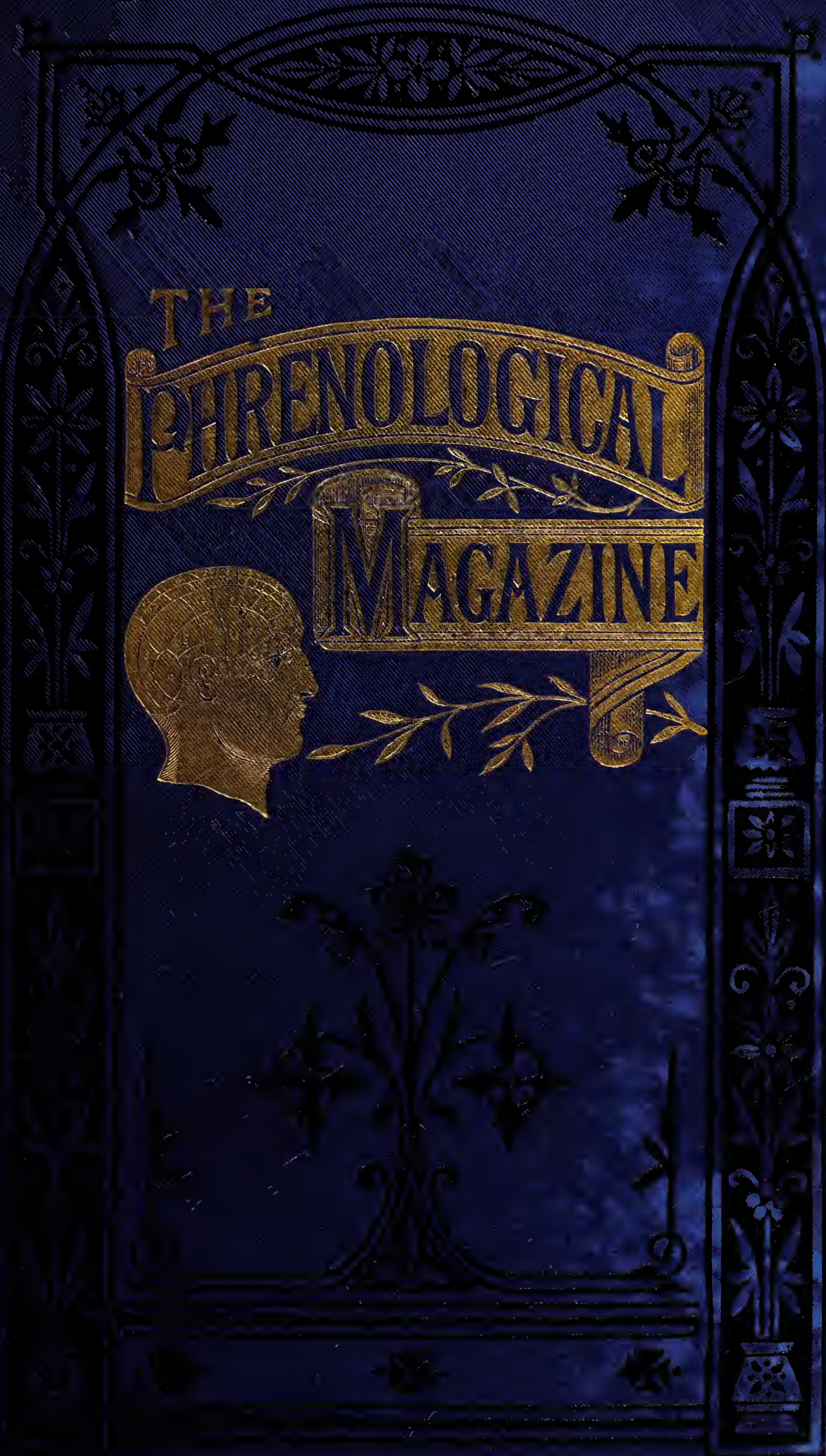




THE
PHRENOLOGICAL
MAGAZINE





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THE
Phrenological Magazine:

A JOURNAL OF
EDUCATION AND SELF-CULTURE.

EDITED BY
L. N. FOWLER.

VOLUME VIII., 1892.

[NEW SERIES.]

LONDON: L. N. FOWLER,
7, IMPERIAL ARCADE, LUDGATE CIRCUS, E.C.

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THE
Phrenological Magazine.

JANUARY, 1892.



(From a photograph by Elliott & Fry.)

A. J. BALFOUR, ESQ., M.P.

THE organization of this gentleman indicates a great amount of capacity for physical and mental action. He appears to be a live man throughout. He is much more in his element when at work than when idle. He has an available organization ; there is a favourable amount of harmony between his body and his brain, but the brain power is superior. He is more impressible than men generally are. He throws his whole soul into whatever he does, and is not a half-and-half sort of man. If there is any fault or deficiency in his organization, it arises from there not being sufficient bony structure and power to carry heavy physical burdens or to do heavy work, but he is particularly

well adapted to the use of brain and mind. His full eye gives him power to express himself, to tell what he knows, and to throw off knowledge in speech, or ordinary conversation.

He is very ardent, susceptible to enjoyment and suffering ; very intense in the tone of his mind, and awakens interest in others while he is in their company.

He possesses more than ordinary character, and when in the groove best fitted for his mental perceptions, he is capable of exerting a very marked influence. He is rather more given to thought, judgment, and originality of mind than he is to mere perceptive power ; hence, strictly speaking, he is more philosophical than he is scientific, more sound in judgment than he is correct in observation.

He appears to the best advantage where thought, rather than knowledge, is required. As he grows older he will fall back upon his reason, be quite original, and be able to develop a subject with considerable clearness.

He has extra imagination, considerable scope of mind, and takes large views of subjects. His head being high, gives him considerable aspiration. His character is all the stronger and more prominent for having a high head. There appears to be a full development of the moral brain. He is mindful of superiors. He would prefer to deal seriously with a subject than to be light-minded and be obliged to curry to others to be entertained. His imagination is strong, and he is able to magnify, to embellish, and enlarge upon the subject of his conversation. He is capable of over-doing in this respect, by sometimes being too extravagant in his style of talking. He is fond of fun and frequently sees the point of a joke, and says many a dry, humorous thing, which is capable of exciting the amusement of some who are in a very serious mood. He is youthful in his mental operations, and will generally be characterised for being younger than he really is. He has a fair degree of versatility of talent, but probably he does not show that so much as an artist or mechanic, as he does in mental contrivance and matters of explaining himself, and in showing different styles of argument.

He is quite emotional, sentimental, and decidedly gifted in presenting the spiritual meaning of a subject, not necessarily as a preacher, but as one who can take a mental and spiritual view of a subject, rather than a mere physical and scientific one.

He has a fair base to the brain, which gives him general force of character ; and there is harmony between body and brain, which gives him life, force, and animation. His educa-

tion may bias him in some one channel of mental action, but if he has the free use of all his powers, he is equal to almost any mental task that may be presented to him. He could write, speak, debate, or be an entertainer where he simply made his conversation pleasant. He is not afraid of action, and rather prefers work where resolution, spirit, perseverance, and executive power is required.

L. N. FOWLER.

CHRISTMAS CHIMES IN THE LAND OF CRANIA.

BY A. N. PATENALL.

MY researches in the land of Crania had often resulted in new ideas and a variety of experiences. At the time of which I write my reader will, I trust, deem them sufficiently just to be recorded. It was a frosty night, clear and crisp, a sprinkling of snow crystals bejewelled the earth, and overhead (I noticed in going to my study window to draw the curtains I had until now forgotten) the stars shone out distinctly, looking somewhat cold, as well as isolate, in their but thin wrappings of fleecy cloud-land. The fire within roared, and crackled, and flamed, as if to demonstrate its kingship amongst the things most desirable at such a season, while the calendar on my writing table pointed its finger to December 24, 1891. On the table was spread a map of Crania, which I had ventured to revise, not in general outlines nor its main divisions, but merely in nomenclature, for sake of any less versed in phrenological than other phraseology.

Most of the land I had ranged under the generic term of Selfdom, including all the basilar plains of sense perception, of appetite and propense, and of physical passions, together with the table land usually described as the region of the social and domestic affections, but better known at present as a domain of feelings common to man and the lower animals—and as well a more mountainous part above this, fitly spoken of as the locality of the self-regarding sentiments. The reason why Selfdom seems by far the larger part of the Crania, may be because in nearly all its departments it is much swollen as yet, and to that extent, of course, there is a hollowness about it. The soil of Selfdom, when not barren from lack of cultivation, is now fertile of growths too often rankly poisonous. The air of its plains is malarious, and though on the hills it is in a sense more exciting, it can never be pure while infested, as at present, with certain microbes so infinitesimal they require a microscope to detect them, yet so

harmful that wherever they can find a resting place they work insidiously the direst fevers and deliriums. The peoples of Selfdom are as various as their clime. Along its lowlands they all have their similarities as they fraternise a good deal, and are all agreed that mere physical good is the only thing worth striving for. Yet each class of them is peculiar, according to the kind of physical good it prefers, and the geographical situation of its residence. Again, each individual of each class differs also from every other, according to the degree of latitude on their particular plain, which registers their specific gratification.

The dwellers on the plain of mere sense perception are a sharp-eyed class of people, frequently very clever and highly useful as physical scientists; but when they try to find everything with a scalpel and microscope they look very funny. For instance, when they think they have discovered life itself in a corpuscle, or mind in a molecule of brain substance, however much learned nonsense they may talk the while, they look for all the world, to a true reasoner, like a conjurer deceiving himself with his own trick.

Those of the middle plain of appetite and propense care little or nothing for such discoveries, but think all the world of a dinner, and doing business, as they call it. They toil and fight from week end to week end for bread, or bread and beef, clothes and money, houses and lands. All good enough things in their way, but not worth a tittle of the kill-one-another scramble they put into it; and the few who do (by fair means and foul) gain in one lifetime more than their profligate grand and great grandchildren can drink and gamble away in several, are no more satisfied for that. Moreover, as they have made it impossible for the rest to obtain necessities, they are naturally in mortal terror of a forced reckoning with them another day. This middle plain, therefore, is at present a mad, disorderly scene: for the most part, of intemperate and uproarious feastings, and wild, hungry fastings, of sweating labours and idle *ennui*, of the hoarded wealth of robbery, and the gaunt, squalid wretchedness of poverty beside it; often, but not always, the result of either thriftlessness or intemperance; but sometimes, aye, not unfrequently, in consequence of a weakness and inability, born of disappointment and despair, and willing strength spent in vain. On the posterior basilar plain, so long as this is fired and fed from the excesses of the former, things can be little better in reality, however carefully they are covered up. Indeed, so infernal in their baseness and cruelty are the lusts which now and again break forth from this region, as to be unnameable in decent society. Well

is it for the licentious, as for their victims, that some sins soon rot themselves out of physical existence.

The peoples of the hill country of Selfdom are certainly somewhat removed from the evils of the lower plains in their grosser forms. So they are apt to look down upon their neighbours below, some with scorn and some with a kind of feigned pity. Yes, some of these hill-side people are so selfly good, they help support and work in missions for the "rescue of the fallen," as they glibly call them, and not without certain reforming results. But strangely enough they feel no need of reform for themselves, although their envyings, jealousies, unjust suspicions, and despotic tyrannies are not one whit the less selfish, cruel, or self-destructive, but rather the more so by reason of their glossing of sham superiority and affected goodness, which is hypocrisy. When a true light shines over the hills, and anyone is there who can see it, these bauble hunters after power, dominion, and fame, may be seen scrambling for these things with all the undignified vulgarity and utter disregard of either God or man of the crowd below; and getting what they seek so unscrupulously, they can but strut to their own shame, and to all right-minded people appear ludicrous, or climb so high up the ladder of wordly position as to provide a commentary upon the text, "Pride goeth before destruction, and a haughty spirit before a fall." It is noticeable also that whenever the despot can stand no longer upon his pinnacle of power, he has a trick of swirling to the right or left of his religion, and hiding in the watch tower there, from whence he peeps out to watch his chances of rising again with the meekest humility. In fact, whoever is a tyrant at one time, will under different circumstances be a coward at another.

In the other half of my map I had included Higher and Anti-Selfdom, with the grand capital of Crania rising up centrally between these, and having the adjoining highlands of Intellectua and Esthetica as border-lands.

Higher Selfdom is immediately anterior to the hill country of Selfdom wholly, and having observed that human choice, will power, and conviction are from thence made manifest, in other words, the *rationale personelle* or truly human soul, I had registered this region as the mountain range of the Ego. It is a place high and dry above all suspicion of false or ruined motive. So much so, the ancients used to call it the Land of Uprightness. Its occupants are a people of back-bone, a little gaunt and stalky in appearance perhaps, and somewhat cold of manner and feeling, living West of Corona, where the sun glow only reaches at the time of its setting. But they are

always there, standing true and staunch for what they believe, and mean to have done if possible. Strong people, grand people, mighty people ; unless they have somehow separated themselves from Rationalia, and kept too much aloof from the people who dwell in the warmer parts of Corona. In which case they become distorted out of their proper habitude, and are liable then to do the very opposite of what they should, namely, judge and condemn unjustly ; and (without a true cause) hence, from time to time such terrible persecutions, and even martyrdoms have been there instituted, as have exercised every studied cruelty and wild beast passion in all lower Crania to effect. Forward of the egoistic, rises our grand capital. The King of Crania, who is also the father of its peoples, has his own palace here, and his servants in immediate waiting, bow down and worship. When they have not been misled, and so made the mere votaries of superstition and idolatry, their whole being seems therein to become glorified. Here also is in building the "Church of our Father and all peoples," whither the tribes from all parts of Crania, in the course of their evolution, ascend. Opening out from the holy place are the broad and far-reaching meadows of Faith-and-hope-land—the former so extensive, and the latter so magnificent in view. The people of the one are ever borne on waves of mystic atmospheres beyond all doubt and fear, while those of the other are born optimists and see everything roseate, sometimes, however, when they fail to ballast their gaily-riding barque from Rationalia, it carries them too far into a region of vapour, which forms no part of true Corona whatever, and hence they are hugely, however beautifully, deluded.

Right east of Corona, and frontally anterior of the capital lies Anti-Selfdom, for human beings the best climate in all Crania. Its soil is fine and fertile, its air salubrious, and its prospects ideal. The people of this locality do not crowd each other, nor toil in vain, nor make big shows to no purpose, but they all work for the Universal Brotherhood. They are essentially happy, having learned through much effort and suffering to love disinterestedly, and when their dream is realised, they will be perfectly so. Till then, they labour and suffer on, esteeming it all joy to be accounted worthy. Perhaps one reason why they have such a kindred sympathy with every one born into Lower Crania, is, that they were born there themselves, and lived first in its one province and then another, until its greeds and strifes became unendurable ; and when memory-fragments of such former states rise up, as in a kind of dream-

consciousness before them, they serve alike as links of oneness and incentives to service for all. The Anti-Selfists, instead of "I" say "We," and have substituted for the phrase "Me and Mine," "Mine and Thine." A delightful people are these altruists, and so inspired by their dream, they can work with any and every class of reformers—the educationalists, esthetics, socialists, politicians, and religionists of every creed and order. For what people profess to believe, or disbelieve, they care little, so long as they are living the life and working the work of true good to humanity. The Anti-Selfists, however, are not all wise as yet; hence are liable to be imposed upon to that extent, and so the good work is hindered. When they have attended at the school of Intellectuals more regularly, and their heads have grown about as big as their hearts (that is, when they have grown wise as well as loving), the work will get on apace.

The pure intellectualists view them through their eye-glass with great curiosity, and wonder if they ever shall be able to make anything of "these soft-hearted enthusiasts," as they call them; but who knows what may be done if they will condescend to bring their own stone-hard heads right up to them.

Indeed, it was now suggested that all these different cults of Higher Crania should meet together at the capital for conference and fellowship, and see what might thus be done, as well for their mutual improvement as also for the transformation of Selfdom. Whereupon all the division gates between their special provinces were thrown open, and there was a great hurrying to and fro, and passing and re-passing through each others' quarters, the general effect of which was, they grew, though by no means alike, yet sufficiently similar to be able to understand and sympathise with each others aims and motives, and so to work in harmony. The duty folks from fraternising with the tender hearts and the Rationalians grew more considerable and charitable, while the Liberals grew stronger and wiser in their sympathy from contact with both. The pure Intellectualists also, in turn for saving the Hopeists from delusion, the Faithists from credulity, and the Devotionists from idolatry, gained from them all jointly an intuitional inspiration, to bring their otherwise too dry and hard to be received truths, right home to the heart of Crania entire. This was no sooner done than Selfdom began to tremble, and its tower to shake exceedingly. Such convulsions became apparent, and such a rushing of its inhabitants from one position they had gained therein to another, that some were

mortally afraid their much-loved province would be destroyed utterly, and the very name of Selfdom erased from the map. But first effects are always more or less revolutionary, and soon, when the *ignus fatuous* lights of Sensedom had burnt low, and the fires of unholy passion were quenched, a better light and warmth of true science and sociology appeared, with really prosperous, because well directed, industries. The people worked still, but there was no more of the sweating system. Plenty everywhere reigned, but no waste. Drunkards and gluttons were known only as monstrosities of a former disorderly state of things, as were thieves, and persons obscene and profane. None were very poor, because none were very rich, except in the wealth of character, where the competition was open to all. Aggressive wars ceased. Love was holy, friendship pure. Home happy, and resounding with music of the merry laughter and gaily tripping feet of healthy, joyous, and "really young" children, every one of whom felt they would have a fair chance, and not be left in ignorance to breed disease and crime, as were some, of whom their parents told them, who were born before the good time came. In a word Selfdom was all there, and more so, but it was not the old Selfdom at all, being now under the regulation and direction of the higher powers above it.

As I was pondering all this and wondering mightily what could have produced such marvellous changes so soon, an ancient Sage, who looked travel-worn, and seemed to be hurrying from a place afar in the direction of Lower Crania, touched me, and said, in answer to my unspoken question, "Come and see." He led on to a spot in that region called Crania Occipita, and there, just above and quite without the range of Cerebella, he stopped short, with a look that told he had now arrived at the place where all his journeyings and research would be rewarded. Here he fell down to worship before the loveliest babe my eyes had ever rested upon. It seemed to be held to its birth-place by two golden cords—one connecting it maternally with the centre of Human Physiologia, and the other paternally with central Divinia at the capital, by way of Spiritualia. By this I felt sure it was no ordinary babe, and while raising my eyes from his cradle to his throne, I saw that all Corona-Celestia was flooded with a glory beyond the glory of the sun. Angel faces and wings began to fill the firmament of Faith-and-hope-land, musicians from Esthetica came now to help their chant of "Glory to God in the highest, and on earth, peace and goodwill to men." At this moment I awoke from what proved to be a dream (and yet not all a dream), by hearing clear, and ringing out from the

“Church of our Father, and all people’s,” “Christmas Chimes in the Land of Crania.”

THESIS.

BY SAMUEL EADON, M.A., M.D., LL.D.

WHAT Faculties or Cerebral Organs constitute a genius for mathematical science ; and what two English ladies have possessed this kind of analytical acumen in a most eminent degree ?

In this life Soul can only manifest itself through a material organism ; and Phrenology is the only science which has



MRS. MARY SOMERVILLE.

attempted to trace out the relations between Soul-faculty and Cerebral-organ, and is consequently the only system of mental physics founded in Nature.

The study of the Brain, and of its nervous elongations, is of vital importance to every man in every class of society ; and when any extraordinary manifestations shew themselves we may be sure the cerebral organs will be correspondential to the manifestations. There is no deception here. We are what our heads say we are, neither more nor less, if we have

only knowledge and skill to spell out the cerebral letters, and understand the words therewith formed in their natural meaning.

As specimens of unusual cerebral development, in the department of mathematics, we cite the cases of Mrs. Mary Somerville and of Miss Phillippa Fawcett, the former the author of "The Mechanism of the Heavens"—a work so profound that the Mathematical Professor of the University of Edinburgh told the writer of this paper some sixty years ago there were not ten mathematicians in Europe who could read the book and follow the writer in her profound analyses. The latter lady so proved her analytical skill in tracing out abstract mathematical relationships as to be declared the senior wrangler of Cambridge University for the year 1890.

Born with an organization delicate and exquisitely refined, the result of unusual culture in both parents, and with a deep cineritious deposition of brain-formation (that part of the cerebrum which the soul is thought to use in all its thinking processes), not to mention the increase in this brain-stuff by the lady's own personal culture, Miss Fawcett would, for the reasons above stated, be eminently fitted to conceive, often with a mere glance, certain relations of RESEMBLANCE, and of DIFFERENCES in abstract quantities, and arrive at results which, to others not so favourably organized, would be reached (if at all) only by the tedious and elaborate working out of every step in a long chain of mathematical reasoning. A student, endowed with a brain of this fine organization, and worked, too, by Spirit as well as by soul power (a method of development and manifestation common to all men and women antecedent to the Fall of Man) would reach easily the top-most hill of science ; whilst others, proud of their REASONING powers (but having soul-aid only without spirit help), would toil up the mountain-side of knowledge, wondering oft whether the laurel wreath would ever be entwined around their brows.

Depend upon it, there is no such thing as CHANCE in academic achievements, or in evolving new discoveries, or in tracing hidden veins not dug out of the cerebral quarry before, veins which others have not had the genius to discover. Antecedent natural causes must have done their work first, before any extraordinary after-effects can be brought about. When, in any case, the reign of natural law is supreme, CHANCE, as it is called, becomes a mere, perfect myth. Success depends on being well-born—Heredity as it is called ; and, by careful culture, to add more cineritious material to the sulci of the brain, in addition to that which one brings naturally into the world. The deeper the layer of this cineritious or grey matter

is laid in the sulci or anfractuositities of the brain, the greater will be the intellectual power displayed.

In families where the laws of heredity have been systematically and knowingly carried out, genius has shown itself in some department or other of Science, of Art, or of Literature, sometimes for three generations, or more.

The subject of Heredity, in respect of an improved genesis of the human race has been, and is, disgracefully neglected; but, with regard to the lower animals, pedigree is an object of great anxiety, and the argument of £ s. d. in generations of fine specimens of dogs, horses, &c., is of much more importance than the culture of genius in either man or woman.

There can be little doubt that it is owing to the laws of Heredity being strictly and quietly carried out, aided by good training and first-class educational culture, that the lady wrangler has been able to win her academic laurels at the mathematical tripos of the University of Cambridge.

TIME AND SPACE—ALL NATURE SUBORDINATE THERE TO.

BY ARTHUR H. IVENS.

THE two abstractions mentioned in our heading are the most important of all the powers in Nature, since without them there could be no movement, no change, no life; all would remain at a dead standstill. Those two entities being to our conception illimitable,—having no antecedent—neither creation nor evolution could have taken place, had not time and space predominated. This our earth (a mere speck in the great universe) must have required hundreds of millions of years to transform it from the nebulous into that of its present liquid and solid state. Geological researches shew that each of the several strata, and of the rock formations, must have required immense lapses of time in which to effect their changes. One of our greatest writers, Darwin, in his "Origin of Species," has calculated that "it is not improbable that a longer period than 300 millions of years has elapsed since the latter part of the secondary period." What incalculable periods must have occurred to bring into their present state, not only our sun and solar system, but the whole of the immense body of fixed stars, so far off in space that we are supposed to be "one hundred millions of millions of miles at least from the nearest." But the distances to which the revolutions of the cometary bodies extend, far surpass those of the stars, since

“the average time of revolution of comets, generally, is about a thousand years,” although their velocity is of the greatest. We have endeavoured to shew that the length of time and distance of space must be illimitable, in order to allow of the continued movements of the celestial bodies, and that, consequently, those two abstractions must have existed prior to either creation or evolution having been able to take place; but there are yet other reasons which tell in favour of our argument. How, for instance, could the condensation of the nebulous matter into liquids and solids have occurred without the intervention of cold? Whether it is called merely a negative of heat, or by any other designation, the fact remains, that no solidification can take place without condensation, nor this without a diminution of heat, whether by evaporation, or whether by cold, as well as by heat, being both factors, acting in a double sense (a sort of negative and positive action). Whichever way we look at the subject of the formation of cold, its temperature in space is very low indeed—said to fall to ninety degrees below the freezing point of Fahrenheit. Now, as no solidification could take place without the intervention of cold, neither are we to suppose but that heat also actually existed, whether to form the nebulous matter, or to keep it in a state of disaggregation. So necessary therefore were both these factors to balance each other in the formation of the nebulous matter, and for its solidification, that it seems both heat and cold must have been in existence equally with time and space, otherwise no transformations—no changes could have taken effect; and without the transformation of the nebulæ into solids, the attracting forces would act but feebly, and therefore the solar and celestial bodies would not gravitate towards each other forcibly as they now do. It may be argued, however, that space being a void, many of the phenomena that now appear to us would not do so in that case. Our answer to that objection is, that it is now known, and has been proved by one of our most eminent scientists, that ether actually exists in space, and that ether is matter. Such being granted, the action of time and of space, of heat and of cold, and therefore of the electric, galvanic, and magnetic forces, as well as of the chemical affinities, all acting doubly by positive and negative; also perhaps of the activic rays of the sun, would suffice so to bring about the transformation in the relations of the particles of matter to each other, as gradually but steadily to bring about all the changes and conditions of inorganic substances by the forces above mentioned. Those changes of course occurred at first in what is usually designated as inorganic matter, though why

it should be so called, considering that a large part of the transformations taking place are by means of crystallizations, and crystals are regular—very regular—formations, always occurring in the same shapes if under the same conditions ; the term inorganic therefore appears to us rather a misnomer in the case of crystals, the forms assumed by crystallized bodies being very numerous. Of the single substance, carbonate of lime, some hundreds of varieties of crystals have been described. Not by crystallization alone, however, but also by the agency of living beings (coral insects, zoophytes, or shellfish), which, whether by secretion of lime from sea water or by the deposit of their exuviae, produce in the Pacific Ocean, and other tropical seas, what are called Atolls (Coral Islands), which are again upheaved by volcanic action into yet larger ones, and even into Continents, and are probably the foundation of that large series of geological deposits, known as the limestone and carboniferous systems. We may add to the coral worms the sponges, and above all “the fossil remains of testacæ,” considered to be by far the most important class of organic beings, which have left their spoils in the subaqueous deposits, and thus have assisted greatly in the formation of strata, especially of the tertiary period. There are also other small animals engaged on land in the preparation of the soil, as shown by Darwin in his work on “Vegetable, Mould, and Earthworms.” We may here also mention that both gases and liquids assume a regular formation, and whenever material substances are rendered amorphous, whether by violence or by natural decay, just as solids at once tend to crystallization, so do the gases and liquids to become globular, in other words to assume definite formations, which are the first outlines of organisms. Thus, there is no cessation of movement and of transformation ; worn-out particles are destroyed, and are replaced without delay by newer and more vigorous ones. We have, perhaps, said more on the subject of cold than of heat, but of the evidence and existence of heat (from the earliest times) our earth gives ample proofs, it being supposed originally to have been in a state of fusion, and is still acted upon by earthquakes every year, desolating many countries both in Europe and America, and also in Asia and some parts of Africa, besides the volcanoes constantly acting in Italy and Sicily, as well as in Iceland, in North and South America, and especially in the Pacific and Indian oceans, and in other countries. Heat may be developed by various causes—such as, by friction, by percussion, by the sun’s rays, by chemical, electrical, or voltaic action, by magnetism, and finally, by all those changes from

fluids to solids, or solids to fluids, which occasion motion in the particles of matter ; however, if it be insisted that there is no evidence of the presence of heat coincident with time and space, its absence necessitates the existence of cold from all time. It appears to us, therefore, that both heat and cold must have acted from the very beginning equally with time and space. Before closing this paper, we will just call attention to the wonderful effects that are brought about by Polarity, in modifying or altering the relations and conditions of material substances, and which go far to allow of the supposition that the positive and negative forces pervading all matter, and all Nature, are sufficient to account for all the results and transformations that have occurred. The various changes induced by electrical, galvanic, or magnetic phenomena are too numerous, too subtle, and too varied for us to do more than just to call attention to them in this paper, which we will close by a quotation from Professor Tyndall's address at Belfast, in 1874. "By an intellectual necessity, I cross the boundary of the experimental evidence and discern in that matter, which we, in our ignorance of its latent powers, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of all terrestrial life."

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(*Continued.*)

B.—SUBLIMITY.

Perception and appreciation of the vast, illimitable, endless, grand, awful, vast, omnipotent, and infinite.

Man has in his nature a great love of the sublime. The world is so full of the vast and grand, that were there no faculty adapted to appreciate this sublime arrangement, the most magnificent conceptions would cause no thrill in the minds of people when contemplating the infinite designs and plans of their Creator.

VERY LARGE.—Persons having a very large development of this faculty will have a literal passion for the wild, romantic, and boundless in scenery, and delight to contemplate the infinite, eternal, and stupendous ; with large veneration, take a special pleasure in contemplating the works of the Deity ; with large tune, will be extravagantly fond of grand, inspiring music—especially orchestral music. With large lang., and comp., will use strong comparisons in explaining the beauties of nature, the excellencies of some artistic pro-

duction, or in sounding the praises of some eloquent speech or lecture.

LARGE.—Will magnify everything; with small combat, small hope, and large caut., will magnify troubles and difficulties; with large friendship, will dwell largely on the excellencies of special friends; with large acquis., secretive., hope., destruc., and combat., and full caut., will want a wholesale business, and a large concern to manage. Will exceedingly enjoy mountain scenery, thunder, lightning, tempests, vast prospects, and all that is awful and magnificent; also the foaming, dashing cataract; a storm at sea; the



MR. G. B. HENSLEY.—Sublimity.

lightning's vivid flash, and its accompanying thunder; the commotion of the elements, and the star-spangled canopy of heaven, and all manifestations of omnipotence and infinitude. With large time., with moral group, will have unspeakably grand conceptions of infinitude as applicable to devotion—the past and future; with large intellectual organs, take a comprehensive view of subjects, and give illimitable scope to all mental investigations and conceptions, so that they will bear being carried out to any extent; with large ideal., add the beautiful and perfect to the sublime and infinite; in short, will have a great appreciation for the marvellous in every species of science—every department of Nature. And certainly its exercise—

besides filling the soul with most delightful emotions—imparts an expansiveness of views ; a grandeur of conception ; a range and sweep of idea ; a compass and volume to thought, and expression, without which no adequate conception of truth, Nature, or God, can be formed.

FULL.—A person with this faculty full, will enjoy grandeur, sublimity, and infinitude quite well, and impart considerable of this element to thoughts, emotions, and expressions, and evince the same qualities as large, only in a less degree.

MODERATE.—A person with only a moderate amount of this faculty, will possess only an average desire to see and examine the wonderful in Nature and Art, and need to have it stimulated by external circumstances.

SMALL.—A person with this faculty small, is deficient in showing sufficient appreciation for large schemes, or the wonderful works of Nature, or mechanics.

VERY SMALL.—A person with this faculty very small is almost destitute of sublime emotions and conceptions, and must contemplate the outstretched landscape.

LOCATION.—Sublim. is located on each side of the head, directly above acquisitive., below hope, and posteriorly to ideal., and anteriorly to caus. It is situated in the brain where it is crossed by the fissure of Rolando, in the convolutions on either side.

DIVISIONS.—Sublim. has two divisions. The posterior part of the organ gives the Sense of the Terrific, while the anterior portion gives a Sense of Grandeur.

22.—IMITATION.

Ability to represent, copy, describe, and do what we see done—the power of imitation and copying in general.

Man is emphatically a creature of imitation. In performing nearly all the actions of his life, the power of imitation is more or less important, and a want of it exhibits an essential deficiency of character. In learning to speak or write a foreign language, the faculty of language furnishes us with words ; but it is imitation alone which enables us so to enunciate them as to make ourselves understood.

The skill of the mechanic depends, in a very great degree, upon the extent of his imitative powers ; and the gesticulations of the orator, by means of which he often expresses more feeling than words could possibly convey, are the promptings of this faculty. So vastly diversified, indeed, are the feelings and the practices of men, that, without some faculty to direct them into even the common usages of society, different individuals would hardly be recognised as belonging to the same race ; yet, with this faculty to give a degree of uniformity to most of their habits, it is easy to determine, not only in what country, but frequently in what section of the country, the manners of an individual have been formed. Hence we infer,

that man must be possessed of a primary faculty, the exclusive function of which is imitation in general. The experiments of the authors upon this organ have been both numerous and satisfactory.

VERY LARGE.—One having imitat., very large, has a remarkable talent for imitating almost every thing he undertakes to imitate : with large secret., can conceal his real feelings, while he appears to feel what he does not ; with large mirth., and moderate ven., and conscient., will have a propensity to ridicule religion by imitating the peculiarities of its professors : with large combat., destruct., self-e., and ideal., can mimic and portray the several passions of haughtiness, of indignation, of revenge ; with any of the other selfish organs large can imitate the several passions exercised by those faculties ; with large event., will notice all the actions and peculiarities of others, and be able to mimic them perfectly ; with large ideal., added, can imagine and represent the action appropriate to any given sentiment, and express it to admiration ; and with large lang., and secret., added, can carry on a dialogue in several voices, and adapt the expression of his countenance to the feelings represented? can imitate the accents and brogue of the Englishman, the Scotchman, the Irishman, the Frenchman, &c., and even imitate the forms of expression adopted by these different countrymen ; easily learn both to read and to speak foreign languages ; with large ideal., mirth., individ., event., lang., compar., and adhes., and full or large secret., and combat., is capable of becoming a first-rate mimic and play-actor, and will have a predominant passion and a remarkable talent for the stage, and find it extremely difficult to avoid imitating the actions, conversation, style, &c., of others.

LARGE.—One having imitat., large, will find it easy to copy and represent, either by gesticulation, talent for drawing and writing, desire to adopt the manners of others, or in almost anything else demanded by the circumstances of life. One having imitat., large, with construct., and the perceptive organs also large, will manifest his imitative power in making after a pattern, in drawing, engraving, writing a copy hand, &c. ; can relate anecdotes, and act them out so naturally that the hearer will seem to see just what the speaker wishes to convey ; will make a far deeper impression than language alone could produce, and be able to heighten the effect by the addition of elegant, and even eloquent delivery ; with form, size, construct., and ideal., large, will be capable of becoming an excellent penman ; with self-e., full, and ideal., individ., and lang., large, can readily adopt the manners and customs of those with whom he associates ; and make himself easy and acceptable in almost any society in which he may be placed, &c.

FULL.—One having imitat., full, will manifest this faculty only in a subordinate degree, which will seldom amount to mimicry ; still, its influence upon the whole character will be considerable, and may be inferred from the descriptions and combinations of imitat., large, by diminishing the influence of imitat.

MODERATE.—One having imitat., moderate will possess this power

in only an inferior degree, and experience some difficulty in copying and describing; fail to impart a natural expression and accuracy to his attempts at copying, and, with self-e., caus., and compar., large, will disdain to copy others; prefer to strike out, and pursue a path of his own; fail to adapt himself to the customs of the society with which he is not familiar; and will be original, if not eccentric, in his manner of thinking and acting: with secret., only moderate can never seem to feel otherwise than he really does.

SMALL.—One having imitat., small, will have but little ability to imitate, and none to mimic; fail in his attempts to represent, and will almost spoil a story by attempting, in relating it, to act out the several parts; will not be at all natural in his gestures, and be a poor penman, and experience great inconvenience from the deficiency of this faculty.

VERY SMALL.—One in whom imitat., is so very small, will manifest comparatively no power or desire to imitate or copy.

LOCATION.—Imitat., is located upon the two sides of benev., being the posterior part of the second frontal convolution, laying against the sulcus which divides the first and second convolution. When large, it extends nearly as far back as the organ of benev., and the coronal sutures, and causes a protuberance, especially when spirit., is small, which runs downward from benev., and towards ideal., and construct.

There are three divisions. The upper gives Mimicry; the middle division gives Gesture; the lower division gives Assimilation.

23.—MIRTHFULNESS.

That faculty of the mind which looks at things through a ludicrous medium, and thus forms humorous ideas and conceptions—a quick and lively perception of the ridiculous and the absurd—facetiousness, pleasantry, humour, wit, fun.

That certain conceptions, ideas, opinions, and occurrences in life, are in themselves absurd and ridiculous, is a position that will readily be admitted. This being the case, it naturally follows that the mind should be possessed of some primary faculty, the office of which is to detect such absurdities, and expose their ridiculousness: and this office is performed by the faculty of mirthfulness. Its function seems to be to aid caus., and compar., in determining what is true, by intuitively discerning whatever in thought or argument is ridiculous or absurd; and the fact that mirth., is located by the side of caus., and in the same range with compar., caus., and ideal., appears to strengthen the probability of the correctness of this supposition.

The existence of such a faculty as mirth is rendered useful from the fact that indulgence in laughter, merriment, and lively conversation, promotes respiration, digestion, appetite, and the circulation of the fluids, contributes greatly to health, imparts buoyancy to the spirits, and greatly augments the power and activity of the mind. The old adage, "laugh and grow fat," though quaint, accords both with the philosophy of human nature, and the experience of mankind, and,

moreover, with man's phrenological developments. If, then, according to the vulgar notion, "every sigh drives a nail into our coffin," this argument shows that "every laugh should draw one out."

VERY LARGE.—One having very large mirth., will look at almost everything, as it were, in a ludicrous light ; manufacture fun out of almost every passing incident ; find it difficult to restrain that strong current of humorous emotions which sweeps through his mind, and which will be likely to burst forth, both upon proper and improper occasions ; and be unable to express himself without a strong mixture of facetiousness with sober thought, and often carry his jokes too far. The descriptions and the manifestations of mirth., large, modified by an increase of the power and the influence of mirth., will apply to mirth., very large.

LARGE.—One having mirth large, has a quick and lively perception of the ludicrous, and a strong propensity to turn singular remarks and incidents into ridicule, and to make sport in various ways ; laughs heartily at anything humorous or funny, and enjoys it with a keen relish.

One having mirth., large, with large compar., destruct., and combat., and caus., full, will mingle the sarcastic, the pungent, and the bitter, with the purely humorous ; and be pre-eminent for his dry, terse, witty, and appropriate comparisons, which will be always in point, and very laughable, and sting while they tickle ; with large secret., and imitat., will have a happy faculty of saying a witty thing in a peculiarly laughable manner ; and, with large lang., compar., and event., added, can work up the feelings of the hearer by a most agreeable suspense, and mingle so much of the cunning and the sly in his manner of expression, that his humorous effusions will keep those in whose company he is, in a roar of laughter, and yet appear perfectly sober himself ; will make very happy allusions to ludicrous incidents ; and be very quick and opportune in his mirthful sallies ; with compar., large, approbat., very large, and caus., only full, may say witty things, but will generally spoil them by laughing at them himself ; with large adhes., approbat., benev., hope., ideal., imitat., event., lang., and compar., will make a social, cheerful, and pleasant friend, who will be full of entertaining conversation ; with large ideal., will express his mirthful effusions in a peculiarly refined and delicate manner, and, with secret., large, can say even a vulgar thing without giving offence ; with secret., and imitat., moderate will have a fund of ludicrous ideas, and a ready conception of the truly ridiculous, but will generally fail to give them so ludicrous an expression as to make others laugh ; will relish a joke, yet spoil his own jokes, and those of others which he attempts to relate, by his defective manner of expressing them ; but, with imitat., large, even though secret., is only moderate, will be able to express himself in so blunt, and dry, and eccentric, and even comic a manner, as to cause a burst of laughter ; with lang., large, and compar., very large, will be a ready punster ; have a happy talent of reasoning by the *reductio ad absurdum*, or, by carrying out, and applying, the arguments of his opponents in such a manner as to

make them appear supremely ridiculous ; with hope large, will be both cheerful and witty, and mingle a high flow of spirits, with a happy talent for humour ; but, with hope only moderate, even when borne down with melancholy, may say many witty things ; with approbat., and cautious., very large, and self-e., small, except among his familiar acquaintances, will have too little self-confidence to venture a joke, or will show so much fear in his manner of expressing it as to spoil it : with ven., and conscient., large, will be frequently annoyed by the intrusion of ludicrous thoughts, even upon solemn occasions ; feel guilty upon this account, and endeavour to banish them from his mind, yet, in spite of all his efforts, they will frequently arise ; and, whenever he attempts to joke, will be dry, sententious, pithy, and always in point, &c. “ Poor Richard’s Almanac ” furnishes an admirable illustration of the combined manifestation of very large caus., compar., and mirth. ; which combination is most strikingly exhibited in all the busts of Dr. Franklin.

FULL.—One having mirth., full, may have a good share of humorous feeling, and enjoy the mirthful effusions of others, yet, without the aid of other faculties, will not himself be remarkably quick to turn a joke ; with large destruct., combat., and compar., will be cogent and biting in his attempts at wit, yet his wit will sting more than it will tickle, and be too personal to please, and, consequently, will often give offence ; will, perhaps, frequently indulge his teasing propensity, yet his mirthful effusion will not be characterized so much by pure humour, as by satire ; may be eminent for his sarcastic and appropriate, if not ironical comparisons, yet the whole point and ludicrousness of his jokes will turn upon the aptness of the comparison.

MODERATE.—One having mirth., moderate, will generally look at things through the sober medium of fact ; seldom succeed well in his attempts at wit ; generally think of his jokes too late to make them ; and be more sober than jovial. Will be quite too zealous upon this point, and easily offended by jokes, especially if they bear upon facts, &c.

SMALL.—One having mirth., small, will be likely to consider wit as either impertinent or silly ; will rather lack sprightliness and vivacity in conversation and appearance ; be slow to take a joke, or to appreciate a witticism, and slower still to make or turn one : with ven., and conscient., large, and hope., only moderate, will seldom smile, and probably think it wicked to do so.

VERY SMALL.—One with this organ very small, will not, in any perceptible degree, manifest the functions exercised by this faculty.

There are two divisions, the upper part gives Humour, the lower part gives Wit.

LOCATION —Mirth., is located beneath the temporal ridge, externally from caus., but a little lower, and nearly in the range of compar., caus., and ideal., in the second frontal convolution.

THOSE who cannot find time for exercise will have to find time for disease.—*Derby.*

MEN OF OUR TIMES.

REV. W. J. DAWSON.—The phrenological development of this gentleman indicates a very marked and distinct character, and most of the organs are full or largely represented. He has quite a limited number of faculties that are only average.



REV. W. J. DAWSON.

He should be characterised for his intellectual critical acumen. He is very apt to notice all kinds of defects and discrepancies. He has a superior power to analyse, describe, and illustrate a speech. He is particularly shrewd in his perceptions of character ; he has good conversational talent ; it is easy for him to talk ; he enjoys conversation. He has the element of an orator, and can easily present his ideas or reasons on a great variety of subjects. He enjoys travelling ; is naturally methodical in his mode of reasoning and thinking. He has

quite a correct perception of the qualities and uses of things ; is close in observations, rather minute in his perceptions, and can take or give a joke as the occasion requires. His sense of the ideal and beautiful is great ; he loves poetry and oratory, and works of art ; he is naturally ingenious in matters of reasoning. He can succeed in almost anything excepting figures. He is very sympathetic ; his feelings are tender and easily acted upon, and he knows how to act upon the feelings of others. He is generally hopeful, and exerts a lively interest in others. He is positive in his spirit, manly in his disposition, executive in his mode of doing business, decidedly fond of pets and animals, and has a strong love as a companion. His bodily powers are favourably developed, giving him uncommon strength and vigour of constitution, and power to resist disease ; he is highly nervous, susceptible, and intense in his mental operations.

W. L. JACKSON, ESQ., M.P., Chief Secretary for Ireland.—
The organization of this gentleman indicates a mind full of



W. L. JACKSON, ESQ. M.P.

animal life ; he can enjoy himself all the time. He is a man of the world. He is full of knowledge, and quick to find things out. He has a faculty to tell what he knows. He is

pliable in his intellectual abilities, decidedly perceptive and alive to actions, and various kinds of performances. He has favourable powers to analyse, criticise, explain and illustrate. He may not be particularly abstract and theoretical, but he is alive to every event that is passing ; makes the most out of his situation, and can tell all he knows of a subject.

He is naturally fond of order, delights to have everything done according to rule, and have everything in its place ; and also has a good memory of places. He is fond of music, and all that goes along with life, excitement and animation. He has an intuitive mind, is quickly impressed with reference to new subjects ; his first opinions and impressions are as correct as any he has. He has a mind that is able to take the advantage of circumstances. He is quick-witted, can answer questions off-hand. He is particularly interested in society where there are always changes, and where it is necessary to be alive to all that takes place. He is somewhat like Sheridan, can quickly turn his mind in another channel, and appear not to know what is going on, and yet can step into his place and tell what he knows without any special preparation. He is capable of manifesting a very strong will and determination of mind. He is satisfied with himself, and is willing to take responsibilities when necessary. He is more proud than vain ; and more independent in spirit than forcible, polite, and affected in manner. Opposition brings him out to a good advantage.

ORION.

HUMAN CRABS.

BY GEORGE COX.

THE writer of this short article cannot claim to be well read in the history of crabs. Just sufficiently, however, to state by way of definition that the crab is not a fish, but an animal, that its whole body is covered with a crust-like shell, and that its tail is very short, and is always concealed under its body ; so that, to use a nautical phrase, the crab may be said to "sail under false colours," as to its fishy qualities, while the hiding of its tail is suggestive of an affinity not pleasant to contemplate.

There are "Hermit" crabs—crabs which seek to make good their claim as belonging to the fishy tribe by carrying on their back shells of any size or shape, which they may manage to annex in their wanderings. We read also of other members of the crab family who live almost entirely on the land, and who feed on cocoanuts, and display remarkable instinct in various

directions. In their method of getting at the insides of the cocoanuts, for example, first tearing the husk, fibre by fibre, and always from that end in which the three eye-holes are situated, and when this is complete, hammering away with their heavy claws on one of the eye-holes till an opening is made. Then, turning round, the albuminous substance is abstracted by means of the animal's posterior and narrow pair of pincers.

This kind of crab is diurnal in its habits, going into the sea at night, but in the daytime living in burrows made under the roots of trees, where it rests on a bed made of the cocoanut fibres. It is even said to crawl up the trees to steal the cocoanuts. Other crabs there are who feed on young birds, which they steal from nests found among seaweed on the sea beach.

Looked at all round, however, there is certainly not much that is creditable to the crab. It is of a decidedly awkward and ungainly gait; and when it can be said to go at all it goes sideways, and in the opposite direction to which it might have been expected to go. Although it is reported that a school was once attempted in a crab colony for the better training of the rising generation, little progress was made, from the fact that the would-be teachers were so terribly crabby themselves, and incurably confirmed in the habit of going sideways.

But after all, it is not of the crab thus far defined that this paper is to treat. Crabs of another order are nearer at hand. Crabs quite as interesting and quite as varied in their attainments—crabs fat, crabs lean, crabs voracious, greedy, and bold; and crabs sleek and crafty; and, oh, what a power to count upon as years roll on, for while it is plainly declared that "the upright shall have dominion," these crabs fatten, multiply, and hold on with tenacious and unyielding grip.

Take, for instance, some good cause in which, from the apparent impossibility of diversity of aim and purpose, it might be taken for granted that a community would combine whole-hearted in the one interest, how often in such matters do the highest aims and the noblest schemes for the common weal prove abortive, and simply owing to the presence of crabs. What ages are absorbed in the accomplishment of the simplest reforms; and when effected how quickly are these often sacrificed, and retrogression in national life and prosperity made to take the place of the long-looked-for onward march to liberty, and the broad recognition of the rights and brotherhood of men; and all owing to the presence and influence of crabs. So that:—

“The best laid schemes gang oft awry.”
 And leave us nought but grief and pain for promised joy.”

“Righteousness exalteth a nation, but sin is a reproach to any people.” There are men who neither go with the stream nor against it, and yet do both. Time serving men, whose scope of thought and action is circumscribed by the boundary of their own interests ; men who will serve their fellows while they can serve themselves, and will as readily sell them with the same laudable end in view ; men who throw their whole weight and influence into a noble cause with every appearance of fidelity to it while credit attaches, and who as readily go sideways to a quiet shelter when the tide turns.

The animal crab at stated times writhes from its shell, and comes out for awhile a boneless mass ; and in like manner, men, swelling with increase, are willing to divest themselves of every semblance of claim to the rank of vertebrate, so that for morality and uprightness they very closely resemble a boneless mass. These boneless creatures have too long blocked the way of progress ; and the battle of right against might in social life remains yet to be won.

It is said of the animal crab, that its greatest enemies are those of its own kind, the strong and able in self-defence alone surviving to perpetuate the race. The same law appears to hold good on the higher level ; and human crabs appear to thrive and prosper in proportion to their endowments of the crabby nature. To go sideways in life just a little, or to appropriate the property of others just a little—or only on a small scale—is to court defeat, and to leave the back exposed to certain vengeance ; for a man’s right to sit in judgment and punish his fellow is by no means dependent upon his own immunity from the same offences : a social beast may pass sentence on his victims. It is further true of the crabs of both orders, that the fat and well-favoured show no sympathy with the feeble and less fortunate, these latter in the shelly family being devoured as they fall. Turn to the social life of the people, and consider the possibilities which are bound up with the very fact of moral and intellectual capacity ; contemplate for awhile the wonderful adaptation of every one thing in Nature to everything else—the harmony and delight with which the wide world might be filled ; and then turn and see the wreckage—the mighty gulf which separates the “ classes ” from the “ masses ”—grinding oppression and the cry for bread on the one hand, and the more than gluttoned luxury and idleness on the other ; and as you bow in very shame at the insult offered to the Highest by

the misappropriation of unmeasured bounty, let your pent-up feelings find vent in the one word—crabs.

“Oh that men would praise the Lord for His goodness,” and would share it with his brother man. In the experience of the shelly family there are times when some voracious and dangerous specimens have their claws tied for the greater safety of their fellows ; but this item of civilization has not yet extended to the human species.

To what a deadlock of superstition, darkness, and submission to despotic rule had our own loved country been debased, when men learned to live by sufferance, and to yield their right of access to the High Court of Heaven to the mediation of a villainous priesthood, and to place the wealth of our favoured land at the same disposal ; until, robbed and degraded beyond all endurance, they at last united to repel the invader by a long and painful struggle, and the sacrifice of many precious lives. And what is the outlook to-day, when as a nation we are justly proud of the constitution of our government, and of our emancipation from servility to Roman rule, the work of that glorious Reformation ? How are our liberties guarded ? Is our Throne stablished in truth, while playing false with its sacred trust, while favouring an ever-strengthening Romish ministry and leadership, and uniting in obeisance to the foreign Pontiff, or bandying civilities with the Vatican ? Is not the past enough to witness to the tendency of such a course ? Have we not already seen enough, that our National Church should set aside the kernel of vital godliness, and offer instead thereof the husks of religious ritual and empty ceremony ? Is it not enough that men ordained in a high and holy calling, sworn for the defence of gospel truth and to support a Protestant throne, should unite in solemn compact to effect a return to all the horrors of papal rule ? Our pride has a poor foundation, and our rejoicing is mixed with fear. We are boasting of liberty of conscience, an open Bible, and a free Press, while these are all being undermined ; and the stronghold of Protestantism, hoodwinked by the cries of toleration and equality, is opening at all points to a designing foe, for the land is honeycombed with Romish emissaries who “hide the tail.” Crabs !

Let us be on the alert to scatter darkness by the letting in of light, and be careful also to return men for our legislative assemblies who can discern between a shadow and a substance ; men also whose insight into social questions will enable them to distinguish between the so-called “vested interests of the publican,” and the physical and mental health and financial

prosperity of a nation. And let the people be taught rather to lead themselves than be any further led ; and, since they live, to claim their native soil in common with the air they breathe, and to share in the profit of their toil. Let us set a right value on a franchise too long withheld, and use it for the suppression of crabs.

We rejoice in the possession of so-called religious and political freedom, but how is all the machinery clogged. Dip also into the inner circle of religious and private life, how here is the lustre blurred and the purity gone. On every hand we are environed with counterfeits of men, with scarcely a trace of internal solid structure : "Crabs."

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, JANUARY, 1892.

IN presenting to our readers the first number of the thirteenth year of the PHRENOLOGICAL MAGAZINE, we have many reasons to be satisfied with its progress. Notwithstanding the old prejudices that still exist in the minds of some regarding mental science, many additional evidences have been given of the increase of interest in new quarters with regard to its publication. Its area is increasing, for now it is in touch with all corners of the globe. The first Christmas double number of the Magazine met with a greater success than was anticipated. Three times the ordinary number of copies were first ordered ; but before half that number were sold another edition was ordered, of which not a single copy is left. On the first of January the foreign postage of newspapers and books will be reduced to the following rates :— Newspapers, books, and printed matter, $\frac{1}{2}$ d. per 2 ozs., with a minimum charge of one penny. This will enable us to offer the PHRENOLOGICAL MAGAZINE, to subscribers located in in any part of the world, at the same rate as in England, namely, twelve months 6s., post free ; six months 3s., post free. We have already a large number of foreign subscribers, but with this reduction we hope to still add to our list. Those who have already remitted the former price will receive the Magazine up to June, 1893.

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ONE hopeful point for the future outlook of phrenology is the earnestness of students, who are making the subject a serious study. They seem keenly alive to the necessity of

close observation, accurate knowledge, the need for comparative criticism on the works of phrenological writers, and of the definite study of the brain. It is the belief—of those who ought to know—that with the enthusiastic earnestness that animates the present students in the subject, phrenology will be handled by competent men and women who will consult first its scientific bearing, and secondly, as far as possible, its popular use.

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MRS. LYNN LINTON has recently said some sensible things “On Reading,” and quotes Lord Bacon’s well-known saying, “Reading maketh a full man.” But she wants to know whether that fulness is of good wholesome food that nourishes and sustains, or of pestilent trash that slowly poisons and corrupts? She says it is as important for young people to know how to read, as what to read. If we want to read with profit, we must first of all take notes. We entirely agree with Mrs. Linton, that taking notes ensures comprehension of the subject; for an earnest student who takes notes, not only picks out certain salient and picturesque bits, but impresses them on the memory in a condensed way. This, says the writer, fulfils that other part of Lord Bacon’s famous aphorism, “Writing maketh an accurate man.” Variety of authorities, she also advises as necessary to prevent narrowness or prejudice of judgment. “Several writers widen the horizon, and educate the critical faculty with the memory and the judgment. Each author presents that view of the subject which most harmonizes with his own mental condition.” To our minds this theory—if true—distinctly proves that the mind is an aggregate of parts, and each person who attempts to express his true impressions on a subject, reveals his unmistakable bent of mind, and his particular combination of faculties, that makes his conception different from all others. One can in many instances judge of the conformation of the head by the style of writing, but it is not a safe rule to be guided by, for some writers admit—like Grant Allen did when interviewed by the representative of the *Pall Mall Budget*, that he did not believe all he wrote. That, “at best, what I write having regard to the welfare of my family is a mere toned-down fraction of what I really think and feel.” There are some writers who write for the times, and not to express individual opinion. By thus examining the many ways of looking at a subject, you get a stereoscopic view, which is infinitely superior to a flat surface. Mrs. Lynn Linton wisely suggests history as one of the first guides to the young reader, for it is the centre whence branch out innumerable

intellectual rays—ethnology, folklore, science, religion, and above all, the grand binding thread of the community of the human story—the likeness to be found among all people at the same relative stage of civilization. After history as the parent, we come to literature. What the greatest minds of a bygone day thought, and how they expressed that thought, is just as important for the young student to know, as what Matthew Arnold, and Carlyle, Buckle, Lecky, and Herbert Spencer have said in our own time. Of course we have passed the science of Homer, Plato, Aristotle, Cicero, Seneca ; but it is essential to a liberal education to know what they said, and how they said it. And we may well be thankful for the excellent translations of the classics which abound, enabling all to read in their own tongue the deathless utterances of these great masters, when the original is unattainable. What is essential in classic literature, is also essential, and even more so, in modern literature. In conclusion, this able writer sums up the things to be considered in the reading of the young, as follows : “ Steady aim and devotion ; a variety of authors on the same subject ; copious note-taking, and a resolution to master all the points of a subject ; the rigid exclusion of immorality, indecency, coarseness ; history as the foundation—the nucleus of facts ; mathematics as the absolute necessity for the education of the reasoning faculties ; and, in proportion to age and capacity, the broad and comprehensive understanding of humanity, as that thing with which we are most intimately connected ; and accurate knowledge, as well as the high ideal whereof leads to the wisest, the truest, and the best life.”

SOUTH FRAMINGTON, (MASS.) REFORMATORY PRISON.

SINCE last Tuesday night I have been in prison, but I believe I am to be let out to-morrow, so you see my sentence has been a light one. I guess if all prisoners were treated as I have been, they would always want to stop here. Well, my Aunt, Mrs. Wells, and I came here to South Framington last week on a visit to the Lady Superintendent, who is also an old friend, and we have been going through strange, interesting, and sad experiences, which I shall never forget. To-day is Sunday. At 8.30 we attended the services in the Chapel, and now soon we go to the Catholic services, for many of the prisoners are Catholic. The Chapel is a beautiful room,

adorned with pictures and most lovely flowers, organ, piano, &c.

We were seated on the platform and watched the prisoners file in to their places. But first I must tell you that this is a Reformatory Prison for Women, and that there are 240 women here who have "done the things they ought not to have done." All forms of evil doings are represented here, from murder to every-day drunken brawls. I think you would be intensely interested to be here, and to watch the different faces, and examine the different heads. There is no mistake about it, character is written on the face, and in the shape of the head.

This prison is to elevate and reform, not to carry out angry punishment.

The women are taken in hand at first by the Superintendent and treated as if they had no past, and they can make their future by their own behaviour.

They are divided into grades—the worst, the honest, and 1, 2, 3, and 4. The 4th is the highest, and the women work and behave so as to secure promotion. The No. 4 have a recreation room and a temperance club; they have a weekly social evening, reading, singing, &c. Last night my Aunt gave them an address, and examined some of their heads; they were greatly interested.

What interested me the most of all was the nursery, where there are sixteen babies, from two months old up to eighteen months—such merry, sweet children, and they are kept like wax, so clean. It is amusing to see them cluster round Mrs. Johnson, the superintendent—she dances them round the room when she pays her daily visit. After dinner, which was cooked and served by a prisoner cook and housemaid, we had an hour's rest, and then a lovely drive behind some fast trotters. This prison is lighted by electricity and warmed throughout; it is as clean as a new brass pin. It is amusing to watch or see the tables set for meals. The highest grade have a table cloth, and the perfect crockery, and then they begin to get more and more cracked as they go down. The dishes in the lowest division look as if they had been nibbled all round the edges, and some of the women seem as if they could do it, for they look as if they had a small tiger chained inside of them. I should like to tell you more about the prison, but time will not permit.—Extract from A. M. Fowler's letter. New York, U.S.A.

Hygienic and Home Department.

A LITTLE LAME BOY.

ABOUT sixty years ago a lame boy, named Erastus, left a home in New England, and entered a hardware store in Troy, N.Y. Besides being lame, he was slender and sickly, and his prospects in life seemed anything but promising. He knew little of the sports and pastimes that his companions enjoyed in their childhood; his face, even in the freshest years of life, bore the marks of suffering and care, and his friends pitied him, and said that he was very unfortunate. But he had a quick, active mind, full of right aspirations, and a heart full of generous impulses. His mind was at work preparing for usefulness in the future, and fondly dreaming of bright days to come, even in the solitary hours of sickness and suffering. He did the best he could, though his lot was so circumscribed, and God had a life work, full of honour, for the poor little lame boy.

When he first applied for work in a store, he was so small that the proprietor looked into his earnest face with some surprise and said: "Why, my boy, what can you do?" "I can do what I am bid," was the manly answer. There was the right ring in this reply, and the proprietor recognised it. "Well, my little fellow," said he, "that is the kind of boy we want; you can have the place."

That boy was Erastus Corning, the millionaire. The neglected, solitary lame boy made himself so useful to his employers, by his willingness to do "what he was bid," as to secure for himself the highest positions of responsibility and trust. He became a bank president, a railroad president, was three times elected mayor of Albany, was a member of the state legislature, and for three terms a member of Congress. In 1863 he retired from business, with a fortune estimated at five millions.

The Bible says that "he that humbleth himself shall be exalted," and the boy who would become successful in life must, like this man, begin by showing a willingness to do anything that he is bid. A conceited, hesitating, over-nice clerk comes to nothing; but the lad who is earnest and resolute, whose aims and purposes are his motive power, who is not to be turned aside from an object in life by false pride, in short, who in any honourable calling, "is willing to do as he is bid," is almost certain, other things being equal, to rise to reputation, and to be richly rewarded with success.

FOOD BEFORE SLEEP.—(By Dr. W. S. Cathell.)—Many persons, though not actually sick, keep below par in strength and general tone, and I am of the opinion that fasting during the long interval between supper and breakfast, and especially the complete emptiness of the stomach during sleep, adds greatly to the amount of emaciation, sleeplessness, and general weakness we so often meet. Physiology teaches that in the body there is a perpetual disintegration of tissue, sleeping or waking; it is therefore logical to believe that the supply of nourishment should be somewhat continuous, especially in those who are below par, if we would counteract their emaciation and lowered degree of vitality; and as bodily exercise is suspended during sleep, with wear and tear correspondingly diminished, while digestion, assimilation, and nutritive activity continue as usual, the food furnished during this period adds more than is destroyed, and increased weight and improved general vigour is the result. All beings except man are governed by natural instinct, and every being with a stomach, except man, eats before sleep; and even the human infant, guided by the same instinct, sucks frequently day and night, and if its stomach is empty for any prolonged period, it cries long and loud. Digestion requires no interval of rest, and if the amount of food during the twenty-four hours is, in quantity and quality, not beyond the physiological limit, it makes no hurtful difference to the stomach how few or how short are the intervals between eating, but it does make a vast difference in the weak and emaciated one's welfare to have a modicum of food in the stomach during the time of sleep, that, instead of being consumed by bodily action, it may during the interval improve the lowered system; and I am fully satisfied that were the weakly, the emaciated, and the sleepless to nightly take a light lunch or meal of simple, nutritious food, before going to bed for a prolonged period, nine out of ten of them would be thereby lifted into a better standard of health. In my speciality (nose and throat), I encounter cases that, in addition to local and constitutional treatment, need an increase of nutritious food, and I find that by directing a bowl of bread and milk, or a mug of beer and a few biscuits, or a saucer of oatmeal and cream, before going to bed, for a few months, a surprising increase in weight and strength, and general tone, results; on the contrary, persons who are too stout or plethoric should follow an opposite course.

HURRY.—Some people are always in a hurry, and generally always behindhand. The two go together; for hurry is the child of a state of mind, rather than a strain of circumstance. The methodical man is never in a hurry. He moves along in his orbit, as Goethe says the stars do, "without haste and without rest." He knows what is first to be done, what next, and how long each item to be attended to will require. He sees in an exigency what can be omitted or deferred, and what must be done according to the programme he has made. If he is due to a certain train, he is there on time with five or ten minutes to spare. If a certain task is to be done at a certain date, the work is ready a little in advance of the date. All of this comes

of a habit of forecasting, planning out, of working daily according to a settled programme, of allowing for each tick of the pendulum a second to tick in. If the person who is always in a hurry will sit quietly down and make out a list of what he has to do, what must be done, what may be omitted, and of the time each task will probably take, of the limit beyond which work cannot be deferred, and will then simply work up his programme, he will find no need to be in a hurry. Some housekeepers are always in a hurry about breakfast or dinner, or getting to church, or having their sewing done, or making calls, or something else; and they do not realize that hurry is in their state of mind, is within them, and not caused by circumstances outside of them.

A PLEA FOR THE BOYS.—Mothers! why is it that all care and taste is lavished on the rooms which your girls occupy, while the barest necessary furniture seems to be considered good enough for the boys. We can all, no doubt, recall glimpses of the average of boys' sleeping apartments. An attic, usually the back room; a narrow bed, a strip of carpet on the floor; bare, cold-looking, whitewashed walls; a chair or two perhaps. Do you recognise the picture? Is it any wonder that the boy who occupies such a room will be more apt to "hang his clothes on the floor" than in their proper place, or that disorder reigns generally while he is in it? "But," you say, "boys are naturally disorderly, and they cannot appreciate a nice room." Have you ever tried? I will venture to affirm that if you will only make a change, give your sons as good rooms as is possible, neatly furnished and tastefully decorated, you will in a short time be surprised to find your boys showing much more pride in keeping up the nice appearance of their rooms than you would have deemed possible. Again, you will say, "I have not the means to spare to do all this." Then get "father" to open his heart and pocket-book; and enlist the sympathies of "the girls." Perhaps they will contribute a picture or two, a pretty mat, or any of the thousand-and-one tasty articles in the making of which feminine ingenuity finds vent. My word for it, your boys will appreciate your efforts. But, perhaps, with the best intentions in the world, circumstances are such that the attic room and bare walls are your only resource. Then may God bless you and help you. Of one thing I am very sure, if you are following in the footsteps of the lowly Son of God, those boys will look back in after life and bless you for the sweet influences with which you surrounded them by your example and prayers, even though you could only give them a back attic bedroom.

SOME say the age of chivalry is past, that the spirit of romance is dead. The age of chivalry is never past so long as there is a wrong left on earth or a man or a woman left to say, "I will redress that wrong or perish in the attempt."—*Charles Kingsley*.

Notes and News of the Month.

WE regret that, through an oversight, the name "Francis, instead of "Sir Douglas," was printed in the first character sketch in the November number. The sketch of Francis Galton, Esq., F.R.S., was published in the March number of 1886.

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HERE is an interesting temperance fact. Eleven gentlemen met the other week at lunch in Shanghai, and it came out that they had all been life-long abstainers. They had each lived in the trying temperature of North China for periods ranging from twenty-four to thirty-five years, and not one of them had been once sick from climatic causes.

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DR. MARY HALL, who was the principal speaker at a recent temperance meeting at Exeter Hall, is not, as was generally supposed, an American, but an English lady. She spent eight years of her life in America; and she came back partly because British women need her to teach them the medical aspect of the drink question far more than her sisters in the United States.

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THE Examination for Diplomas and Certificates in connection with the Fowler Institute takes place on January 14th, and the two following days.

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DR. BUSBY was asked how he contrived to keep all his preferments and the Head-Mastership of Westminster School through the successive and turbulent reigns of Charles I., Oliver Cromwell, Charles II., and James II. He replied: "The fathers govern the nation, the mothers govern the fathers, the boys govern the mothers, and I govern the boys."

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MRS. ALICE SHAW, the whistling lady, believes that whistling is hereditary. She has several daughters who whistle nearly as well as their mother.

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SIR RICHARD WEBSTER, Sir A. K. Rollett, Mr. Cyril Flower, and a good many jurist members of the House of Commons, are ardent amateur photographers.

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LOUISE MICHEL is devoted to animals, and never stirs without bringing with her at least three cats, a toad, and a parrot. Her anarchist principles have already led to her imprisonment for periods varying from three to five years. She likes England, and, though a Socialist in France, is a firm believer in the British constitutional forms of government.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

INDEPENDENT COLLEGE.—Professor A. J. Coles delivered his popular lecture, entitled, “Phrenology, its principles and benefits,” at the Independent College. The Rev. F. W. Aveling, M.A., B.Sc., the principal of the College, introduced the Professor to the students and teachers. The professor kept his audience in rapt attention, with frequent outbursts of laughter. A warm vote of thanks was given to the Professor for his able lecture.

A LECTURE was delivered on Tuesday, December 8th, in the school-room of Bloomsbury Chapel, New Oxford-street, by Professor Fowler, on the “Utility of Phrenology.” At the close, Miss Jessie A. Fowler examined four heads of ladies and gentlemen present; the applause which greeted the various points as they were made proved the appreciation of the audience, and the Rev. J. Baillee said he could endorse the truth of the character sketches, as Miss Fowler’s remarks accorded with his personal acquaintance of the parties examined. There was a good attendance, the Rev. James Baillee, the pastor, occupying the chair.—*The Holborn Guardian.*

MISS JESSIE A. FOWLER has just been lecturing in the following localities:—Kelvedon, in the Friends’ Meeting House, in the Shore-ditch Tabernacle, Finsbury Park, Leytonstone, Clapton, Tulse Hill, Dulwich, and at the Rectory Road Congregational School-room. The Rev. Fleming Williams introduced the lecturer at Rectory Road, and spoke a word on the usefulness of Phrenology. At the close of the lecture Miss Fowler examined five well-known members of the audience; the accuracy of the delineations was testified to by the Examination Committee, which included the Rev. F. Williams. He said the examinations were wonderful word photographs of the persons, whom he knew well. He gave striking facts about the lives of several of those examined, and several disbelievers were converted.

LECTURES ON PHRENOLOGY.—Mr. Richard Gray, Ph.D., F.S.Sc. (Lond.), has been delivering during the last five weeks a course of lectures, in the Congregational Schools, Folkestone, each Monday evening. The subjects embraced—“Brain Growth and Culture;” “Individual and National Peculiarities;” “Our Children—their education and training;” “High Aims and True Success.” The audiences have been large, and the lectures much appreciated. Questions were asked, and replies given to the satisfaction of the company. Examinations of several ladies and gentlemen were declared to be most correct; in four instances, three excellent

Phrenologists had previously examined, and bore the same testimony. Much interest was excited, and we trust may result in a study of the science.

On Friday evening, December 4th, a lecture was delivered in connection with the Wheeler Street Mission Mutual Improvement Society, Birmingham, by Mr. Mark Guy, of Messrs. Guy and Fellows. Subject, "Your Head: How to read it." The lecture was well attended, and proved interesting as well as instructive; it may be characterized as a concise, connected, and scientific discourse. The public delineations were of an especially amusing and interesting nature, being remarkable for fairness and accuracy.

CLECKHEATON—BROOK STREET MUTUAL IMPROVEMENT SOCIETY—The first of a series of lectures on "Phrenology," was given on the 24th inst., by Mr. D. Allott, M.F.I. There was a large attendance, presided over by the Rev. B. J. Tungate (Pastor, Central Chapel). Mr. Allott first spoke of the opposition, criticism, and condemnation which Phrenology has had to encounter from sceptical men. He then referred to the utility of the science, its value and importance; the way in which it may be applied to practical and every-day life. He next spoke of the average size, weight, and formation of the brain. At the close of the lecture, Mr. Allott examined a number of persons selected from the audience, and several of the above bore testimony to the accuracy of Mr. Allott's statements.

PROFESSOR ROE ON PHRENOLOGY.—A deeply interesting and instructive lecture upon the above subject was given by Professor Roe, in the Primitive Methodist School-room, on the evening of the 16th inst. The Rev. A. Bound occupied the chair, and, in introducing the lecturer, dwelt upon the nature of the subject, and use to which it should be put, hoping that those present would be quite convinced ere leaving upon the latter point.—Mr. Roe commenced his address by explaining its title. In conclusion the Professor argued that so far from tending towards fatalism, the progress of the science might indicate one more means by which humanity might approach its Creator, affirming that a man might better perform his work in the world by having allotted to him the labour for which he was best suited.—*Oxfordshire Weekly News*.

CONVERSATION enriches the understanding, but solitude is the school of genius.—*Gibbon*.

THE bread of life is love, the salt of life is work, and the water of life is faith.—*Mrs. Jameson*.

I SHOULD say sincerity, a deep, genuine, true sincerity, is the first characteristic of all men in any way heroic.—*Carlyle*.

Fowler Institute.

MEMBERS' NOTES.

“For 'tis the mind that makes the body rich.”—SHAKESPEARE.

ON Monday, December 14th, Mr. Dennis R. Samuel read his paper on “The law of Gravity as the Basis of Mind.” Mr. R. Hall occupied the chair. The lecturer said he was unable quite to trace the basis of mind to vortex motion, as was originally suggested, but was still of the opinion that such a thing was possible; he therefore preferred to use the word gravity in place of vortex motion. He stated that energy is subject to the same laws of evolution as matter, and that mind is merely a development of the force of gravity. The function of the mucous membrane is to secrete mucous, while the special function of the brain is to secrete thought. Gravity is an ultimate incomprehensible force. Everything is instinct with energy, which is the connecting force of the universe. Geology teaches that after the molten stage life was enabled to appear on this earth in an elementary condition, and was subject to the well-known law of differentiation from the “survival of the fittest.” The primary rocks having been subject to fusion, have apparently lost all trace of the original life forms; but in the stratified rocks the traces of advancement from lower to higher forms may be clearly seen. The paper led to a very interesting discussion, in which questions on materialism, spontaneous generation, and Biblical interpretation, were explicitly dealt with.

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The January monthly meeting takes place on Monday, the 11th, when Mr. Fris will read a paper on his experiences, entitled, “Phrenology in Sweden.”

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The Fowler Institute Soirée will take place on January 4th.

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MR. F. sends the following report of a very remarkable case, and of especial interest to phrenologists:—“A truly wonderful case has, writes a correspondent, just been placed on record by a surgeon. A boy was shot with a revolver, the bullet entering the forehead just above the left eye, and he was believed to have been killed. However, the surgeon on being summoned probed the wound, and detected plainly the presence of the bullet. As soon as the latter was touched it could be felt to move backwards. This was followed by a twitching of the limbs, respiration, and signs generally of returning life. The third day afterwards the boy became conscious, but he had no recollection of what had happened. Within three months he was able to be up, and some paralytic symptoms which had resulted from the accident had to a large extent disappeared. Before the injury he had been able to read, write, and do ordinary sums in arithmetic, but on recovery he had lost all recollection of the alphabet, and had to learn

it over again. Remarkable, however, as it may seem, his ability for calculating had improved ten-fold. Ultimately he made a perfect recovery, his health being completely restored. He lived for nine years and a half with the bullet thus lodged in his brain, and then died in consequence of a blow received on the side of his head opposite to that originally injured. On examination after death, the bullet was found embedded in his brain." Such a skull as the above would be a valuable addition to the Institute Museum, especially if an accurate account of the boy's life could be obtained. An examination of the brain, and more especially the organs of language and calculation, if viewed from a phrenological point, might have revealed the cause of this curious effect.

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Human brains except to the professional student are at a discount, and it is this portion of anatomy, together with the skull, that deserves the attention of those who desire to prove phrenology on scientific grounds. There is doubtless much yet to be learnt about our nervous apparatus, and in seeking for truth in this matter, we cannot do better than follow the example of the fathers of this science, by examining the brain itself.

I therefore propose that we should induce our friends, or more particularly those who may possess remarkable head-pieces, to leave them to the Institute; the brain for examination, and the skull for preservation; together with a detailed character sketch and biography. Members, of course, would be expected to set the example they ask others to follow. A friend of mine, whom I have known for many years, has expressed his willingness to aid science in this respect, when the time arrives for him to enter into a more perfect state of being. Why cannot we supply this long-felt want?

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Mr. Hollander read a paper on "Recent Brain Research," on December 9th, which was delivered in his usual popular, and at the same time, instructive manner. Our list of members steadily continues to increase, and the fact that the above-mentioned gentleman has promised his name will be welcomed by all.

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The following is an extract taken from a letter of Miss A. M. Fowler's, dated November 19th, 1851:—"I appreciate very much the kindly mention made of me in the November Magazine, and desire to thank the members through you for their continued remembrance of their old secretary. Those words, 'England, Home, and Institute,' are very dear to my heart, and are never out of it; you may be quite sure I shall return to them as soon as circumstances will allow. I was much interested in reading the report of the Mind *v.* Body discussion. My vote would be, having a sound body first, as almost necessary for the strength of mind."

An instrument for measuring brain power is said to have been constructed by a Mr. J. L. Balbi. Mental effort causes a rush of blood to one or more parts of the brain, the quantity of blood depending upon the intensity of thought. Increase in temperature follows, which, if measured, determines in a rough way the "power" necessary for that thought. The inventor says, "I accomplish this object in the following manner: I have a head-gear of some light, high-conducting (heat) substance. In its middle, or any other convenient position, I fix a thermo-electric pile, and connect this, by means of flexible wires or otherwise, to a sensitive galvanometer. The extreme sensibility of the thermo-electric pile is well known, and, therefore, whatever rise in temperature takes place, consequent to the rush of blood, would be instantaneously indicated by the galvanometer."

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Miss Susie Anstey, one of our members, writes from her Hygienic Home and School of Physical Culture, Devon, that she has succeeded during the past summer in establishing the above school, which has more than reached her expectations. She is also making many converts to phrenology; this, however, is not surprising, for she proved a most apt scholar, and acquitted herself with credit during the months devoted to earnest study at the Institute.

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Miss Baker, of Calcutta, writes, "I am glad to hear the Institute is growing. Please remember me most kindly to all the members I know, and tell them how much I miss the meetings." She also gives some interesting facts about the people in Calcutta, and the views of some of the Natives on Theosophy. In reply to some of Miss Baker's questions, as to whether the Priests out there could do the wonderful things the Theosophists claim for the masters, the Baboo said, "I believe there are a very few of the high caste Priests who could do so, but they are generally very old men; and they give all their life to studying the laws of Nature, and how to control them;" but, he said, "lots of things are only wonderfully clever conjuring tricks."

G. B. COLEMAN.

The Employment Bureau.

The Employment Bureau has been opened by the Fowler Institute, to assist people who are seeking employment, and also to aid heads of firms to secure suitable employeés. It is hoped in time that this department will become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C.

A YOUNG Lady desires a situation as Kindergarten Teacher.

A TYPEWRITER is wanted—lady preferred.

Book Notices.

We have just imported a large supply of "How to Mesmerise," giving full and complete instructions, by Professor J. W. Cadwell, of America. The price has been reduced to 2s.

* *

"The Face as Indicative of Character," by A. T. Story, has been reduced to 1s. 6d., paper covers, cloth 2s. 6d. This is one of the best and cheapest books on physiognomy now before the public.

* *

Binding cases for the PHRENOLOGICAL MAGAZINE are now ready, price (post free) fourteen stamps; or we will supply the cover, and bind the Magazines for 2s. 6d. Persons desirous of having their copies bound are requested to send them on at once.

* *

The "Phrenological Annual" for 1892, price 6d., edited by Professor J. Coates, of Glasgow, contains articles on phrenology, handwriting, physiognomy, hygiene, mesmerism, and a number of character sketches illustrated. Altogether it is an interesting number, and can be had direct from this Office.

* *

A specimen copy of the new issue of "Natural Food," a monthly magazine devoted to health and the higher life, will be posted with this number to all subscribers to the PHRENOLOGICAL MAGAZINE. "Natural Food" will henceforth be published monthly by L. N. Fowler, Ludgate Circus, London, price 1d., or yearly subscription 1s. 6d., post free. The price will place it within the reach of all. Dr. Densmore, the editor, is endeavouring to make it one of the most popular health journals now before the public. Any subscribers of the PHRENOLOGICAL MAGAZINE who have not received a copy, by intimating this fact on a post card, will have one forwarded.

* *

"The A B C of Theosophy" is a little pamphlet of fourteen pages, written by H. S. Ward, who, though he tells his readers is not a Theosophist himself, thinks that the cause of truth will be better served by a fair statement of the doctrine (even if false) than by ignorant antagonism or ignorant support. It is the nutshell of theosophy, for we find in its limited pages an explanation of mahatmas and phenomena, occult science the source of revelation, the main principles of theosophy, which are the two great ideas of karma and re-incarnation. The scheme of life is next dealt with, which includes seven principles, three referring to the eternal and four to the perishable. He speaks of the aim of life as the educating and perfecting by experience of the higher ego, and this is done through karma. "Kama Loca" is, we find, a state and existence, not a place, and here a man waits the close of his normal life-cycle, if from

accident or disease death ensues before that period. Devachan is a state of perfect happiness, approaching the conception of heaven. It is well worth reading, and will save many hours of wading through larger and more obtuse reading on the subject, which may not in the end present such a concise and clear idea of the general principles.

* * *

“Marriage a Success,” by A. Burch and J. J. Sparkes, F.S.Sc. (published by L. N. Fowler, Ludgate Circus). This book should be read with a great deal of interest by those who are about to choose a companion for life. It gives some good sound advice as to the kind of temperaments that are suitable to each other. The book is well illustrated, showing the development of the various faculties of both sexes, and the dispositions that are likely to unite with happy results. Those who are married will do well to study the chapter on matrimony, as they may learn some hints how to make “Marriage a Success.”

* * *

Daniel Marshall's New Game—“Cartulary.”—This is the superscription of a new game, which is having a large sale, and is in every way adapted, not only for the fireside and home circle, but for clubs. It is so simple that children can play, yet so intensely interesting that older folks can find an evening's amusement by playing “Cartulary.” Our phrenological friends should certainly obtain a copy of this game, as it is specially stimulative to the faculties of observation, locality, order, and calculation, in the perceptive group, and causality in the reflective; and yet to play it properly nearly all the faculties of the mind are brought into play. We should advise its introduction into kindergarten establishments. It is sold at prices ranging from 1s. to 10s. 6d. (see advertisement on another page), and can, for the convenience of our friends, be obtained at the offices of the PHRENOLOGICAL MAGAZINE at published prices.

Hints.

IF a fire is violent, wet a blanket and throw it on the part which is in flames.

NEVER throw pieces of orange peel or broken glass bottles into the streets.

CELERY acts admirably upon the nervous system, and is a cure for rheumatism and neuralgia.

SHOULD the bed or window curtains be on fire, lay hold of any woollen garment and beat it on the flames until extinguished.

WHEN benumbed with cold, beware of sleeping out of doors; rub yourself, if you have it in your power, with snow, and do not hastily approach the fire.

SHOULD a fire break out in the kitchen chimney, or any other, a blanket wetted should be nailed to the upper end of the mantelpiece, so as to cover the opening entirely; the fire will then go out of itself. For this purpose two knobs should be permanently fixed in the upper ends of the mantelpiece, on which the blanket may be hitched.

Science Clippings.

THE average of the pulse in infancy is 120 a minute; in manhood, 80; at 60 years, 70. The pulse of females is more rapid than that of males.

NO. 174.

ONE of the most peculiar marine curiosities found at the bottom of the sea, is the brain stone, which in many ways resembles the head of a human being, with its many brain-like furrows.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

W.S.—This photograph indicates a narrow, high, and rather long head. He is manly, rather proud, decidedly dignified, very positive in his opinions, and does not deviate from a regular course of life. He has not so much physical, as mental and moral force, and will sustain himself with credit when strongly opposed, for he has considerable moral power, presence of mind, and many generous impulses. Larger destructiveness and side head generally, would give him more worldly wisdom, and enable him to appear to a better advantage as a business man. He would do in some responsible position, where it required a man to take his place, and sustain himself in spite of opposition. He is not particularly gifted in conversation, or making speeches, but he goes right to the point, and says what he has to say in a few words. He would sustain himself in a position where positive mind was required, and would maintain his opinions through thick and thin.

K. W.—Is better adapted to a professional life than to ordinary work. She takes substantial views of subjects, and is not often wrong. She has a large brain, the base of which is quite active, and she should show a decidedly executive and industrious character. She prefers to do something of an executive nature, than to have the way already prepared. She is not particularly forcible, nor does she make a great fuss about things, but she will carry a heavy load all day as well as a light one, and sustain her uniformity in the midst of severe trials. She does not do one heavy day's work, and then spend a week talking about it afterwards, but she goes right along with her duties, and takes the hard with the easy, the same as if it were all of one grade. She comes from a family accustomed to go through with whatever they take hold of. She has a good organization for a practical sphere of life. As an educated woman, she would do for a nurse in a hospital, or even as a surgeon. She always knows how to do things, requires no showing, and is very intuitive in judgment.

W. C.—Has an available intellectual capacity. He is quick to observe, acquires knowledge easily; is quite intuitive in his judgment of character, is versatile in talent, quite given to contrivance and experiments. He is of a restless spirit, and the more he has to do the better he works. He will not show off specially well as a speaker; or in other words, has not so much refinement, and extra nervousness. He has strength and power; he is one who can take hold, and do, and clear his way. He had better not have a partner, unless it is his wife. He acquires knowledge easily; has a good general memory, and can use his knowledge and experience to a good advantage. He is not wanting in force of character, but he is more known for his will and determination of mind than for his ambition or love of display.

INA.—Is remarkable for her powers to understand, her judgment, scope of mind, versatility of talent, imagination and taste; for the exercise of judgment. She is not specially gifted in anything, but she talks so as to be understood. She would prefer to be in a position to plan, lay out work, devise ways and means, and do that which requires taste. She is not so well qualified for a business that requires mere memory, observation, and conversational talent; she would do better as a superintendent, manager, one to take responsibilities, for she can be relied upon in her work and judgment. The force of her mind is in her reason and moral sense. She does not make a great noise or fuss about anything, but her work is done quietly and well. She is a favourably-balanced young lady, and will not be changing from one sphere of life to another, or show a coquettish spirit. She should encourage conversational talent, and do her share of the talking.

J. P.—Is a good medium to pass information along to others. She is a good talker, wide-awake, social, and entertaining. She is warm-hearted, ardent, and somewhat enthusiastic. She knows much, and is ready to impart it to others. She is practical, executive, and has a stimulating influence over others. She comes directly to her speech, and talks definitely, hence she talks much about persons, what they

say and do, and what is going on. She has a very loving disposition. She is admirably adapted to the sphere of a wife, and companion, and would settle down into domestic life and do honour to her home, but if left to work her own way through society without marriage, she may not be so patient, or so steady, because the impulses of her nature are very distinct, and she needs responsibilities to keep her mind settled, and use her force. She is alive to the company wherever she is.

JEANIE.—Has an indication of a remarkable ancestry; some of the family must have lived to be very old. She has always had the credit of being older than she really is, not because she was so very serious, but because of the peculiar form of her head, which is particularly high, and quite narrow. She is rather remarkable for her sympathy, and her generous impulses. She is reverential, and respectful to superiors, and knows her place. She has strong intuitions of mind, a keen sense of character, and spontaneous knowledge. She knows how to make the most of a situation. She does not mimic, and imitate others much, and has not extravagant imagination, but loses no time or opportunity in gaining her ends. If there is difficulty as to what to do under the emergency, she is the one that is resorted to for advice, for she has presence of mind in times of danger; makes many friends and no enemies.

D. T. E.—Has an aspiring mind, more than ordinary ambition, and is anxious to make his mark in the world. It would be difficult for him to pass along quietly like a farmer or mechanic, without being known. His mind seeks a public position, and he wants to make the most out of his calling or situation. He would prefer to be before the public in some way, but more especially as a manager, superintendent, or to be in some sphere where responsibility is required, for he is high in the crown of the head, is ambitious, independent, and persevering; he also is orderly, systematic, and particular about his work and bearing. He is fond of music, and quick in his perceptions of the conditions of things. He is always in earnest, and anxious to turn everything to a good account, and tell what he knows to a good advantage. He had better practice speaking. He prefers a peaceable life to one of warfare, for he is not cruel and revengeful in disposition.

M. J.—The photograph indicates an amount of restless disposition; nothing but a full and complete education would satisfy him. He is one of the hungry kind of men for all kinds of practical knowledge, only of a scientific type, and is interested in things and in conditions of things. He is very quick of observation, accumulates knowledge on any particular subject with great readiness. He has a retentive memory of all that he sees and does. He has even discrimination of mind, and wants to know something about everything. He can enjoy fun, but he is more interested in defending knowledge and the application of ideas. He is quite steady, firm, persevering, and rather manly; he is not given to trifling, although his jokes are quite practical and to the point. He is known for great perseverance and tenacity of opinion, and would prefer to be the leader than to be the one to follow. He is much safer as a teetotaler, because he generally makes the most out of his labours and enjoyments.

THE
Phrenological Magazine.

FEBRUARY, 1892.



LORD ROSEBERY.

THIS gentleman has a favourable balance of organization. His head shows uncommon abilities, and great versatility of talent. He should be remarkable for his practical talents, his available power, and his ability to turn off business—not only with dispatch—but with care; few persons will go through a difficult task with less fretting and exhaustion than he. He is particularly observing; has superior judgment of practical matters; quick to inform himself of the condition of things, and knows how to apply his knowledge without hesitancy; few men work with so much

ease, and do their work so accurately as he does. Although he is not so highly nervous as many, yet his mind is clear, and his knowledge is thorough, and his ambitions are great. It costs him less nervous chafing to do what he does, than men generally. He has capacities for a literary sphere of life, or for statesmanship where there are many statistics to be considered. He is copious in the use of language; he requires motive to call him out, for he does not speak so well under ordinary circumstances, as when excited. He naturally takes rather broad and liberal views of men and things; of politics and religion, and all his relationship to life; does not chafe much about ordinary affairs. He has plenty of good humour, and exerts a pleasing influence over others. He is capable of making many friends, and cannot very well make enemies; but he is a plucky man when called out, and he is not easily stopped in his course when he once gets started. He is very tenacious of his position when taken, and can be relied upon to carry out the plans that he has commenced. He will allow a great many troubles and difficulties to roll off his shoulders on to others, while he will enjoy himself. He exerts a positive influence, and is as far removed from the character and disposition of Calhoun as possible.

L. N. FOWLER.

In a review of his "Pitt," by Mr. Brett, in the *Nineteenth Century*, some interesting side-lights are thrown upon the character of the man whom Mr. Gladstone once designated as his successor. A certain young politician, on finishing his education, "was warned by an old and affectionate teacher 'not to take plush,' whereby was meant one of those subordinate ornamental appointments which Ministers are fond of dangling before the eyes of promising youth. The reply was what Mr. Pitt might have written under similar circumstances: 'I have been offered plush tied up with red tape, and have refused it.'"

In his Eton days Lord Rosebery, we are told, "astonished his teachers by the gravity of his demeanour. One who remembers Lord Dalmeny when he arrived at Eton as a 'new boy' describes the gravity with which he used to lie by while others talked, and wait for a chance of saying at his ease something unexpected and *sic*; how remarkably he possessed even then that capacity for the cool adjustment of two dissimilar things which makes a spark, and is called wit; and how, even in boyhood, his wit was interlaced, as it is in the volume just published, with a fine sentiment."

Lord Rosebery is one of the most remarkable men at

present to the front in English public life. He belongs to the highest aristocracy of the land, and he has identified himself with the cause of the people. There is always something taking in such a combination. It unites, as it were, the ideas of the past and of the present. It strikes the imagination, and appeals to our common humanity. But Lord Rosebery is much more than a politician. He is a man of culture and refinement. His character combines remarkable delicacy and sensibility with unusual strength and determination. Such a man—young, rich, eloquent, and sympathetic, fired with a generous ambition but exercising a masterly self-restraint, and yet withal full of loyalty and reverence—such a man possesses all the characteristics which win the popular heart and ensure a great career.

At each step upwards that Lord Rosebery has taken he has become more fitted for the position he has attained, for he has been pressed to the front by the natural development of circumstances, and not by the hasty dictates of ambitious rivalry.

COMTE AND GALL.

AUGUSTE COMTE, the greatest French philosopher of this century, was a disciple of Gall, the founder of the phrenological doctrine. Unlike other disciples, Comte acknowledges Gall as his authority, and gives him credit for his efforts to make psychology a cerebral science.

Gall shattered the last link which chained mental philosophy to metaphysical and theological systems. And this bold project he realised to a degree beyond all that the most competent thinkers of his time had imagined possible. In a time when the attributes of human nature were narrowed down by all existing schools to mere intelligence, Gall boldly upheld the positive doctrine of the preponderance of the emotions over the intellect, a truth indicated by the common instinct of mankind, but unknown as yet to science. He dissipated on the one hand, the nebulous mental unity of psychologists, by demonstrating the plurality of intellectual and moral organs ; and on the other hand, he removed the old biological error of attributing the higher functions to any but the cerebral apparatus. To appreciate the importance, and the difficulty of this latter service, we must remember that the passions were still referred to the vegetal viscera, by both Bichat and Cabanis. At a time when naturalists by common consent were devoting their whole attention to dead animals,

Gall took living actions, which he observed so admirably, as the foundation of his principal analysis of propensities and faculties.

Comte renders due justice to this part of Gall's work, but he undervalues his physiological discoveries, forgetting that Gall was first collecting his facts regarding the connection between the organic state of parts of the brain, and certain fundamental faculties, and then drawing his deductions from them. Comte accepts only the deductions, and pays no attention to the facts. He is under the impression that Gall first analysed the human faculties, and then tried to discover their connection with the brain. Besides, Comte, like Gall's English followers, gave his doctrines the appearance of a complete system, instead of proceeding on Gall's scientific basis, and ensuring first the foundation of the work. He works under the curious mis-apprehension that Gall's collection of physiological and pathological facts was only a didactic artifice to justify his analysis of the human faculties. In truth, Gall does not pretend to have discovered or enumerated all the faculties. "Probably," he says, "those who follow me in the career which I have opened, will discover some fundamental forces and some brain-organs, which have escaped my researches." He furthermore acknowledges his inability to give in all cases the fundamental forces; even those which he thought fundamental, he admits may be found to be complex. "I know," says Gall, "it would have been more philosophical always to refer to their fundamental forces, the qualities, or faculties, which I could detect in only their highest action; but I preferred leaving something for those who came after me to do, rather than give them an opportunity to disprove what I had prematurely advanced."

Comte tries to discover the fundamental faculties by a study of the human progress as a whole, that is, Sociology. By a process of speculative reasoning he arrived at an analysis of the human faculties. He altered the classification ten times in three years, which makes one doubtful as to its positive foundation. But what shall we think of the founder of "the positive philosophy," when he proceeds by the same method of abstract reasoning to localise the various faculties in different parts of the brain, without giving a single fact in support of his localisations. What is there to distinguish him from the metaphysicians, whom he criticises at great length.

According to Comte, Gall's system was a failure because constructed without the aid of Sociology, but his imperfect results made it possible to proceed at once to the universal science, for which this was the only preparatory step still

wanting. "As the founder of Sociology," he observes, "I owed this special acknowledgment to the biologist who has done more than any other to free my philosophy from every trace of ontology as well as of theology." Physiology and Pathology he thinks incompetent to solve the problem of localisation of function. It was impossible to solve it prior to the study of sociology. In a congeries of organs so intricate as the brain, parts are more closely connected, nay, more homogeneous, than elsewhere, consequently mere anatomical study, according to Comte, would never have led to the discovery of the plurality of organs. Equally incompetent, he thinks, must be the anatomical method to determine the respective positions of the faculties.

Nevertheless, Gall proceeded on the objective method. He observed, and it is an acquisition of science in the present day, that the anterior part of the brain is connected with the intellect, the middle part with the moral faculties, where we might suppose them on other grounds, because of their connection with the principal mechanism of motion, and the posterior part and the sides with the propensities. This principal division is accepted by Comte, only with different terms.

Comte divides the "Human Soul" into three groups of faculties; the intellect, the heart, and the character. He represents the brain as appropriated to three orders of functions, the preponderating portion of it, and more especially the posterior region, being given to feeling; the anterior portion to intellect; the central portion to activity. The feelings again are divided into two classes: the personal and the social. So far there is no serious difference between Gall and Comte. Even the arrangement of the faculties Comte intended to carry out after what he calls the "idea" of Gall, but which was really an observation made by Gall: that the functions of the brain are so arranged that their succession presents a developed series, being higher in quality and inferior in force as we proceed from behind forwards. Comte thus appropriates the anterior extremity of the affective region to the social feelings, reserving the larger portion for the personal instincts, the hinder portion always belonging to the less noble propensity. The benevolent inclinations are placed in proximity to the intellectual organs.

Comte now divides the personal instincts into the instinct of preservation and the instinct of improvement. The former he subdivides into the preservation of the individual—*i.e.*, the nutritive instinct; and the preservation of the race—*i.e.*, the sexual and the maternal instincts. By a process of speculative

reasoning, which the limit of this paper will not allow me to follow, he arrives at the conclusion that the nutritive instinct is located in the cerebellum. This area corresponds to a portion of the skull at the back of the head close to the neck, whereas phrenologists have located this instinct in an area corresponding to a portion of the skull, which is just in front of the highest tip of the ear, by the great convexity of the zygomatic arch; a localisation which is confirmed by recent experimental researches. In a similar unsatisfactory manner Comte has located all the faculties; needless to say that there is no scientific foundation for his brain-topography.

Succeeding to the series of preservative instincts, we have two of a more elevated and less universal kind, the instincts of improvement. Comte names them: the military and the industrial instincts. Between these five egoistic instincts, and the social faculties, we have two intermediate affections. These are: pride, or the love of power; and vanity, or the love of approbation. This completes the series of the seven personal instincts.

The higher propensities are three in number: attachment, veneration, and goodness, or universal love. "To attempt to reduce them to one," says Comte, "would be to fall back into the metaphysical confusion from which Gall delivered us."

With regard to the intellectual functions Comte differs from Gall. He does not carry the analysis of perception as far; otherwise, the difference is not so great to justify Comte's severe criticism. "In the absence of all systematic method," he says, "Gall constantly oscillated between the suggestions of his own mind and empirical observation, without ever proceeding on any regular plan. This fluctuation, however, which then was inevitable, did not seriously interfere with the first attempt to work out the physiology of the brain so far as the propensities were concerned. There his logical deficiencies were compensated by a powerful combination of two most efficient instruments: the common sense of mankind, and the observation of animals. In this subject no one had gone utterly astray except the philosophers, whose endless points of discord had done little except hide the truth. But with the intellectual functions the case was altogether different. Here Gall was not helped by the study of lower animals; and the light derived from the common judgment of men was too confused, and needed the application of a theory beyond his grasp. Notwithstanding this, he burst vigorously through the oppressive confusion of metaphysical prejudice. His own conclusions were indeed shallow, and in every respect unworthy

of him ; still, ephemeral as they were, there was sufficient reality in them to assist me in ascending to the true encyclopædic point of view by founding the science of social life." While I agree with Comte that the self-inspecting process has not assisted the discovery of mental laws, I differ from him in ascribing to the study of the collective evolution of the race the possibility of localising brain-functions.

The first distinction in mental functions, which Comte draws, is that between the faculties of Conception and the faculties of Expression. We have two sorts of conception—one passive, the other active. The first may be called Contemplation ; the second Meditation. Comte recognises two modes of contemplation : concrete and abstract. The first refers to objects. From it we derive cognitions which are real. It is more used in Art, whether technical or æsthetic. The second mode of contemplation is analytic. It takes cognizance of events. From it we get conceptions which are general. It is more used in science. The Meditative function is decomposed into Induction and Deduction ; two distinctions universally accepted. The fifth intellectual organ is Language, under which Comte understands not merely articulation of speech, but all sorts of communications more or less artificial, as cries or gestures.

The last group of faculties form the "Character" proper. The faculties are : Courage, Prudence, and Perseverance. Every being endowed with active powers should have courage in undertaking, prudence in execution, firmness in accomplishment. No practical success can be attained without the union of these three qualities.

This completes the analysis of the "Human Soul" into 18 faculties : 1. Nutritive Instinct ; 2. Sexual Instinct ; 3. Maternal Instinct ; 4. Military Instinct ; 5. Industrial Instinct ; 6. Pride ; 7. Vanity ; 8. Attachment ; 9. Veneration ; 10. Benevolence ; 11. Concrete Contemplation ; 12. Abstract Contemplation ; 13. Inductive Meditation ; 14. Deductive Meditation ; 15. Language ; 16. Courage ; 17. Prudence ; and 18. Perseverance.

Though the results of Comte's analysis of the human faculties are far from what he himself calls "positive," we must be indebted to him for defending Gall's teachings so cleverly, and in face of almost unanimous opposition. Whether his defence of the general phrenological principles will help to remove the prejudice which many learned men have against the doctrine, is doubtful ; yet it is far superior to a similar work by Prof. Alexander Bain, of Aberdeen.

BERNARD HOLLANDER.

CRIMINAL ANTHROPOLOGY BY LOMBROSO.

MODERN investigations are tending to establish a certain type as characteristic of a class of instructive criminals. And from a consideration of what that physical type really denotes, light is sought upon the practical problems of which the existence of such a class forces every civilized State in some fashion or other to take cognizance.

The home of the science of criminal anthropology is Italy, and its most illustrious name, so far, is that of Dr. Cesare Lombroso, whose *magnum opus* is "L'homo Delinquente," a grim and startling work testifying to amazing faculties of research and generalization, which it is to be hoped before long will be available for English students in a good translation. Lombroso is a man of extraordinary intellectual ability and activity. Born in 1836, he had begun at the age of eleven to compose romances and tragedies, and at twelve had published two small works on Roman Archæology.

Philology claimed him next, but his interest was soon attracted by natural science, and through medicine he was led to a close study of mental diseases. At one time, he held a post in connection with the study of mental diseases at Paris University, where his exact method of research, since generally adopted, met at first with general derision—he was said to be studying madness with a tape and line. At first, according to his own statement, he studied crime as a form of insanity, but the publication of Darwin's "Origin of Species," set him on the track of another theory, with which his name has become more especially associated. He has said of himself that future investigations may leave not one stone of his system upon another, but whatever edifice may take its place, the builders will be deeply indebted to the first man who showed what must be done to render any building possible. Lombroso's theory, or, at any rate his working hypothesis is, that the criminal character is an instance of the phenomenon, known to science as "atavism," a retrogression to an earlier and inferior stage of development. Instances of this retrogressive tendency are not uncommon in the animal and vegetable world. Now and then, a child is born with webbed toes or cervical auricles; frequently a garden flower will revert to some point or other to the type of its wild original. The criminal according to Lombroso is a savage, born out of due time: morally separated from the society in which he lives, by a gap of thousands of years of evolution; nay, he often has characteristics which suggest a still more remote ancestry in their resemblance to features, which distinguish the

anthropoid ape. His theory, as has already been expressed, has not lacked vigorous and capable opponents. In the first place, an accurate classification of criminals will greatly limit its applicability. Not all criminals are instinctive criminals: there is a large class, whose criminality, even when equally confirmed and rooted with that of the instinctive criminal, may be traced originally to external influences—accidents of birth, association, &c. Then even instinctive criminals may be divided into those who are congenitally so, and those in whom some morbid affection, such as an attack of meningitis in childhood, may have been the predisposing cause of vicious instinct, or perhaps one should say, the cause of suppression of the finer social instincts, for vicious instincts are simply those of unqualified egoism. And, again, disease of some kind may be the common origin, both of criminal instincts, and of atavistic tendencies. The question of the true source of instinctive criminality cannot yet be regarded as settled for scientific purposes, but great light has already been thrown on the practical problem as to how this form of moral aberration may best be dealt with.

Prof. Lombroso, in one of his articles, has referred to the power of Smell and Taste, and the peculiarities of Walk and Gesture among criminals, and gives some of Dr. Ottolenghi's researches on the above, who has contrived, with this object in view, an osmometer, containing twelve aqueous solutions of the essence of cloves, varying from one part in 50,000 to one part in 100. He made his observations in several series, one each day only: the conditions of ventilation being about the same, and the solutions being renewed for each observation, to avoid errors caused by evaporation. He looked first for the lowest degree at which olfactory perception began. In former experiments he proceeded differently. He disarranged the different bottles, and requested the subject to replace the same in the order of the intensity of their odour. He has divided the errors of disposition which resulted into serious and less serious errors, according, as in the order of the solutions, there occurred a distance of several or only one degree. He examined 80 criminals (50 men and 30 women); and 50 normal persons (30 men, mostly chosen amongst the prison warders, and 20 respectable women). Among the normal males the average power of smell varied between the third and fourth degree of the osmometer; amongst the criminals it varied from the fifth to the sixth degree; 44 individuals had no power of smell at all. While the normal men made an average of three errors in the disposition of the bottles, the criminals made five, of

which three were so-called serious ones. The normal women touched the fourth degree of the osmometer, the criminal women the sixth degree; with two the power of smell was wanting entirely. In eight cases of anosmia (loss of the sense of smell), presented in a certain set of criminals, two cases were due to nasal deformities; the others were a kind of smell-blindness. The subjects were susceptible of odoriferous excitations, but were unable to specify them, and still less to classify them.

Of Taste.—Dr. Ottolenghi has also examined the sense of taste of 100 criminals (60 born criminals, 20 occasional criminals, and 20 criminal women). He compared them with 20 men taken from the lower classes, 20 professors and students, 20 respectable women, and 40 loose characters. These series of experiments were made with 11 solutions of strychnine, and of saccharine, and of chloride of sodium. The criminals showed remarkable obtuseness. The lowest degree of acuteness was found in the proportion of 38 to 100 in born criminals, 30 to 100 in occasional criminals, 20 to 100 in criminal women; while it was found in 14 per cent. of the professors and the students, in 10 per cent. of the respectable women, in 25 per cent. of the men of the lower classes, and in 30 per cent. of the loose characters.

Walk.—A study which Lombroso made with Perachia, shows us that, contrary to the case of normal men, the step of the left foot of criminals is generally longer than that of the right; besides, they turn off from the line of the axis more to the right than to the left; their left foot, on being placed on the ground, forms with this line an angle of deviation more pronounced than the angle formed by their right foot.

Gesture.—It is an ancient habit among criminals to communicate their thoughts by gestures. Avé-Lallemant describes a set of gestures used among German thieves,—a real language executed solely with the fingers, like the language of the deaf. Pickpockets, says Vidocq, when they are watching a victim, give each other the sign of St. John, which consists in putting their hand to their cravat, or even in taking off their hat. Pitré has published the most important information on this point. In his "Usages and Customs of Sicily," he describes 48 special kinds of gestures employed by delinquents. This phenomenon is explained by the exaggerated mobility with which born criminals are endowed, as is the case with children.

To be continued.

HOW THE CALIGRAPHIC ART MAY BECOME A SCIENCE.

BY E. T. CRAIG, ESQ.

CALIGRAPHY is an art, and depends on the skill of the expert. As seen in the Courts of Law, experts differ as to the character of the hand-writing of individuals, simply because, at present, there is no scientific basis on which to draw conclusions. Some very remarkable coincidences occur, without apparent reason.

If the hand-writing is to be used as a guide to character, it must be in harmony with the foundations and causes of character. This brings us to the fact that the brain and its combinations constitute the only basis of character. If the action of the faculties is uniform, then we have a key to the varied styles of writing, so far as these can be embodied in written forms. Thus, a man endowed with much firmness and destructiveness, may reasonably be expected to embody his feelings emphatically by the pen. A writer endowed with little destructiveness would not emphasize his caligraphy. A person gifted with order would arrange his caligraphy with some regard to regularity.

A good practical phrenologist, gifted with a good development of Form, Size, Individuality, and Comparison, should become a good caligraphist.

It is only by combining practical phrenology with the art, that caligraphy can become a science of practical utility ; and even then it will be limited in its sphere of application.

The hand-writing of a Ruskin presents a marked contrast to a Florence Nightingale and a Mazzini. The energy of the latter stands in relief to that of the Nurse of Scutari, and the free lines of the author of "Modern Painters," so that all who run may read the hand-writing on the wall.

Yours respectfully
E. T. Craig

THE life of man consists not in seeing visions and in dreaming dreams, but in active charity and willing service.—*Longfellow.*

THE LATE SAMUEL EADON, M.A., M.D., LL.D.

SAMUEL EADON, ESQ., closed his eventful life on January 18th, after a brief illness, at the residence of his son, Dr. Eadon, of Hambrook Court, to the sincere regret of all our Phrenological readers. He was born in Sheffield December 3rd, 1809, and was therefore eighty-two years of age. He possessed a highly intellectual brain, and an unusually forcible mind; one that was keenly alive to almost every form of philanthropic work. No greater proof of Phrenology is needed than to look at the head of this illustrious man as depicted by his photo. All humanity was his brother, and the uplifting of truth his one desire. His benevolence and conscientiousness were dominating qualities of his character.



THE LATE SAMUEL EADON, M.A., M.D., LL.D.

Few men who have possessed so spiritual a mind have also been known for so much practical common-sense insight, both as regards scientific subjects and human character. We could enlarge at some length on the estimable qualities of so great a man, but as others have written literary tributes to his memory we are desirous of mentioning them. From the *Sheffield Independent* we quote the following:—"Up to a very short time before his decease Dr. Eadon was remarkably energetic and vigorous, both physically and mentally. He was born at Sheffield, and had practised very successfully in the Midlands and elsewhere for many years. In his College career Dr. Eadon won many laurels. He became a student of the University of Edinburgh at an early age, and dis-

tinguished himself in a remarkable degree, carrying off a large number of prizes in Greek, logic, rhetoric, moral philosophy, and mathematics. In 1833 he was bracketed 1st prizeman for senior mathematics, as well as for mental and moral philosophy. At the early age of 18 he was first prizeman for the silver medal, and in 1834 was pronounced by Professor Wilson gold medallist for mental and moral philosophy. Four years later he graduated as Master of Arts, and was elected Fellow of the Royal Society of Arts of Scotland. He was very prolific with his pen—learning and literature were his forte. Many of his contributions have appeared in the correspondence columns of our journal, and at the advanced age of four-score he wrote with that ease and vigour which mark a master hand. He was the author of many pamphlets, as well as innumerable articles which have appeared in many serials and journals. In appearance he was considered by many to have a striking resemblance to the late Earl of Beaconsfield. In manner he was genial and unassuming, having always a kind word for everyone at home and abroad.”

Mr. James Coates, Editor of the “Phrenological Annual,” published in his last year’s number a biographical sketch of Dr. Eadon, to which we refer our readers, and he has just sent us a communication which may be new to some: “Dr. Eadon preceded Gully as a hydropathist; was the first British physician who made a special study of homœopathy, and who went abroad to take degrees. He recognised the curative effects and the dangers of hypnotism 50 years ago; excelled in the localization of function 30 years prior to Ferrier. As physician he became a convert in his day—with many other able medical men—to the value and significance of phrenology. With his departure another, and I believe the last, link of the chain is broken which connected the educated phrenologists of the present with the late George Combe, the first British phrenologist. It was Dr. Eadon’s privilege to be an esteemed friend and correspondent of the great master. He was not only personally entertained by Combe, but received instruction from the Scotch metaphysician in phrenological science.”

Mr. J. Dyson, a Sheffield friend, writes of Dr. Eadon:—“There were giants in those days. Intellectually, Dr. Eadon belonged to that class. His long, flowing hair threw out a colossal, beautiful forehead, his quick eye was radiant with intellectual fire, the repose of his upper lip on a bottom lip—cherry-like in its rich fulness—indicated a firm will and a generous heart, while his massive (somewhat Roman) nose revealed the mental and physical power of the man, and

stamped him with authority and dignity. From the year 1757 to 1877—120 years—the Eadon family were educationists in Sheffield. Dr. Eadon's style of instruction was advanced, and, as you say, different from others. Not the old routine, mechanical style, but familiar, kindly, friendly, expository. He gave short lectures on all kinds of subjects to his pupils. Thus he taught for twenty years with marvellous success. His attention was turned to medicine when his father lay stricken with cholera. The family doctor, along with Sir Arnold Knight, was impotent in the case. Mr. Eadon felt his own inability, for much as he knew he knew nothing of physic. This turned the whole current of his life. He was an enthusiastic student of phrenology and its concomitants. He graduated at Hahneman and Cleveland Colleges in America, and afterwards at the University of Aberdeen, and went through the whole curriculum of study and hospital practice at Aberdeen and Glasgow. He investigated and adopted the method and practice of Dosimetric therapeutics with great success, and thus, like a true genius, discovered the 'Art of prolonging life'—both his own and other people's. Here is an extraordinary case. A man of learning and vast experience becoming a student a second time at 60 years of age!"

The series of articles now running through the MAGAZINE are some of the last he has written. They are on the Faculties or Cerebral Organs that constitute a Genius for Mathematical Science. He was a voluminous writer of phrenology, psychology, medicine, besides being a ready writer on many miscellaneous subjects. He has written nearly twenty articles for the PHRENOLOGICAL MAGAZINE, the principal ones being "Metaphysics of Phrenology," "Bible Psychology and the Phrenology of the Future," "Longevity," &c., &c. He wrote to Mr. Fowler shortly before his death and expressed his appreciation of the December number of the MAGAZINE, and hoped soon to see the proof of his own articles, which were to appear in the New Year. He mentioned his great age of 82, and said he had unfortunately taken the influenza. Thus month by month have we to record the gaps that the death angel makes as he robs us of those, one by one, whom we would fain have kept with us.

J. A. F.

As a result of the diminution of crime no fewer than eight convict establishments, containing accommodation for upwards of 6,000 prisoners, have since 1882 been assigned to other public purposes—the prisons at Brixton, Chattenden, Fulham, Millbank, Pentonville, Woking (male), and Wormwood Scrubs.

THE THREE SOUL-FACULTIES, OR CEREBRAL
ORGANS, WHICH CONSTITUTE A FIRST-CLASS
MATHEMATICAL GENIUS ARE COMPARISON,
CAUSALITY, AND DIFFERENTIA.

COMPARISON.

BY SAMUEL EADON, ESQ., M.A., LL.D.

WE have now arrived at the group of organs called into action by such distinguished mathematicians as Mrs. Somerville and Miss Philippa Fawcett. These are known as the Reflective Organs; called by the metaphysician "Reason," "Understanding," "Judgment," &c., but by the Phrenologist—Comparison, Causality, and Differentia (vulgo wit). The relative position of these three organs is singularly appropriate, and in the order, too, most fitted to give mutual aid.

The soul-faculty or cerebral organ first to be treated of is Comparison, so called by Spurzheim, but by Dr. Gall the Sense of Analogy, and by Dr. Thomas Brown a mode of manifestation of "Relative Suggestion," and which he named a Feeling of Resemblance. Its function is not to make comparisons amongst the same kind of objects—as comparing one form with another form, one colour with another colour, or one tone with another tone. Each of these organs is competent to perceive this kind of resemblance; but none of the knowing faculties, separately, or all together, with Individuality to boot (whose special function is to bind the several items of these organs into one concrete individual object), could compare a colour with a sound, or an object of the external senses to a mental feeling. "This," as Mr. William Scott says, "can only be accomplished by a faculty which takes within its grasp the whole range of Nature"—and such is Comparison. Its function is to trace out analogies and resemblances existing in the relations of different things (not the same kind), to compare things of the most opposite kinds, to draw analogies such as often discover resemblances of the most unexpected and surprising kind; as, for instance, a light seen afar off in a dark night, to a good deed showing in a naughty world; the comparing of the Kingdom of Heaven to a grain of mustard seed. In short, the resemblances of Comparison are indirect and not direct, as in those arising from the perception of concrete individual objects. The function of ordinary organs is to perceive resemblances between things themselves, but "Comparison" is a special organ to perceive resemblances not between objects them-

selves, but between their RELATIONS to other objects. Hence the range of the functions of this grand organ of the human soul is most extensive and so omniverous that it finds food for assimilation in the whole wide domain of Literature, of Science, and of Art: from Aristotle, with his syllogism; from Lord Bacon, with his inductive reasoning, and with mathematics the most refined, and abstracted of all forms of ratiocination. All these and more come within the grasp of its analytical power. To this source we are indebted for the marvellous allegories of Bunyan and Spencer, and the delicate analogies scattered, in rich profusion, along the flowery beds of poetry. To this organ science owes its classification of objects, ranging from individual to species, and onwards to orders, classes, and kingdoms; and, in doing this, giving to language a power of condensation truly wonderful. It is to Comparison that we owe our knowledge of general words and of general propositions. It is the source of Aristotle's syllogism, *i.e.*, reasoning from generals to particulars, and of Lord Bacon's method of induction of reasoning from particulars to generals, which latter method has superseded the former.

The meaning of general terms was so little comprehended—only think of Locke's laughable idea of what a general triangle was—that there is no reason to wonder that it took more time to arrive at Dr. Thomas Brown's analysis of this class of words than the whole race of the Cæsars found necessary to establish the sovereignty of the world.

Generals, now their meaning is known, are of the greatest service in following and recording the results of scientific investigation, as words of this class produce clearer notions than a series of separate individual words can do, as the greater the number of particulars a general word is symbolic of, the clearer the conception.

It is owing to the use of general terms that the sciences of number (arithmetic), and of space and quantity (geometry and algebra), are the readiest to be apprehended and the easiest to be understood, as every word used is a GENERAL WORD. The whole fifteen books of Euclid, says Dr. Thomas Reid, the great Glasgow University Metaphysical Professor, contains not a single word which is not a general word. The same remarks will apply to language. They are all general words except those called proper nouns, which, having no plurals, are simple individual words, symbolic of simple individual objects.

Seeing what has been stated, that the faculty or organ of Comparison is the fountain-head whence resemblance amongst

analogies takes its rise, and that general terms are the means by the use of language of recording the results of resemblance amongst the relations of objects, it is easy to understand that general propositions must arise from the same source as general terms, and that this at once brings us to Dr. Brown's rationale of the reasoning process which is, in fact, for all subjects, whether the data be analogical or of a more abstract nature. Not that all propositions arranged in mere sequence constitute the reasoning process, as a certain thread of meaning must run along effectually connecting the first subject with the last predicate. However long the chain of reasoning may be between the subject of the first proposition and the predicate of the last one, logic sense must pass from link to link, otherwise it is not reasoning, but merely the expression of a few sentences each having a meaning of its own, but nothing more. Now whence come these intervening links or proofs in a long chain of reasoning which connect, as with a thread of gold, the subject of the first proposition with the predicate of the last? Locke ascribes their suggestion to "sagacity," and calls them "proofs." Archbishop Whateley says these intervening proofs may be willed by a "peculiar innate sagacity" !! but the illustrious Dr. Thomas Brown has shown that these intervening proofs of the reasoning process arise from a natural vigour and richness in the principle of "relative suggestion," especially that which an advanced nomenclature will call "Differentia," or the conception of tracing out differences in the analogies of various objects of contemplation ; and this, being translated into the language of phrenology, means that the organ of "Comparison or Differentia is large, the brain of fine texture, and with extensive depositions of grey matter, and these together give intensity of action, which cause a richness of suggestion peculiar to the organ called into action." This is the reason why certain students are able at one single intellectual bound to dart from the subject of the first proposition to the predicate of the last, even though the reasoning process be of six or seven propositions long, without having to think of the intervening proofs. He or she who can do this is a GENIUS of a high order, and may be a Senior Wrangler at Cambridge if previous training and careful culture have been the previous attendant conditions.

From what has been advanced it is evident that Comparison is a prime factor in the composition of human nature ; and the organ of this soul-faculty is in a singularly commanding position for doing its duty. Look at it? Why, it occupies the very central spot and highest position in the group of the

intellectual range, having, in a perpendicular direction, beneath it Eventuality, and a little lower on the same line is Individuality (the fact-furnishing organ of this and of all the other organs), with Causality on each side, and a little beyond each of these lies the organ which perceives the differences in all analagous relationships. This group constitutes the Genius, or the God of Intelligence of this lower world ; just as the organ of Veneration is the centre of the moral group, with Benevolence in front and Conscientiousness behind, supported by Hope and Wonder, making man a very god of goodness, which he was, and would have been, but for the Fall, the dethronement of the Pneuma—the God-power enshrined in him. The action of these several organs, whether in an intellectual or moral aspect, is but the mere shadow of man's original greatness and goodness—had our First Parents preserved intact the powers of their original creation.

Let us be thankful, however, although the intellectual and moral man is "in ruins," yet it is only a grand sun beclouded for a little time, to shine fuller and brighter in the good time coming.

MEN AND WOMEN OF OUR TIMES.

THE EMPRESS OF JAPAN has a favourable organization for balance of power ; she will not be subject to so many extremes as many are, for there appears to be a good balance between body and brain ; she takes life more easily than some, and troubles do not wear or chafe her mind to such an extent as to render her specially nervous ; she exerts an even, uniform influence, but is not wanting in energy and spirit to cope with the trials of life. She appears to have good perceptive power and a favourable development of those faculties which give practical common sense ; she does not appear to be specially brilliant, or subject to extremes of mental manifestations. She has good observing powers, and an excellent memory. She is quite apt in her intuitive discernments of character, and is disposed to make the best use of the powers she has. She does not appear to have any defect or over-development of mind as to produce anything like eccentricity. She is lively in her disposition, and capable of drawing friends around her. She is pleasing and kind in her manner, rather than having a dissipating negative influence. The entire organization, so far as it can be seen, is favourable to a harmonious life.

The Emperor has a very marked organization ; few individuals show such a prominent character as he does. His physiognomy is most marked ; he possesses an unusual degree of tenacity of mind and of physical strength. He is naturally long lived, and capable of resisting foreign influences to a very great extent. He has a mind and a will of his own. He relies as much as possible on his own resources, and is not easily choked off any of his enterprises. His physiognomy indicates a peculiarity in the lower development of the ears, which gives more power to his brain than if they were



THE EMPRESS OF JAPAN.

higher ; there is a marked difference between the location of his ears and those of the Empress. He will not depend on others, but do everything himself as far as possible, and will follow his own mind ; few people have the power to bear up, and go through with more severe trials, and keep on, than he. His physiognomy further indicates great strength, both of muscle and of vital power. He has an excellent power of observation ; he wants to be about and see what is going on himself, and have a hand in it. He remembers persons, and faces, places, and similar circumstances, with great accuracy. He delights in criticising, and is prepared to take any amount of responsibility that his position

requires. He has not much nonsense about him ; is not given to trifling, but is always in real earnest. His conversational ability in his own language must be good. He is possessed of good common sense, practical talent and ability to practice his experiences much above the average.

The Emperor of Japan, Mutsu Hito, the present Mikado, or Emperor of Japan, was born in 1852, and succeeded his father, Konei Teuno, in 1867 ; crowned in 1868, and married Princess Haruko in the year after. The Sovereigns of Japan have formed an unbroken dynasty since 660 B.C., the present



THE EMPEROR OF JAPAN.

Emperor is the 121st of his race. Until this Sovereign commenced his reign, the Government of Japan was of a double character ; the Mikado, without whose sanction no laws could become valid, and whose decision was final, had a sacred character, and was held to be of semi-divine origin, and was mysteriously concealed from the sight of the people, shut up in his palace, the administrative power of the country being in the hands of a second ruler, named Sho-goon. The country was divided among a number of nobles, called Daimios, who were absolute lords over their own portions, exercising the power of life and death ; the system being similar to the old feudal system of our own country. In 1868, this system was over-

thrown, and the present Emperor became absolute Sovereign of the whole State, and was no longer shut up in his own palace. From this time, his reign has been marked by great reforms, which have entirely abolished the old exclusive attitude of the Empire. Public and private schools have been established, and many of the teachers have been engaged from Europe and America ; while numbers of Japanese youths have been sent to those countries to be educated at the public expense. To fully estimate the breakdown of old prejudices involved in this it should be stated that no Japanese used to be permitted to leave his native country, and any who made the attempt, were, on their return, liable to the punishment of death. It was not until 1853, that any foreign country was allowed to trade with them, at which date the United States obtained a concession allowing them to trade at two ports only.

The present Emperor has also introduced European artisans and manufacturers to instruct his subjects ; lighthouses have been erected ; telegraphs and railways have been constructed. Some of the Buddhist temples have been closed, and the priests compelled to serve in the army or work in fields. The Christian religion is tolerated and has made progress. The last reform of the Emperor was the granting of a constitution to the people in February, 1889, which was followed by the opening of the first national Parliament in the autumn of 1890.

MISS AMELIA EDWARDS has a very prominent development of brain, and a high degree of vital power and animal life. She has a character of her own, independent of family pedigree. She is like her father on the father's side of the house, although not masculine, or anything bordering on a coarse tendency of mind, yet she has abilities that could fill the place of a man with ability. She may not be of the showy kind, but she has an uncommon amount of practical common sense, and knows how to use her life and experience to a good advantage. She may not be specially witty, or even brilliant, but she has an available intellect that would sustain her in almost any position in which circumstances might place her. All her perceptive faculties appear to be prominent ; she is remarkable for her power of observation, for discernment of character, for her knowledge of the world, and how to use it. She is a good judge of character, and understands people at first sight. She is seldom at a loss to know what to do in a certain situation, because—first, she has presence of mind ; second, she has good powers of observation ; and third, she is remarkably intuitive, and sees a situation at once, and knows what to do on the spur

of the moment. She has a rare ability to do what circumstances require of her.

It is extremely probable that a Civil List pension will shortly be awarded to Miss Amelia B. Edwards. Miss Edwards, who was born in 1831, has done good work as a



MISS AMELIA EDWARDS.

novelist, a critic, and an archæologist. Her first work of fiction, "Barbara's History," appeared in 1864; "Half a Million of Money," two years later; "Debenham's Vow," perhaps her best-known story, in 1870; "In the Days of My Youth," in 1873; and "Lord Brackenbury," in 1880.

UNIVERSAL will be the expression of regret on the death of Margaret Lady Sandhurst, who died on January 7th, at her residence in Regent's Park Road. We heard her give one of her last practical, yet eloquent addresses, at the residence of Mrs. Müller, Portland Place, when she appeared in perfect health, and gave marked energy to her utterances on the

subject which has brought her name so prominently before the public. By birth, she belonged to a Conservative family, but the success of her opponents in preventing her from the representation of Brixton, on the London County Council, by litigation, after she had been elected, only quickened her zeal in the Radical cause. She was an earnest advocate of every reform she handled. She possessed a marked Phrenological character. Her forehead indicated uncommon points for a woman, characteristics which she must have inherited from her father, who was Mr. Robert Fellows, of Shotterham, Norfolk. She possessed a strong practical intellect, a utilitarian mind that inclined her to turn everything into a useful channel, and the power to value things according to their market value, rather than at their popular or artificial price. She was strong in her executive brain, which rendered her energetic and forcible in character, and this part of her brain being active joined to great height of head, gave a strong, practical, energetic interest to her sympathies for struggling humanity. We can well understand her philanthropy was called out to the "incurables" and "cripples" of Marylebone, or to the interests of the Labour League in the east end. Her voice had the depth of a man's in tone, yet there was blended with it a pathos that was magnetic and womanly. She was only in her sixty-fourth year, and certainly gave one the impression that she was equal to another ten years of active service in the cause of the Women's Liberal Federation.

Some contemporaries have given a few touching reminiscences of Margaret Lady Sandhurst, which we quote for the benefit of our readers:—

"Death has come to Lady Sandhurst as she herself has more than once expressed that she would wish it to come. 'That is death in its most terrible form,' she said one morning as she went over the hospital in the Marylebone Road, with a representative of the *Pall Mall Budget*, and had just left the room where a poor woman was suffering from a terrible disease. The doctors had 'given up' the poor creature, but Lady Sandhurst had taken her in, and was very hopeful that her magnetic massage would cure what neither allopath, homeopath, nor quack could do. She passed her hand over the moaning patient's neck and shoulders, and the drawn face brightened immediately, the agonized look of the eyes gave way to a smile, and she sank back on her pillow evidently relieved. 'I am no believer in hypnotism, magnetism, or any of the occult powers of healing, and I merely state what I saw and heard.' As we went out of the room, Lady Sandhurst went on: 'Death itself is nothing. A

quick, sudden death is the ideal termination of life. It is the slow agony of a long disease which gives death its terror.'

"Another of Lady Sandhurst's homes, is somewhere near Kilburn—a cheery little house among fields and green lanes, and in which some seventy pinafores little cripples had been gathered : all children of the very poor, whom Lady Sandhurst had picked up here and there when on her wanderings among the London poor. Her whole heart was in the work of this refuge, and before we had been five minutes in the room the pitiful band of children had crawled, and limped, and wheeled themselves up to her with loud exclamations of pleasure. Lady Sandhurst's usually somewhat stern features relaxed into the kindest of smiles, and soon she was massaging and magnetizing, with a big apron tied round her, while the babies under treatment cooed and chattered. Later on she explained that, though the magnetism and the hypnotism might be scientifically and naturally explained, there was some healing power which was unexplainable. As a political speaker, and as an advocate of women's progress in every direction, Lady Sandhurst was, in spite of her hobbies and 'notions,' a tower of strength ; and behind her brusque manner there were hidden a head and a heart full of enthusiasm for, and of sympathy with, all that is good, and true, and noble.

"With unassuming manners, and an enthusiasm in the right direction, she used the influence which a title is still able to confer, whatever democrats may say to the contrary, in labouring among the needy and oppressed, and in inspiring others of her own class with the same useful aims. Her little home at Kilburn, for the cripples she picked up in her wanderings among the London poor, is something better than the tallest obelisk which could have been raised in her memory. Her many kindly charities—charities not of the pound of tea and six yards of flannel description—will not easily be forgotten. As an orator Lady Sandhurst was often to the fore. She had a happy disposition which kept her spirits above proof, and a cautiousness which heaved the lead before she spoke. Some may think that her scheme of life was eccentric ; we believe, says 'Woman,' that no one can say it was useless or unprofitable."

CARDINAL MANNING.—The severe weather has found another victim in the venerable Catholic Cardinal Archbishop. All classes and creeds admired his genuine virtue, his untiring philanthropy and his unwearied zeal in doing good. For suffering humanity he toiled, and labour had in him a

friend that has never been surpassed. He gave his active brain and his large heart to the service of the people, and full of years and ripe with good deeds he has now ended his toil-some career. The Cardinal has left a sister ninety-two years of age. His head speaks volumes for Phrenology.

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He could not have been the man he was had he not possessed a pre-eminently characteristic brain. His reflective faculties were particularly large, and were aided by his prominent and active benevolence in planning acts of philanthropy.

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The sanctum sanctorum of his Eminence was described by one who saw it, as a very litter of confusion to the eye of the rare visitors admitted within its sacred precincts, but to the eye of its owner it was far otherwise. To him apparently there was a place for everything, and everything was in its place. The organ of order on the outer angle of his eye was most decidedly marked, but it had a distinctly mental bias, and his systematic arrangement of thoughts and ideas showed that he possessed the quality of order, though in material things he exhibited it but little. The Cardinal, it is said, sat in the centre of a rampart of books, papers, and magazines, heaped up all around his chair. This seemed like confusion worse confounded ; but when there was need for reference to any volume or article bearing on the subject under discussion, down swooped the hand of the Cardinal upon the very thing that was wanted, and the extract was reached and read before anyone else would have had time to go to the bookshelf.

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On first seeing the Cardinal people were generally struck with his look of fragility and delicacy. His extremely thin frame appeared the more meagre by reason of his height ; the sharp, clear-cut features, overhanging forehead, and deep-set eyes, covered by the small scarlet skull cap, at once gave the impression that you were before a recluse who was the very embodiment of austerity. This a Phrenologist could easily have detected to be an utter mistake, even if he had not known his public character ; for a man with his mental temperament, active brain, and intense sympathies, could not have isolated himself from the haunts of men, among whom he could wield an immense influence. There was, however, no name in London more eagerly interested in all that was going on, nor one better up to date in all political philanthropies and religious movements, than the Archbishop of Westminster.

As was well known to those who had the privilege of often seeing the Cardinal, the question of temperance seemed to him one of the most vital questions affecting the England of to-day and to-morrow. It is recorded of him twice when supposed to be in articulo mortis, he absolutely refused to drink brandy, evidently considering example the best half of preaching. In old days the 17th of March was a red-letter day in London among a certain class of citizens. Half the cabmen went "on the drink" in honour of St. Patrick. Now a large number of them undertake to abstain for the twenty-four hours from all intoxicating liquor in order to celebrate their patron saint's feast. He raised his voice and sharpened his pen on countless occasions in the cause of sobriety; he lent the temperance movement the influence of his great name, and he added to his admonitions the force of his example. He had by no means a selfish or worldly development of brain; his angle from the opening of the ear forward, including the base of the brain, indicates one singularly free from animal or basilar tendencies.

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At the age of 60 he became a total abstainer, and to his last day he was steadfast to his resolution. "Get thee behind me, Satan," he is reported to have said in answer to a remonstrance from an eminent physician, who once urged him in times of bodily prostration to relax his severity. It was this austere and rigid simplicity of life, this deep interest in the welfare of men, this keen desire to strive for the good of those who were unwilling or unable to seek it for themselves, this untiring and unsectarian philanthropy, this large-souled charity, this catholic spirit of pure beneficence, to which he attested on many a page and many a platform, that secured for him the admiration and gratitude of his fellow-countrymen. The power of a born leader of men was conspicuous in him. It was the magic of his personality, his mingled strength of purpose and unfailing kindness, which drew men to him, and made them share his convictions and labour for their realization, through his strongly marked firmness, conscientiousness, spirituality, and intuition.

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You could have seen the Cardinal anywhere and everywhere, in the palace or in the hovel, in his cathedral or in the lobby of the House of Commons, but you could not see him to such an advantage as in the bare-looking square edifice in Vauxhall-bridge Road, dignified by the title of Archbishop's House; for there no human heart ever sought for

sympathy or help in vain, and not the most indifferent or casual visitor could go there without feeling the better that there should be in this world a man of such an intelligence, and kindly heart, as Henry Edward, Cardinal Archbishop of Westminster.

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At least more conspicuously than on any other occasion was Cardinal Manning's philanthropy exhibited during the great strike of the dockers and others at the East-end in the autumn of 1889. On August 30th he spontaneously sought an interview with the representatives of the dock-owners, and it was through his perseverance that on the 12th of September employers and employed came to the agreement which terminated the formidable and wasteful strike. This achievement was the crown and consummation of his career as a philanthropist.

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When General Booth published his work "In Darkest England," he found from no person occupying a prominent position more sympathy and support than from Cardinal Manning, vast as is the distance which separates the theology of the Salvation Army from that of the Church of Rome. Ignoring any difference of this kind, the Cardinal bestowed a cordial approval on that section of General Booth's scheme which promised employment to any one who chose to ask for it. The Cardinal announced his belief that every man has a right either to work or to bread, and some of his expressions of opinion during the controversy aroused by General Booth's scheme were regarded as breathing a distinctly Socialistic spirit.

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Cardinal Manning's appearance and physiognomy were striking. He was tall and erect, and his emaciated face was extremely pallid. His ear showed him to be a man of high aspirations, and intense intellectual and moral ambition. As an orator he was impressive, but he spoke, even when most in earnest, without much emphasis, owing to his having a purely mental Temperament. From an early period of life he was an ascetic, and at the well-spread tables of his London hosts the diet which he selected was conspicuous for its plainness and meagreness. He lost his wife, by whom he had no issue, some fourteen years before he entered the Church of Rome.

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The Cardinal was a voluminous writer and editor. His published pastorals, sermons, and pamphlets were very

numerous, and he was a frequent contributor to the press and to periodicals. Many of his most interesting contributions to the latter were issued as "Miscellanies," in eighteen volumes.

ORION.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,
LUDGATE CIRCUS, E.C., FEBRUARY, 1892.

THE SENSE OF CRIMINALS.

It seems to have been shown that the mere senses of criminals as a class, are less acute than those of normal human beings. Twice as many of them in a thousand are colour blind ; they have a less acute taste ; their power of smell is less developed, and their hearing is not so acute. Furthermore, their sensibility to pain is less, so that the criminal class recover more rapidly from wounds which prove to be dangerous and fatal to the normal brain.

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MIND AND MUSCLE.

In the "Young Man" for January, the following allusion to the above subject is made. The award of the Smythe mathematical prize, in Bowdon's College, for the past six classes, presents a remarkable phenomenon. This prize of £60 is based on a course in mathematics extending over two years, and is the most important College prize. Of six consecutive recipients of this prize the first was the fast quarter-mile runner ; the second was the pitcher of the College base-ball nine ; the third was a clever performer on the trapeze ; the fourth was a man of good physical development without special athletic attainments ; the fifth was the catcher of the College base-ball, and the best all-round athlete in College ; the sixth is a candidate for a position in the College boat crew, and will next year be a member of the football eleven. In the future, mental athletes will do well to remember that *Meus Sana in Corpore Sano* is as necessary now in the curriculum of a life-work as years ago when these words were uttered. It is the particular duty of the phrenologist to urge this upon all who possess a mental temperament, when phrenological advice is sought.

DR. D'ABUNDO'S RESEARCHES ON THE WORKINGS
OF FINGER TIPS.

The researches of Dr. D'Abundo, which have been recently published, deserve our close examination. One point of great importance he has observed is this, that a marked difference exists in the markings of the finger tips of idiots and sane people, and the smoothness of the former is most noticeable. This is not a surprise to biologists, as the convolutions of the brain become less and less marked in passing from animals of higher to those of lower intellectual powers. Dr. D'Abundo has made comparisons between the markings of the fingers of many idiots and their mothers. Out of twenty imbeciles, in sixteen cases Dr. D'Abundo found the finger tracings almost alike, and in the four other cases quite alike.

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THE HEADS OF THE NAVAJOS.

Dr. R. W. Shufoldt, says, on the peculiarity of the heads of the Navajos, "Upon every occasion where I was permitted to do so, careful examinations were made of the heads of these people, both living and dead, as well as the methods of strapping the infant Navajos in their cradles, and, indeed, all else that might tend to throw light upon the subject.

"Of some two or three dozen children of all ages, from the infant upwards, that I have thus examined, I have yet to find a case wherein the mother has not taken the special precaution to place a soft pad in the cradle in such a manner as to fully protect the back of the child's head. Moreover, I have yet to see a case, except for a few days or so in the very youngest of babies, where the head is strapped at all. On the other hand, this part of the body is allowed all possible freedom."

Fowler Institute.

MEMBERS' NOTES.

"Phrenology is establishing itself wherever its immense value has been rightly understood."—SIR G. MACKENZIE, F.R.C.S.

THE January monthly meeting took place upon Monday, the 11th, when Mr. Fris read his paper on "Phrenology in Sweden," Mr. Fowler occupying the chair.

The following is a brief summary of the lecture. It is now more than six months since I started on my trip to Sweden, which was undertaken partly for pleasure, and partly for phrenological observa-

tion. While on board the steamer in the North Sea, I heard that the mate did not believe in a spiritual world, and also doubted phrenology; but his organ of spirituality was very large, and this caused me to tell him he did not know himself. Upon further investigation, the mate described a vision of his mother's death, which appeared to him while away in Brazil, and on his return home was able to detail the scene to his father, that had actually occurred at the exact hour he saw it. This large organ had enabled him to communicate as it were with the unseen world.

On arriving in Stockholm, I lost no time in enquiring all about our science. What did I learn? It died, and was buried about twenty-nine years ago. The only book I could procure on the subject was one written by a German, named Schartes, in 1862, translated into Swedish; it is not only very imperfect, but contains many wrong ideas; yet this is the latest phrenological work of Sweden. There once existed in Stockholm, a phrenological museum, but to obtain any information about it was as difficult as it was amusing. I was looked upon by everyone as a person who must have a screw loose somewhere, but after some days of fruitless research, I at last found an old man named Hjecm, who had once been a warm defender of the science himself, and judging from the appearance of some books in his possession, two of them being by Prof. O. S. Fowler, he had doubtless enjoyed their use. He gave me some valuable information about the museum in question, which had comprised some five hundred skulls and casts, but was subsequently sold to an Antiquarian, whose address he was able to furnish. I paid several visits to this Antiquarian, each time hoping to get a glimpse of his treasure; but since it was covered by tons and tons of other treasures in a large warehouse, I had to give up the idea previously cherished.

Finding phrenological literature and collections in so imperfect a condition, I next commenced to preach the doctrines of Gall to my relatives and friends, which soon got me into hot water. I examined many persons, and often was able to describe traits in their character that even those most intimate with them had been unable to understand.

During my trip, many opportunities occurred of defending the cause among people representing the commercial world, the army, the navy, clergy, and medical profession. Among the medical profession was a Professor Wallis, one of the head masters of the Royal Swedish School of Surgeons, who admits his partial belief in the subject, and promised to encourage my investigations by sending six skulls over to the Fowler Institute, to see if Mr. Fowler could describe the character of the original possessors.

Mr. Fris here exhibited a number of drawings and engravings of historical Swedes, showing how mental science is—as he prefers to call it—proved by their character as well as by their cranial developments.

Both Mr. L. N., and Miss J. A. Fowler, congratulated the lecturer on the able manner in which he had handled the subject, and expressed their pleasure that Mr. Fris had become such a bold defender of the

doctrines of Dr. Gall, as he had already proved himself to be among the Swedes, and that he had made so good use of his time during his summer visit to his native country.

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“Thoughts on Theosophy” is the title of a paper promised by Mr. H. Snowden Ward, for Monday, February 8th.

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On the evening of the 4th ult., the occasion of the Soirée, the Institute rooms were to be seen filled with smiling faces, enjoying the hospitality of Mr. L. N. Fowler and family. The decorations were most tastefully arranged by the members of the Institute, and a programme selected which must have met with the approval of all. A notable feature was the thought reading of Miss M. Lancaster, who both surprised and interested the audience by the use of her very large spirituality in this direction. Although our honoured President was able to be present on this occasion, two of his daughters, Miss A. M. Fowler, and Mrs. Piercy, were unavoidably absent. From the former lady Miss J. A. Fowler read, during the description of her original “Corner Stones,” a most characteristic letter to her fellow-members:—I extract the following—“I understand that to-night is the occasion of the second Institute Soiree, and I wish most heartily that I could be present to receive and to give congratulations and good wishes for the coming year. I am staying only a stone’s throw (and a woman’s throw) from the great Edison, and if I could only get near enough to him I might receive electric force enough to shoot me across the ocean; but even Edison, with all his almost miraculous inventions, cannot compete with the human brain when it sends off its thoughts in different directions, and I must be content with that kind of telegraphy at present. My aunt, Mrs. Wells, whom you all know, phrenologically speaking, is well and hearty, and sends her good wishes to the members and friends who will be assembled when this reaches you. Here’s health, strength, psychic power, and scientific insight into the most wonderful of all created matter—the mind—for 1892—the wish of A. M. FOWLER.”

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Miss J. A. Fowler’s remarks were about as follows:—I want to take you away from this room into the region of fancy, where I will tell you a legend of long ago. You can do a little thought-reading on your own account. This legend was written long before you or I were born, or even thought of. “There was once a beautiful garden, said the writer, in a large enclosure; in it grew all kinds of flowers and each was busy having its own special work to do, each had its mission to fulfil. Some were rugged, strong, and robust-looking, equal to any amount of knocking about; the winds blew over them, the rains beat down on them, the frosts and snow covered them, but it was all the same; like the little eidelweiss of the Alps, or the flannel flower of the Blue Mountains of New South Wales, they grew and blossomed,

and commanded attention from all. Other flowers were so fragile and delicate that they nestled down under the trees and tall shrubs for fear they might get hurt, or attract attention. Some had to comfort in sorrow, some to whisper hope to the faint-hearted, others by their beauty, had to awake again the love of the beautiful, noble, and true, that for a time had lain dormant. Others, because of their superior strength, had for their mission to urge on the already awakened qualities of mind ; never ceasing until success was secured. Each kind of flower in this garden had its own gardener, and in proportion to the care bestowed upon it, it flourished. Each gardener did his own digging, weeding, and watering, while the soil had to be brought from some distance. The only entrance to the garden was by a gate cut out of the wall. The gate was kept closed and fastened, but each gardener had a key for his own use. But one curious thing was, no gardener could open the gate for anyone else, though they often helped the crowd who stood outside (and who breathed in the perfume from the flowers) to find the right key to unlock the gate for themselves. Being difficult to find it was all the more appreciated when found. Some noted the thoughtful brow and earnest eyes of the gardeners who worked there, while others ridiculed and derided the pains they took and the labour they expended, believing it useless to take away the stones, and sift the soil, &c., &c. It was said these were intellectual gardeners, and they seemed to breathe intelligence into their flowers, so much so that the garden was called the garden of 'Thinkers, Authors, and Speakers.' As these gardeners worked their soul capacity seemed to increase, and by their thoughts they influenced the world. They worked hard and long, night and day very often ; and bringing their soil from the field that was most needful for the young plants they tended. Often they read aloud, or played and sang to their flowers. 'Were there any weeds in such a garden?' 'Oh ! yes ; it was like any other garden in that point, but the gardeners did not allow them to remain and choke the seeds or plants.' Many of the gardeners had to move from their favourite garden much to their regret, but they invariably took some seedlings with them, and trusted to Providence for soil and water. One gardener went to Calcutta, another took some seed and planted a garden in the wilderness of Kimberley, South Africa ; and these seeds grew to the astonishment of all the people around. Another gathered seed and planted it in Queensland. Another in the South of France. Another went to the western part of America, and scattered seed there ; while another stayed in New York, and planted pansies. In this way the whole world was planted out from the one beautiful garden, and blossoms thus came to the head gardener from the South of France, India, Africa, Australia, and America ; and everywhere these flowers became noted for their perfection and excellence. In the original, or parent garden, there still remained many intelligent gardeners, and these were so indefatigable in their work that they were called 'Corner Stones.'" The writer of the legend

continued, "I was lifted one day by an Angel of Light over the wall of the garden, and he said to me, now listen to what these gardeners or 'Corner Stones' are saying to their flowers." One of the oldest gardeners was heard to say, "These are some of the noted men and women I have worked among and talked with, they have inspired my life; and I trust I have helped them in return; breathe into the petals of your flowers ineffable love, and charity, for all that is noble and pure, and take an example from all great men until you gain 'The perfect stature of a man.' Another gardener was eloquently talking of what true 'Happiness' meant, it was not obtained through being isolated from the world; but by working in it, and obeying all the bodily and spiritual laws of our natures. Another attacked the problem of 'Life,' others depicted the lives of 'Nero' and 'Turner.' Another was explaining to her flowers the necessity for 'Enthusiasm' (for the sex principle seemed to be recognised in this garden, as there were lady as well as gentlemen gardeners.) This gardener advised all her flowers to use enthusiasm, as they could not bloom well without it. One gardener was scientifically explaining the law of 'Gravity,' 'the Nebula Mass,' 'Energy' 'Force,' 'Spontaneous Generation,' and how this law of gravity could be applied to the 'Vortex Motion of mind.' Another was explaining the plausible, yet unscientific teachings of Comte, as compared with Gall's theories. Another had chosen the curious subject of 'Crabs'—'human crabs.' Another had the audacity to talk on the very delicate subject of 'The equality of brain power in men and women,' and some of the flowers seemed actually to believe such a thing possible—but we know that such an idea is out of date now, for no one believes it. Another was explaining the Phonograph and all its wonders; another was speaking on 'Fatality' and all its bearings; while yet another read the Thoughts of the flowers with eyes closed. 'But are these the only 'Corner Stones,' I asked the angel?' Oh no! men and women of Science, Literature, and Art, have all worked in this garden, and have been weaving their thoughts into gardens of their own. Some have become distinguished divines, and have large temples in which to preach; others have become clever editors and journalists who wield mighty influence; some have become lawyers and barristers; many have become doctors of medicine; some have become honest merchants.' Just at this point the angel took me back into the busy world, and then left me to wend my way home." This legend made such an impression upon me as I read it, that I wondered if we, in this nineteenth century, could find the key of this garden gate, and strive in turn to become "Corner-Stones" in the great work of Human Science. In order to do so we may have to take into account the suggestion recently made through some experiments in lighthouses for signalling. The Eddystone light can be seen $17\frac{1}{2}$ miles in ordinary weather, which light is thrown horizontally across the water; while now it is found that a much less powerful light directed vertically can be seen twice as far. This experiment, if applied to mental work, may enable us to send the phrenological light of the human mind twice as far during

the new year just opening, by letting our light go upward instead of horizontally across the world.

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Mr. Fowler struck the keynote when he welcomed his friends. He said he was very glad to be among them, and thanked them for responding so heartily to his invitation. The subject in which they were so much interested was a climax subject, and became interesting to all because it touched the greatest of all created matter—man. Everyone might be benefited by studying it scientifically. They had to thank Dr. Gall for his laborious efforts to promulgate it, and from his day to this there had not been wanting capable men to advance its cause. In looking back he remembered that he had commenced his public work in connection with it the year Spurzheim passed away—1832. He trusted that they would all during the evening be socially, intellectually, morally, and spiritually fed, so that their faculties would respond to the importance of the subject of Human Science, which called them together.

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Mr. Edward Breakspear, of Birmingham, made a very characteristic speech on behalf of the numerous country members who were not present. He said he should never forget the time some thirty years ago when Mr. Fowler first went to Birmingham, and what an unmistakeable impression he made upon the Birmingham people by his lectures on mental science. He spoke of the value phrenology had been to himself, and what influence all scientific teaching (at home and in America) would have on the community at large. He hoped the London members availed themselves of the privileges that country members could not have.

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The evening proved most successful and enjoyable, one long to be remembered,—but perhaps this is an unnecessary comment when we consider who were our host and hostess.

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Madame Patenall favoured us on December 30th with a lecture on “Christmas Chimes in the Land of Crania,” which was delivered in her usual easy and agreeable style. As an illustration to her remarks, a large map of the “Land of Crania” was used, which was quite unique in character.

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Dr. B. W. Richardson lectured on the “Anatomy of Suicide” last month, at St. George’s Hall, when he remarked: “Race has a great deal to do with suicide, the Teutonic race being more disposed to it, while it is rare among Jews, coloured African races, and Turanians. Among Scandinavians it is high. It is lowest in Portugal, being 16 per 1,000,000; and highest in Saxony, where it is 469 per 1,000,000. London shows one-third more than any other town in proportion to its population; and Middlesex gives 105 cases, against one in Merionethshire. Climate seems to have very little influence, while season makes a marked difference. Summer shows most suicides, and winter fewest. With regard to religion, Protestants stand far above

other sects. Those temperaments most subject to it are the nervous and lymphatic."

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I shall be glad to receive the title of papers from members who are desirous of proving their scientific "enthusiasm" for phrenology.

G. B. COLEMAN.

Notes and News of the Month.

WOMEN have the franchise in school elections in Norway and in 15 States of the American Republic.

THERE are 27 lady students now taking the medical curriculum in Queen Margaret College, Glasgow. Two of them hail from Ceylon, and one from India.

MISS EMILY MANSEL, the *Nursing Record* learns, has been offered, and accepted, the important position of Inspector of Nursing to the Queen Victoria's Jubilee Institute for Nurses.

TWELVE million children in the United States are to-day studying the effects of stimulants and narcotics on the human body. The laws making these studies compulsory in all the free schools of the States are passed in nearly every State in the Union.

FRANCISCO CRISPI, the foremost statesman of Italy, has just passed his seventieth birthday. He still speaks with all the fire and force of forty years ago. He drinks no wine or beer, nor does he smoke tobacco, and abstains from all luxuries. He says a great European war will soon break out.

THE Royal Geographical Society is going to do what it ought to have done long ago. It has decided to promote the diffusion of geographical knowledge by occasional courses of public lecturers. Mr. H. J. Mackinder, reader in Geography at Oxford, has already been engaged to deliver the first lecture.

THE latest novelty is (naturally enough) the *Novel Review*. "Everything is done nowadays by a novel," so the prospectus of the new venture cites Mr. Humphrey Ward as saying. "By a good novel,"

of course, he meant ; and the object of the *Novel Review* (with which is incorporated *Tinsley's Magazine*) is to give the public a guide to the best novels of each month.

BRITAIN'S Paris Ambassador, Lord Dufferin, as successor to the late Earl Lytton, is regarded with general satisfaction. Lord Dufferin is an author, a traveller, and a diplomatist. More than thirty years ago he acted with great tact as British Commissioner in relation to the massacre of the Christians in Syria. As Governor-General of Canada, and subsequently as Viceroy of India, he filled difficult positions with conspicuous success.

SPECIAL prominence will be given to American, Colonial, and Foreign novels. Another feature in the *Novel Review* will be a series of interviews with leading foreign novelists, and also a series of portraits and character-sketches of popular English novelists. The first number, which will be published on January 25, will contain a "sketch" of Björnson, an interview with the authoress of "Mdle. Ixe," and "Bernard Shaw reviewed by himself."

WITH sorrow we record the early death of one of America's most gifted women workers. Miss Julia B. Ames, assistant editor of the *Union Signal*, whose visit to this country in the summer of 1890 was an inspiration to many, was attacked with typhoid during the Boston Convention of the Women's Christian Temperance Union, and died in that city after a brief illness. Her loss will be felt by Temperance women all round the world.

SIR WILLIAM WHITE'S talent for language was one, says the *Athenæum*, of which he was proud. The number of languages he acknowledged was looked upon as very great, being twenty-eight. Yet he has been surpassed in mere numbers. His total, too, was largely made up by the Slav languages and dialects, and the distinction between some of these is so slight as hardly to confer on each of them the title of a language. The real merit of White was that he made himself proficient in the whole body of them, and most of them he spoke with fluency and correctness of idiom.

SCHOOL OF MEDICINE FOR WOMEN.—The London School of Medicine for Women has wound up the year with quite a long list of successes and honours won by its past and present pupils. The Edinburgh School Board have just appointed Miss Catherine Urquhart, L.K.Q.C.P., one of their medical officers, and Miss Mildred Sturge, M.B., Second

Gold Medallist for Obstetrics of the University of London, has been appointed physician to the Clapham Maternity Hospital and Dispensary for Women and Children. Others who have passed the M.B. examination of the London University with more than usual distinction have been Miss E. M. Pace, Miss Wood, and Miss E. Williams.

THE Hon. James Munro, the Premier of Victoria, who has just been appointed to the Agent-Generalship of London, will not set the Thames on fire, but he is a level-headed man, and ought to do good practical service for the country of his adoption. Mr. Munro was born in Sutherlandshire sixty years ago, and emigrated when he was twenty-six. He was trained as a compositor, and worked at his trade in Melbourne. He, however, soon found larger scope for his undoubted business abilities and administrative capacity. He is the vice-president and one of the founders of the Federal Bank of Australia, and is president of the Real Estate, Mortgage, and Deposit Bank (Limited). As the leader of the temperance party in Victoria, and the author of the local option law now in operation in that colony, Mr. Munro's presence in London will be cordially welcomed by his friend, Sir Wilfrid, and the English local optionists in general, and also by ourselves. He has a practical head, is genial in character, and social with all.

WE are pleased to greet in the phrenological literary world, a welcome addition in the form of a Quarterly or Phrenological Record—it being the organ of the British Phrenological Association. The papers for the past quarter have been upon Dr. Gall, Dr. Spurzheim, The Temperaments, Professor Bastian's Objections to Phrenology, by Messrs. Webb, Melville, Morgan, and Hall; also an article by Bernard Hollander, the editor. It is gratifying to note that Dr. Landois, author of "Text-book of Human Physiology," was not aware of the fact that Dr. William Stirling (his translator), had excluded the drastic passage on Phrenology, in which he said, "If the details of the phrenological system show decided defects, it is nevertheless worth a serious consideration whether the fundamental idea of this system ought to be equally rejected. The discovery of the centres for voluntary movements and conscious sensations in the cerebrum, demonstrate the necessity of a renewed examination of Gall's doctrine."

MR. W. H. DAVENPORT ADAMS, whose death occurred at Wimbledon, at the age of sixty-two, was one of the most prolific authors of the day. In his earlier years he was devoted to journalism, but for a long time past he was occupied almost entirely with the production of books

on a wide variety of subjects—historical, geographical, biographical, ornithological, and religious. Mr. Adams had also published an annotated edition of Shakespeare; had translated the works of Louis Figuier, Michelet, and other popular French writers, and at the time of his death was editing the “Whitefriars Library of Wit and Humour.” As a writer of instructive and entertaining books for boys, Mr. Adams had also gained a well-deserved reputation. Amongst his best known works are “English Party Leaders, and English Parties from Walpole to Peel,” and “The Great Civil War.” So far as history was concerned, Mr. Adams’s work rather lay in the direction of compilation and condensation than of original research, but he had considerable power of graphic description, and his broad, liberal sympathies were very apparent.

DEATH OF BISHOP CROWTHER.—This venerable negro bishop terminated a long life of marked Christian simplicity and consistency on the last day of the year by an attack of paralysis. He died in harness at Lages in the Niger Territory, being about eighty years old. In early boyhood Dr. Crowther was rescued from a slave dhow by a British man-of-war, and conveyed to Sierra Leone, where he was placed in a mission-school. From this school he passed to Fourah Bay College, then just established by the Church Missionary Society. Thence he came to England, and was ordained by the Bishop of London. In 1827 he married Susanna, another rescued slave, and of his family one is Archdeacon Crowther, two are lay-workers in the same sphere, while two daughters are married to native clergymen. On St. Peter’s Day, 1864, he was consecrated Bishop of the Niger Territory. At dinner one day a little girl who sat next to him was observed to be wetting her finger and rubbing it upon the Bishop’s hand to see if the black came off. The dear old man apparently did not notice it. He was a humorist and a thorough gentleman, so he could well appreciate the little lass’s curiosity.

THE anniversary of the death of a remarkable woman—Caroline Lucretia Herschel—occurred on the 9th of January. Her mother was of a frugal mind, and took care that her daughter should not learn more than was necessary to make her useful in the house. The girl, at her own request, was taught millinery and dressmaking in order to ensure a livelihood. This was hardly the sort of training likely to develop the mind which found relaxation from the severe labours of calculations from her brother’s astronomical observations, in sweeping the heavens with a telescope, and adding many small nebulae to Herschel’s catalogue. She discovered seven comets from the lawn at Slough, in five of which she had the priority, and furnished the Royal Society with a catalogue of 560 stars not included in the British catalogue. She began her career by accompanying her brother to England in 1772, and at Bath helped him in his profession of a

musician, was the principal singer at his oratorio concerts, and refused an engagement for the Birmingham Festival. But the brother gradually abandoned music for the stars, and the helpful sister followed him. She died in her native Hanover at 97 with undimmed faculties.

THE DUKE OF CLARENCE.—It is with intense sympathy and regret we record the death of the Duke of Clarence and Avondale. His age, his position, and his approaching marriage surround the sad event with even a deeper halo of grief than death ordinarily brings. His illness was short but severe. A cold caught while shooting, Jan. 14th, quickly developed alarming symptoms, and he succumbed on Thursday morning at the early age of twenty-eight. The late Prince's shy, retiring nature, made many fancy that he was destined as Heir-Apparent, had he lived, to pass through life "the Silent Father of our Kings to be." But his phrenological developments indicated that had he been spared to his country his career would have been one of modest usefulness, high aims, patriotic purpose, and unselfish devotion. From griefs unborn he rests secure, and he passes away an interesting and pathetic figure in the long pageant of English Royalty. It has been truly said that it is not only in her capacity as Sovereign, but in her domestic relations, in her quality of wife and mother, that Queen Victoria has won the respect, the admiration, and the regard of her subjects. Her children have sustained the claim, and so the affliction which has overtaken them touches all hearts and throws its shadow on every home.

OWING to the deep interest Prince Consort took in the science of Phrenology during Geo. Comte's lifetime, messages of condolence for their recent loss were sent to Her Majesty, and to their Royal Highnesses the Prince and Princess of Wales, Princess May, and members of the Royal Family, from the president and members of the Fowler Phrenological Institute, to which replies have been received from Osborne and Windsor Castle.

THE Khedive of Egypt died on January 7th, at Cairo, after seven days' illness. Telegrams were despatched to the Khedive's sons Abbas Bey (18 years old), and Mehemet Ali Bey, who were in Vienna, informing them of their father's death, and hastening their return home. Mohammed Tewfik has occupied the throne of Egypt since the year 1879, and was only thirty-nine last November. Tewfik succeeded on the abdication of his father Ismail, who was practically deposed by the European Powers in June, 1879. The most salient event of the Khedive's reign was the rebellion of Arabi Pasha in 1881, which led to the bombardment of Alexandria by the British fleet during Mr. Gladstone's Administration, and the subsequent campaign of 1882. After the bombardment, British troops landed. General Sir Garnet Wolseley had charge of the operations, which culminated in the complete defeat of the rebel forces at Tel-el-Kebir on September 12, and Arabi Pasha and the other leaders of the movement were exiled to Ceylon. This campaign was followed by the disastrous events of the

Soudan. Hicks Pasha's army, dispatched to put down the insurrection of the Mahdi, was annihilated on the 1st of November, 1883. Then came the series of events which led to the disaster of Khartoum, the slaying of General Gordon, and the final abandonment of the Soudan. Though a Mohammedan, he was the husband of only one wife, the Princess Emineh, and has left two sons and two daughters.

THE INFLUENZA BACILLUS.—DISCOVERY BY GERMAN DOCTORS.—Papers were read at a meeting of the surgeons of the Charité Hospital in Berlin on Thursday evening by Drs. Pfeiffer and Canon on the discovery of the influenza bacillus. The *Times* Correspondent tells us that Dr. Pfeiffer stated that on the reappearance of influenza in September last, Professor Koch commissioned him to search for the influenza bacillus. He began by examining the sputum of influenza patients, which he found had a peculiar character, and was often purulent. Dr. Pfeiffer purified the discharge by the Koch method, and was thereby enabled to discover the bacillus. A peculiarity of the influenza bacillus is said to be its immobility. It is found in various positions, singly, in chains, and in strings. There is also a complete absence of the tendency of groups to gravitate towards one another which has been observed in other bacilli. The chief characteristic, however, is the size of the microbe. The influenza bacillus is the smallest yet discovered. It is only half as large as the bacillus found in cases of blood poisoning, the bacteria hitherto regarded as the most microscopic organism existing. The new bacillus resembles most closely that present in cases of inflammation of the lungs, the Friedlander bacillus, so called from the name of its discoverer. It differs from it, however, in its shape, which is oval, and not round like the latter. The influenza bacillus has been propagated to the fifth generation by its discoverer. The animals injected with it were rats, guinea-pigs, mice, pigeons, rabbits, and monkeys. Influenza was developed in the case of monkeys and rabbits. Dr. Pfeiffer recommended as one of the first means of combating infection the immediate removal of all matter discharged from the patient's lungs. As the health of the patient improves the bacillus gradually disappears. Dr. Canon, in his report on his investigations, confirmed the discovery of his colleague.

DON'T SHUT UP THE WINDOWS.—Where the body is not overheated the draft caused by the ordinary incoming of air through an open window will do infinitely less harm than the impure air caused by closed windows. The way to enjoy pure air in cold weather is to turn on the heat when the room gets cold, not to shut up the windows. If the room becomes too warm, don't turn off the heat, but open the windows. By this means a person who knows any thing about ventilation can have an equable, summer-like atmosphere about him all winter long. The necessity of open windows is doubly apparent where tobacco smoke is indulged in, as the smoke is dangerous to the breathing apparatus and makes it liable to lung troubles.—*Hall's Journal of Health.*

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

A PHRENOLOGIST once passed this verdict on Mr. James Payn, the novelist: "This is the head of an individual born to benefit his fellow-creatures in the paths of practical science; he will go far as a builder of bridges."

WE call attention to the fact that Mr. J. Millott Severn has opened new premises at 38, Clumber Street, Nottingham. We trust he will find his usual success to follow him in this town.

THE next British Phrenological Association Meeting will be held on Tuesday, February 2nd, when a paper will be read on "Skull Physiognomy," by Mr. James Coates, at 63, Chancery Lane, W.C. The last meeting was held on January 8th, when Mr. O'dell read a paper on "Phrenological items of more or less importance." Mr. A. Hubert, from Harrogate, was present, and gave a most interesting speech on his experience in phrenology.

MR. J. W. TAYLOR AND PHRENOLOGY.—That phrenology is universally believed in is largely due to the many excellent men who have revealed its usefulness and reliability. It is of interest, therefore, to know that Mr. J. W. Taylor, is practising with considerable success amongst the Preston people. There are few phrenologists who are more enthusiastic. The success of his lectures elsewhere proves that he is a capable speaker, and we are ready to acknowledge his gentlemanly demeanour and courtesy. Marriage, said the lecturer, was the oldest institution on earth, founded in the nature of man, yet how little attention was paid in this age to the choice of a partner for life! The qualities essential to a good wife were—domestication, cleanliness, charity, sobriety, a healthy constitution, and, if possible, a good temper. The lecturer warned young ladies against the habit of novel-reading, and advised them to store their minds with something more substantial. Mr. Taylor brings his successful phrenological visit to Preston to a close this week.—*The Preston Herald*.

GUILE-ALLIS LIBRARY, GUERNSEY.—MR. MORGAN ON “HUMAN NATURE.”—Last Tuesday evening an able and interesting lecture on “Human Nature : How to understand it,” was delivered in the hall of the above institution, by Mr. Algernon Morgan, member of the British Phrenological Association. He traced the great differences which exist around us, and which are obvious to all in regard to the various substances and materials with which we are brought into contact in our experiences of every-day life. The earth’s crust is composed of different characteristics, and we recognise their qualities and give them distinctive names. In the same way the various orders and species of the vegetable kingdom, and the different genera and families among animals, may be easily distinguished. If, therefore, the lower order of creation was distinguishable, was it not logical to expect man, who was the crown and glory of creation, should also present certain well-marked differences? The general principle that character always corresponded to organization was as immutable as the reasoning of Euclid. He then spoke of the three leading temperaments. In conclusion, Mr. Morgan quoted the opinion of Mr. L. N. Fowler, a widely-known authority on these subjects, that a well-balanced temperament is, by far, the best, and is the most favourable to true greatness, to general consistency, and to that desirable strength of character which so largely contributes both to the happiness of its possessor and to the welfare and prosperity of those dependent upon him.

The Employment Bureau.

The Employment Bureau has been opened by the Fowler Institute, to assist people who are seeking employment, and also to aid heads of firms to secure suitable employeès. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.

AMONG others, a young Lady desires a situation as Kindergarten Teacher.

A YOUNG Gentleman, acquainted with shorthand, requires a situation—assistant to a Phrenologist preferred.

A CAPABLE Builder requires a position as Overseer.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

JUPITER.—Has a very fully developed brain; all parts appear to be well represented. Her forehead is high and broad; she is wide awake to all that is going on; she has extraordinary gifts to understand and comprehend; she sees everything on a broad scale, nothing narrow or contracted. The stability of her brain is in its upper storey, which indicates that the moral faculties are particularly represented. She should be known for her great uniformity of character, stability of purpose, as having more than ordinary moral courage. She is a great lover of justice; cannot at all attach herself to trickery or dissipation. She has all the elements of an orator and statesman, and her mind is well adapted to public business, to having something to do with the affairs of the Government. She is much interested in everything connected with education and mental development; she has much versatility of mind; it makes but little difference what she is called upon to do; she is liberal in her modes of thinking; is not much given to sectarianism or creeds; she is highly ambitious, very anxious to do her best.

T. KIMBERLY.—Has a superior vital organization, very strong constitution, and a strong hold on life. He will go through trials of constitution enough to kill two or three ordinary individuals without being much affected. He has a remarkably broad head, which gives force to his character; he has a great amount of energy; he possesses much versatility of talent in a mechanical and business direction; constructiveness enables him to do almost anything that the occasion requires. He is quite original; has a mind of his own; he thinks for himself, and seldom asks anyone how to do a thing, and when he does he follows his own judgment afterwards. He has very correct ideas of forms, shapes, and outlines; he judges correctly of distances; he measures very accurately by the eye; he has great perceptive powers, which makes him acquainted with qualities and conditions of things, and enables him to use what experience he has had to the best advantage. He would have made a good geologist, or mineralogist, in his way. He shows a good deal of order and method, for he must have things done according to an approved plan; he is somewhat inventive and takes pleasure in doing

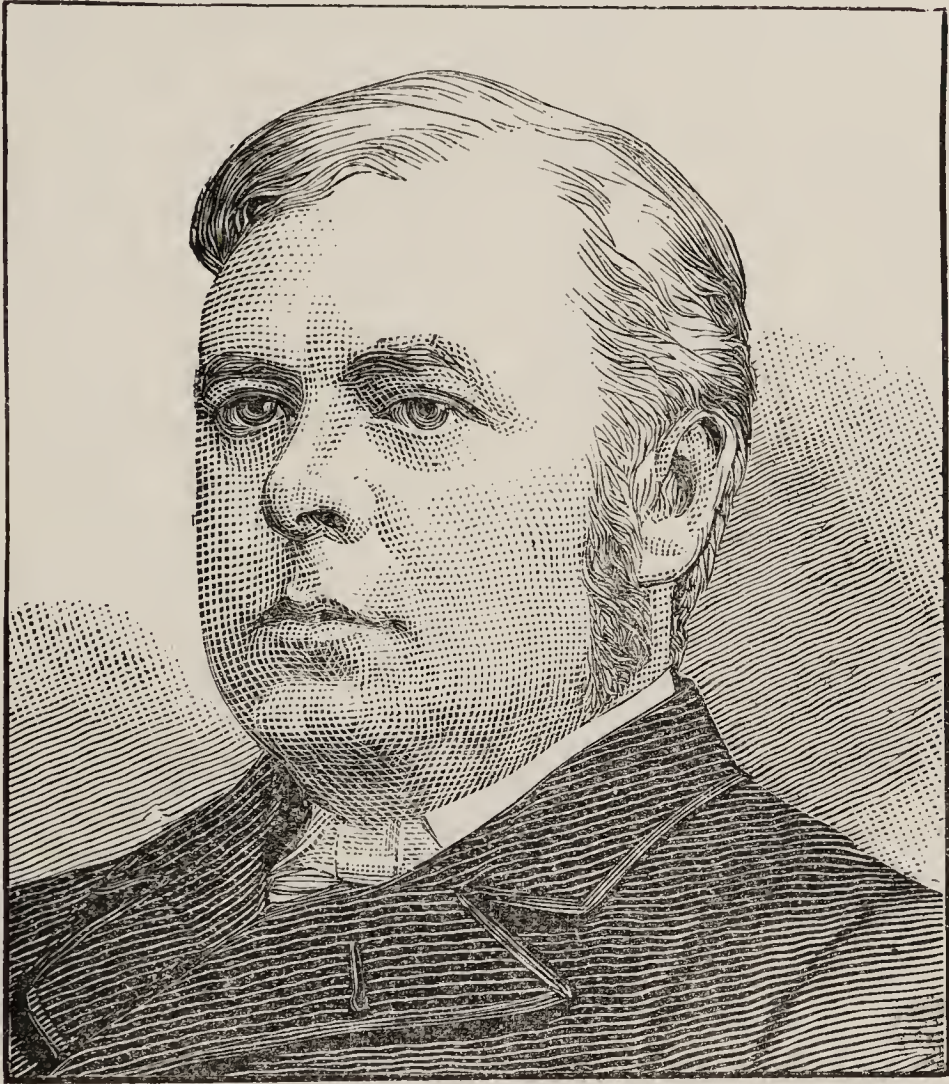
difficult and complicated jobs ; he has strong imagination, and is liable to talk rather extravagantly. If he chose he could easily cut out in paper representations of what he saw. He loves fun, enjoys a joke, and almost loses his dignity in expressing his fun. He has a very strong character, and it will take a long time to unfold his mind fully.

X. Y. Z.—Has a marked development of brain and physiognomy ; he is a great observer ; has a superior memory ; is very apt in criticism ; is quite original in his remarks ; he delights to talk, and will excel where the most talking is required. If he could content himself in a business way, he would succeed as a cashier. He would make a capital speaker, and would delight in being before an audience to tell what he knew ; he has a lively, wide-awake temperament, and would prefer to be employed in some intellectual pursuit rather than manual labour. He would excel as an entertainer, and should educate himself in that direction. He must take care of his health ; it will not do for him to be intemperate in any way ; he must learn to use his brain with prudence, and give himself ample time for rest when he has been pushed in his mental work.

I. E.—Has a strongly marked physiognomy ; she possesses more than average energy and force of mind ; feels equal to almost any task ; she invariably takes hold of the heavy end of the work, and rather delights in having just as much as she can do ; her spirit is to carry all before her and stop at nothing. She would have much preferred being a man to a woman, especially if she were obliged to walk in the path that is generally laid out for woman to walk in. She prefers to work with men rather than women. There is no silly nonsense about her ; she has a good base to the brain, which gives force ; strong, perceptive intellect, for the lower part of the head is broad, and the reasoning intellect is quite active and vigorous. She has a favourable development for business, both of an executive kind and that which requires judgment ; she is not long in making up her mind ; her form aids her very much in her practical phrenology ; size also is well represented, hence her judgment is generally correct. With a liberal education she would have shown out versatility of mind. Her likes and dislikes are decidedly strong ; she is a whole-hearted friend, if any, and she has more of an inclination to do the fair honest thing whether it is to her advantage or not, for she does not trifle. She is very decided, firm, persevering, and there is nothing half-way about her ; she says what she means, and means what she says. Her greatest liability to go astray is connected with her strong prejudices, which may sometimes bias her judgment too much.

THE
Phrenological Magazine.

MARCH, 1892.



THE REV. JOSEPH R. DIGGLE, M.A.,
CHAIRMAN OF THE LONDON SCHOOL BOARD.

THE organization of this gentleman is characterized for balance of power, harmony of mental action, and great versatility of talent. He has a fine physical development; all the wants of his nature are about equal; he is not subject to many extremes. He has a large amount of vitality, has a strong hold on life, and is capable of enjoying every minute of his existence. It is an exception to the rule for one to be so harmoniously developed as he is. He is not carried away by his imagination; he does not contradict himself; he is more solid, sound, and practical, than imaginative or extravagant in his ideas. There is great harmony between body and brain, and but little antagonism

in his character. He has strong desires, and is able to put forth very vigorous efforts to accomplish his ends, but there is harmony in his work ; his vital organization enables him to enjoy life, and to make the most of it. His perceptive intellect introduces him very naturally to the physical world, so that he enjoys living. He is quite alive to all that is going on around him ; he is a good judge of men and things ; he is naturally a scientist, and is in his element when he is studying Nature. He is whole-souled and hearty in his work, and he throws much life and animation into what he does and says. One speciality of his nature is his capacity to enjoy whatever he does. He has plenty of mind with all that will enable him to change from one subject to another without becoming confused. As a speaker he is polite and free on all topics of conversation. As a business man he goes right to work, loses no time or energy, and knows what to do without making severe mistakes first. He is particularly observant and practical ; he brings everything to a point, says what he means, and means what he says ; there are very few vagaries about him. He may show more common balance of mind than extravagant imagination, for he is so thoroughly practical that he cannot waste any words or time. He has a very intuitive mind ; is quick in discerning character, motives, or truths. Few men hit the nail on the head as clearly as he does. He is not so original and abstract as he is practical in his ideas. He seems to be all alive to what is going on around him ; he enjoys life all the more in proportion as he is busy in business, or business is pushing him. He remembers all he sees, where he goes, and what he does. He is ingenious, and turns off his business with dispatch. He has a good knowledge of place, and should show an extra fondness for geography, astronomy, travels, and discoveries. He must have had a passion for travelling all his life ; he wants to see everything that is worth seeing before he leaves this world. He has fair conversational talent, but usually he has more to say when he sits down after having made a speech, than when he started, for thoughts multiply on his hands as he goes along. He is good at describing things, qualities, and surrounding circumstances ; he makes everything plain and easily understood by children as well as grown people. He is constitutionally methodical, and wants to know what there is to be done first, and how it should be done before he begins operations. He has a heavy base to the brain, which gives him great tenacity of life, and pleasure in existing. He will want to stay in this world as long as he can, notwithstanding the gates of heaven may be open when he gets there. He takes positive delight

in mixing with people, and seeing and doing such things as will benefit others. He is almost careless sometimes with reference to himself ; he forgets and neglects himself while he does for others. He has the elements of a missionary, and almost ought to have been one. He is quite versatile in talent, and readily contrives ways and means ; if he were a missionary he would use his talents to a better advantage than many, for he always sees several ways to do the same thing. He has great executive power, he delights to have plenty of work to do, and does things in a wholesale way. He would prefer to take heavy responsibilities—if by so doing he could accomplish something special—than to simply fill in and use his time in an ordinary way. He has good business qualities ; is disposed to make money, accumulate property, have a large library, and plenty of means to accomplish his ends. He works with both hands, and throws his whole soul into his work. There are no crooked points about him, nor is he antagonistic in his spirit towards others. He is more complete in his genius, and can do a greater variety of things quite well than men generally can, for he does not need to be educated to sharpen a knife, mend a pen, and do various kinds of work, for he knows within himself what to do without being told by others. He is very ambitious as well as resolute. He intends to do his best in what he does, but he does not work as a necessity, and do the thing because he cannot help it, but works because he loves to do so. He will always pile on more rather than take off from the task. Few men can adapt themselves to greater purpose than he can, for he is an all round man ; hence, it makes but little difference to him what he has to do.

L. N. FOWLER.

The result of the London School Board elections which took place on November 26, places Mr. Diggle once more as Chairman of the London School Board. He has now had control of the policy of the Board since 1885, when he was first elected to the chair. He is a man of some wealth, and his leisure is entirely given up to School Board work. His conduct in the chair is dignified and adroit, his temper admirable, and his knowledge of the business and power of rapidly dispatching it, is probably unequalled on the Board. He is the author of a scheme for superannuating the teachers, which has excited a great deal of controversy. He has won a distinguished name as an earnest and faithful worker in the cause of popular education, and in the temperance reform movement. He is the younger son of W. Diggle, Esq., of

Astley, and is about forty-three years of age. He entered Wadham College, Oxford, in 1870, gained College Exhibitions in two successive years, and graduated in the History School, Michaelmas Term, 1873, First Class in Honours. He was then lecturer on Ecclesiastical History at St. John's College, Highbury, until his Ordination in Lent, 1874, as a clergyman of the Church of England. His first curacy was at St. Matthias, Liverpool. This dockside parish is one of the poorest in the great sea-port. He entered upon his duties with great energy and enthusiasm. The Day Schools, Sunday Schools, Bible-classes, Temperance Society, and kindred parochial agencies, were greatly helped by his self-denying and persevering efforts, and when, after about two years, he accepted the curacy of St. Mary's, Bryanston Square, London, he carried with him the good wishes of numerous friends in Liverpool, where much regret was felt at his departure. In 1879 the Bishop of London offered Mr. Diggle the Vicarage of St. John's, Bethnal Green, but he declined the appointment in order to devote himself to the work of the School Board, which involves much sacrifice of time and strength. In September, 1882, Mr. Diggle preached in Westminster Abbey on behalf of the Church of England Temperance Society. We may add that, besides his temperance and educational work, Mr. Diggle is a member of several hospital and other charitable committees. *Diggleites*, as members of the School Board who vote with him are called, predominate in number over the opposite party of *Progressives*. The *Diggleites* aim at keeping down the School Board rate, and the entire expenses of the School Board. On the other hand, the *Progressives* are in favour of teaching some of the Board School pupils the piano, and the art of swimming, and various advanced branches of learning, and even giving free meals, which would raise the School Board rate.

FORMATION OF CHARACTER.

BY L. N. FOWLER.

CHARACTER is formed; it has no natural growth like a body or tree. It comes from a life guided by motives and desires, having a definite object to accomplish. The foundations of a character are native talents, hereditary gifts, physical and mental training, internal inspirations, and external influences, all brought into action while labouring alone, or with others—for ourselves or others, for time or eternity.

A strong, permanent, and useful character is not often formed all by itself. We help to form the characters of each

other. We may have all the qualities for a strong and permanent character, and yet not have a character. Many have distinct characters, but they are not appreciated in the society in which they move, for no one is in sympathy with them. Three persons may be equally gifted by nature—one ahead of time ; one behind time ; the third just in time, and he alone is appreciated at the time. The one ahead of time is appreciated only by the next generation.

In forming character there are three things to be done : first, to bring into use all the powers of body and mind we possess so as to do life's work ; secondly, to bring these powers under the dominion and guidance of our reason and moral sense so as to use them to the best advantage ; thirdly, to live with a distinct reference to the life to come, and with a due regard to our accountability. Mind is so elastic and impressible that character will continue forming so long as mind exists. The responsibilities of life, with their labours and contact with other minds, will greatly aid in forming a substantial character. All Nature is progressive. We have spring, summer, autumn, and winter. We have ploughing, planting, and sprouting of seed ; then the green leaves, the blossoms, the green and the ripe fruit. We have first the helpless infant, then the weaned child, the blooming youth, the full-grown man, maturing, then the old man matured and ripe. The formation of character is a gradual work ; it cannot be done all at once. In the beginning laws, principles, and elements must first be recognised ; but ages are required to understand and apply them, so as to reap the benefit of their application. Man was born with the elements of character, but time is required to form it.

Once this earth was young and took on its constitutional strength like a child or a tender plant. It is now forming its character, exerting its influence among the planets, developing and exhausting its resources, consuming its heat and productive power. By-and-by it will cease to develop and generate in the lower order and strata of Nature ; its power will diminish in the grosser and less important departments of Nature, leaving its strength and vitality to be exhausted on higher objects and far more important ends, until the essence of things remain only. Finally there will be a collapse, and the old earth will die. The productions and growth and maturity of a seed, a man, or a world, are all regulated by the same law, so far as the material powers are concerned ; mental development begins with the small and young, and grows large and old.

Man first began to exist in his animal nature and conscious-

ness, having no higher ideas or desires than to gratify a barbarous state of mind. To do this he had to defend himself against his enemies, overcome many obstacles, which brought him to the borders of civilization. Yet he was without knowledge of law, without a plan, a system of action, or an elevated object in view. Without intellectual or moral capital; without tools, clothing, houses, or articles of commerce; without books, knowledge of the Arts, or the use of the metals; without knowledge how to control the elements, or of the gases that enter into their composition; without a knowledge of himself, mentally or physically, and yet subject to the same results of violated law as though he sinned wilfully. The brain has always been the organ of the mind, yet it has not always been known to be so. The laws of dietetics and the influence of medicine on disease are not yet fully understood. But mind continues to grow, unfold, and form itself, and character is becoming more perfect as knowledge increases and more is known of Nature and her laws. When all discoveries and inventions have been made, all Nature has become understood, and all laws known and applied, then character will be more perfect than it possibly can be at any period of time short of that. It is well to understand the beginnings and the stepping-stones to the development of a full character.

There are three kinds of influences that stimulate in the development of character. The first comes from the organization, including the bodily wants and mental desires. The second comes from experiences in those things which give pleasure and pain. The third comes from understanding the relation of cause and effect. The mind first manifests itself in impulses and appetites; then through our imaginations and expectations; then through observations and criticisms; then through philosophy and spiritual communications. Finally the mind outgrows the body.

The different faculties of the mind are enlarged and increased in strength and activity by exercise and impressions made upon them. The quality of the character depends on the organization. The kind of character depends upon natural endowments, and how we use our gifts. The purity of the character depends upon parentage and habit. There are endless varieties of grades and qualities of character: from the highest to the lowest; from the largest to the smallest; from the brightest to the dullest; from the most generous to the most close; from the most active to the most dull; from the most prudent to the most reckless; from the most pure to the most impure.

Character was formed more slowly in former times than now. It is formed more slowly now than it will be in a few hundred years time. We judge of the characters of others from our own standpoint, and that judgment is correct in proportion to the perfection of our characters and a full knowledge of those whom we judge. No two differently developed minds agree on a complicated subject. All see from their standpoint. All differ in their conceptions of the Deity, of space, of truth, honesty, and personal rights. Age, knowledge, experience, habit, position, integrity, health, disease, and perfection of organization, help to form and bias opinion.

Compare a coal-pit boy, with very limited opportunity to improve, with the Prince Imperial, who had every possible opportunity and advantage. Although very much depends upon native gifts, yet circumstances have a powerful influence by way of bringing forward or retarding mental development. But parents above all, through parental influence and hereditary bias, often do more for their children by way of laying a foundation for true greatness than can be done afterwards by education, or even by spiritual influence. Education calls out and polishes what already exists. Examine such examples as the Prince of Wales, John Bunyan, and Abram Lincoln. Character, then, must be regarded in the light of contrast, or comparison—as being good or bad, strong or weak—for God alone is absolutely perfect, because He only is composed of the essence of all existences. Character becomes more perfect as the mind is more fully developed, and all its powers work in harmony ; even a conversion to the highest principles, and the possession of the purest love towards the highest object, can only change the direction of the faculties that already exist ; they add no gifts, faculties, or talents. Through eternity there must be a difference between the man who started with two talents or with five. Those men who have exerted the greatest moral and religious influence, and have swayed the minds of the greatest number of people, have had great powers of body or mind, and a high degree of the mental temperament, have been well born into the world. To be well born spiritually we need to be well born physically. Martin Luther, Whitfield, Wesley Brothers, Charles G. Finney, Moody, Murphy, Cromwell, Alfred the Great, John Bunyan, were all well born mentally and physically. The life legacy some parents give their children is small. It is one of the greatest of blessings to be well born ; such persons are under a much greater obligation than those less favoured. The difference at times between a fully and a poorly born child, is from one-half to three-fourths.

To be continued.

MEN AND WOMEN OF OUR TIMES.

PRINCESS MAY has a favourable organization for an open, free, and generous spirit. The tone of her mind is elevated; she is naturally refined in every sense of the term; she is confiding, and acts in a free, easy, natural manner. She is ardent in her language, earnest in her disposition, and is dis-



PRINCESS MAY.

(From a photograph by Messrs. F. Russell and Sons.)

posed to live a true, sincere life: she is not troubled with suspicion, jealousy, or watchfulness of mind that puts her under restraint. She has every indication of being true to herself and those around her. Some of her leading qualities of mind are sincerity, honesty, and high-toned piety. She has a good perceptive intellect; she is practical, and readily reduces her ideas to practice. She is apt in debating and telling what she knows, and entertaining company; she is

naturally vivacious and inspiring in her conversational talent. She is executive, has considerable spirit and disposition to overcome difficulties, and can bear up under trials where others fail ; in fact, she is quite plucky, and although worn down by extra care and trial, she will rally and get over it. She possesses much versatility of talent ; is naturally methodical, orderly, and systematic ; she is quite full of life and animation. She is very impressible and quite alive to what is going on around her. She exerts a regulating, modifying influence wherever she goes, because of the elevated tone of her mind. She has a fair balance of organization ; there appears to be no special antagonism in her developments. She is a bright spirit where she goes. There appears to be a roundness and a plumpness to her organization that makes her happy all over when she is happy. She is capable of high culture, and of exerting a uniform and refined influence over others. She can fill almost any place suitable for a woman, and will be able to command respect with reference to any position.

THE LATE MR. C. H. SPURGEON.—This gentleman possessed a unique character. Few men have begun the practical work of life so young, worked so steadily for forty years, or accomplished so much in the given time as did Charles H. Spurgeon. All his surrounding influences, to begin with, were calculated to support and encourage him until all his powers were brought into full action. He started with limited knowledge, experience, and education, yet used with singular completeness all his powers of mind and strength of body. He wasted no material, no opportunity, no time. The most important faculties of his mind were the moral and social, which were strongly represented in his brain ; this being so, it was easy for him to convert every assembly he was in into a social gathering, and to speak to his hearers as though they were all friends. Anti-phrenologists can but recognise his warm social interests, which correspond with his large social faculties. The base of his brain was large, which gave him unusual energy, force, and industry ; but, with his strong vital and ganglionic system, he worked easily and without much friction. His head was not broad at the centre of the parietal bone and just below, consequently his restraining powers were not large. He spoke and acted promptly and frankly. His self-esteem was never in his way, yet in business or in a responsible situation his moral sense enabled him to take his proper position. His whole coronal brain was large, giving him a superior degree of moral feeling, and

capacity to exert a spiritual influence. His largest moral faculty was benevolence; he talked through it, he prayed through it, he preached through it, and through it he touched the common cord of sympathy in others. His love and charity entered into his entire nature, and fairly combatted with his large conscientiousness, hence the law and the Gospel were both presented by him in the same discourse. He had large hope and was seldom cast down. He had also strong faith and consciousness of spiritual existence. Through his spirituality he showed uncommon faith in prayer and spiritual communications with the unseen. Veneration was large, and had a prominent influence over his character, and gave him a feeling of worship, deference, and permanency. He had more sentiment than poetic talent; more emotion than extravagance, and more pathos than expansiveness of mind, for his head was high rather than broad. His intellectual faculties were called into action through his other powers of mind. He was straightforward in what he said and did; fired at a mark, and had definite objects in view, which his mind could not easily relinquish until his end was gained. His mind expanded rather than contracted on a subject. Thoughts and feelings multiplied as he continued to speak or write. His mind went from facts to principles; from science to philosophies; from Nature to the Author of it. It was the base of his intellect that was first set in action, then the higher powers—not the reverse. From the first he learned to depend upon the inspiration of the moment, and the knowledge and memory he could command at the time, which kept all his faculties wide awake, and his general memory very active. His brain, between comparison and benevolence, was very full, which gave him an intuitive mind, and power to understand the character and motives of others. He was very apt in what he said, and considered the best time and manner for saying a thing. Mr. C. H. Spurgeon succeeded in crowding more labour into the space of forty years' ministry than many men do who live to be over 80. His cup of vitality was so full, his earnestness so intense, and his spiritual convictions so distinct, that he was, truly speaking, a live man in every sense of the term. He reaped the benefit of coming from, and inheriting too, good parental stock. His grandfather lived to the ripe old age of 87, while his father is now living at the age of 80. Unfortunately he inherited, along with his vital temperament, certain constitutional weaknesses, which pressed upon him just at the zenith of his power, when he could not readily consent to relinquish one iota of the responsibility resting upon him, but instead, worked bravely on, often in spite of bodily pain.

Many of his mental powers he inherited from his mother, as well as his temperament, tone, ardour, warmth of feeling, and intensity of mind. For a full description of the character of this illustrious preacher, the readers of the PHRENOLOGICAL MAGAZINE are referred to No. 15, March, 1881.

SIR MORELL MACKENZIE.—He was the most distinguished laryngoscopist in this country, and his practice was very extensive. When in his twenty-sixth year, he was awarded



SIR MORELL MACKENZIE.

(From a photograph by Thomas Hall.)

the Jacksonian prize by the Royal College of Surgeons for his essay on the pathology and treatment of diseases of the larynx. Sir Morell Mackenzie attended the late Emperor Frederick, and it was in recognition of his services on that occasion that the Queen in 1887 bestowed on him the honour of knighthood. The Emperor also conferred on him the Grand Cross and Star of the Hohenzollern Order. Sir Morell's head was high and broad on the vertex; he showed the truth of his phrenological developments by his scientific philanthropy. He was not only a clever and industrious man, but he was also keenly sympathetic and in his wide practice he used his opportunities to relieve, without fee, the poor

people who consulted him. He often provided, out of his own bounty, the necessary nourishment which was so needful in some throat cases. He had a decidedly mental temperament, and a wiry constitution, which, however, was so heavily drained by his indefatigable labours, that he had no spare energy to fall back upon when seized with his final illness. He possessed a clear and vigorous mind, and leaves a gap that cannot well be filled.

ORION.

THE FACULTY OR ORGAN OF CAUSALITY, WITH CERTAIN ALLIED KNOWING POWERS.

BY THE LATE SAMUEL EADON, M.A., M.D., LL.D.

CAUSALITY is another factor in the trinity of the intellectual group. Let us examine what part this faculty or cerebral organ plays in the development of what is known as a mathematical genius.

This organ, says George Combe, is "situated on the upper and lateral parts of the forehead, and, when large, gives prominence to these parts." Gall called it the organ "Esprit Metaphysique," "Profondeur d'esprit." Spurzheim gave it the name of "Causality." This last appellation is that usually used.

The organs required to judge of the proportions of space, *i.e.*, whether a figure bounded by certain lines contains the same amount of space as another figure bounded by lines but of a different shape altogether. Now, to ascertain this, the organs of size, locality, individuality, and comparison (not Causality) will be required; and for the proportions and relations of numbers, the organs of order, calculation, and comparison will be called into requisition (not Causality); and why? Because Causality implies force, power, and agency, which operate with conscientious regularity, and the above ideas do not enter into the propositions of pure mathematics. It is in the application of the principles acquired by the study of pure mathematics that Causality can enter the arena, and show how the knowledge of geometry, of algebra, of logarithms, and of arithmetic, can be brought to bear on the arts of life by the power and energy implied in the function of this important organ or faculty. Applied mathematics seems to be the field for the exercise of Causality, and not dealing with the analogies and relations of pure abstract thought in the language of an elegant and

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refined symbolism. Hence, Causality, which, when large, gives such nobleness of expression to the "Human face divine," is not so much required in the endowment of the mathematician as a combination of certain knowing organs along with comparison—each of these being in ample development. None of our most famous mathematicians—not even the immortal Newton himself—had prominently developed Causality.

The function of Causality implies force, power, and agency. It traces effects to their causes, searches out for principles, and directs their application when using the reasoning process. Hence the correctness of mathematical reasoning when Causality is dealing with abstract relations and analogies. Strange to say, that Causality is larger in all our great thinkers and metaphysicians—as Kant, Fichte, Bacon, Franklin, Dr. Thomas Brown, and Professor Wilson; and even in Wordsworth the poet, than in Newton, Leslie, Playfair, and other distinguished mathematicians. Although the reasoning process is the same, the materials made use of are different. With the deep thinkers, their reasoning is analogical, their words inexact, and often indeterminate in meaning; hence the inference why a great mathematician is often a bad reasoner, and an acute reasoner on general subjects a bad mathematician. Professor Sir John Leslie, though eminent as a mathematician, was very deficient in tracing logical sequences; whilst the distinguished Bayle was an acutely logical reasoner, but poor in tracing out relations amongst spaces, lines, and angles. From this it is evident that the notions current in educated society, that the study of mathematics tends to cultivate all the powers and faculties of man, is a grand fallacy, and much time is lost, indeed wasted, which might be employed better on subjects of more life-profit and interest. Causality acting on symbols of thought, not in strict relation to its function, errors in the reasoning processes, or rather in their results, must be a necessary consequence; but when exercised on its own related abstractions, the exercise of Causality will always lead to accurate results; but on the data presented for its acceptance and exercise in the every-day matters of general life, good reasoning cannot be born of abstract mathematical parentage—get figs from thistles as likely.

In reasoning, whether general or mathematical (although the process is the same as before stated in all kinds), there is something more required than being able to follow out the rationale of the reasoning process. Archbishop Whately says, "There is the power of selection and of combination of the premises required, such as shall be best calculated to reach new,

unperceived, or unthought-of conclusions." Yes ! certainly. It is the conception of these differences amongst analogies, and the facility of their suggestion in trains of thought, which constitute a genius for mathematical science, and which alone enables a man or a woman to carry off the palm of First Wranglership.

Although a student may apprehend and understand a geometrical demonstration from another man's brain, yet this is a very different affair from his inventing his own intervening proofs—the products of his own brain ! A man who is dependent on the suggestions of another can never become a senior wrangler ; and perhaps may not have his name inscribed on the list at all. Like a poet, a senior wrangler is born, not made, whatever amount of drilling and coaching a man may have had.

From what has been advanced, it is somewhat antagonistic to one's phrenological notions that the forehead of the great Sir Isaac Newton was not so imposing as that of the poet Wordsworth, or of Professor Wilson, the dreaded Christopher North, of "Blackwood's Magazine," of some sixty years ago. From all this, it would seem that Causality is not the grand organ (as many have thought) which brings about the highest success in a mathematical contest, as we have endeavoured to show during the progress of writing this paper.

The genius of Sir Isaac Newton for mathematical science, was owing to his having a large inverted pyramidal form of that wonderful organ, called comparison, with fully developed knowing organs, especially locality and weight, which were very large. Sir John Leslie's frontal region was similar to that of Newton's. Weight, in particular, being very large, gave his face a dull, heavy, and unintellectual sort of expression—an observation which the writer of this paper frequently heard when Professor Leslie occupied the chair of mathematics in the University of Edinburgh.

GENIUS, TALENT, INDUSTRY.

BY R. W. GILES.

"TALENT" is a quality which enables its possessor to acquire knowledge by learning from others and by unassisted study.

"Genius," on the other hand, is characterised by an independence of instruction ; it takes its own course, and originates new ideas and inventions never thought of before. It may of course enlarge its sphere of knowledge by reading, by observation, and by experiment ; but it is by no means

characteristic of genius to be apt to be taught ; on the contrary, embryo geniuses are often dull fellows at school, and idle to boot. It rather dislikes to follow in the track of others, and rises superior to obstacles of circumstances and deficiencies of education. Genius may safely be left to hew a path for itself. Talent is greedy for instruction. Hence the two have very different relations to education, a subject upon which I should much like to dilate, but the length into which I have been unintentionally betrayed warns me to avoid the temptation.

Arkwright perfected his invention of the spinning-frame in the uncongenial atmosphere of a barber's shop, in the teeth of a scolding wife, who more than once broke up his models on the eve of completion, and who habitually upbraided him for neglecting the profitable occupation of "an easy shave for a penny," with the elegant apostrophe, "Cuss the 'cheenery!" I believe she lived to be Lady Arkwright. Let us hope she learned to moderate the rancour of her tongue.

George Stephenson, inventor of the locomotive and the father of railways, developed his extraordinary engineering genius in the obscurity, physical and metaphorical, of a coal pit ; eking out his slender earning by mending the boots of his fellow-workmen, and occasionally a watch or a clock.

Sir Humphrey Davy, who was described as an "idle and incorrigible schoolboy," was apprenticed to an obscure apothecary in Penzance ; he afterwards became assistant in the laboratory of Dr. Beddoes, of the Hot Wells, Bristol, well known to my father, who was then serving his apprenticeship at the same place, but I cannot discover that he knew anything of the doctor's more illustrious subordinate.

Faraday's father was a Yorkshire blacksmith, who migrated to London, presumably in search of work, and Faraday himself was apprenticed to a bookbinder. A chance attendance upon four lectures by Sir Humphrey Davy was the immediate cause of his directing his attention to science, and he was some time after introduced to the Laboratory of the Royal Institution through Davy's instrumentality.

Benjamin Franklin made his first entry into Philadelphia, a poor lad, with all his possessions upon his back, and a dollar in his pocket. As Mark Twain depreciatingly remarks : "Anybody might have done that ; the only difficulty is to have the dollar." But how few out of the millions who have begun life with a dollar, or even less, have arrived to be a Franklin ?

On the other hand, it seems absolutely immaterial with what seemingly insuperable disadvantages genius may be oppressed ; it will make its way to the surface, and triumph over all.

Can industry then supply the place of genius? Emphatically, No! Industry may compensate for paucity of talent, as we have said, it is a common heritage, and its presence or absence is a matter of degree, and whatever results are attributed to talent are the joint product of talent multiplied by industry.

“Genius” is a living organism, instinct with its own life, performing its appointed functions spontaneously, as of necessity.

“Talent” is an elaborate engine, skilfully devised to many wheels and to perform divers works, but wanting the motive power.

SPURZHEIMS' SKULL.

J. A. Deuksinger, M.D., writes, in the *American Phreno. Journal*, the following interesting account of the Spurzheim Collection, in Boston:—

“After the Boston Phrenological Society had terminated its active existence, the entire phrenological museum—including the skull of Dr. Spurzheim, his collection of skulls and busts, along with the busts collected and presented to the Society by Mr. J. D. Hohn, of London, and the busts collected by members of the Boston Phrenological Society—was purchased by Dr. J. C. Warren, of Boston, and by him presented to the Harvard Medical School, in 1847, at that time located in North Grove Street, Boston. The donation then became part of the Warren Anatomical Museum. A few years ago, when the Harvard Medical School removed to their new building, corner of Boylster and Exeter Streets, they transferred the Warren Anatomical Museum to it also, along with the skull of Dr. Spurzheim, but his general collection of skulls and busts, over 400 in number, was left behind. The old college building is now partly occupied by the Harvard Dental School (another branch of Harvard College), but the collection of busts can still be inspected by any one applying to the janitor. Spurzheim's skull, along with a lock of his hair, can be seen by any one applying to the janitor of Harvard Medical School, or to the curator of the Warren Anatomical Museum, on every Saturday between 12 and 1 o'clock. Close by the side of the case containing Dr. Spurzheim's skull, is the case containing the skull of his friend, Dr. Robertson, of Paris, who arranged in his will, that after his death his skull should be prepared and sent across and placed beside that of Dr. Spurzheim's. Another object of interest in the Warren Anatomical Museum to phrenologists is the skull of Phineas Gage, of celebrated crowbar case fame, with which almost every phrenological reader is familiar.”

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(Continued.)

SPECIES II.—OBSERVING AND KNOWING FACULTIES.

24.—INDIVIDUALITY.

Power of noticing single objects as separate existences, and of considering each as a distinct identity and individuality, desire to see and know, and to examine objects, curiosity to see things, power of observation.

The material world is composed of single objects, arranged and combined into one grand whole ; but without a faculty whose function it is to individualize these objects, and take cognizance of them one by one as distinct and separate existences and entities, mankind would perceive them only as a confused and indistinct mass, and be unable to distinguish one single thing from another. It is doubtful, indeed, whether, without such a faculty, we could form clear notions or distinct ideas upon any subject.

This faculty gives the desire, accompanied with the ability, to become acquainted with objects as mere existences, without reference to their qualities, such as form, size, colour, weight, &c., or to their modes of action ; and, inasmuch as it leads to observation, it becomes an important element in a literary taste and talent.

VERY LARGE.—One having individ., very large, will possess an unconquerable desire to see, *see*, SEE—whatever it is possible for him to see ; before he is aware of it, will take up things and look at them, even when propriety would require him to leave them untouched ; have a prying curiosity to become acquainted with things as mere existences ; can hardly rest satisfied without thoroughly exploring and surveying everything within the reach of his observation ; is a real looker, and even given to gazing, or, perhaps, to staring : with caus., only full, looks much more than thinks, and is so much devoted to the examination of objects, that his power of abstract thought is thereby weakened, or, at least, frequently interrupted by the operation of this faculty ; find it difficult to confine his attention to abstract contemplations because it is frequently arrested by physical objects ; will be given to personification, and, with compar., large, to metaphor, simile, &c., and be apt to consider the mere abstract in ideas or notions, such as virtue, vice, justice, reason, &c., as personal identities ; may readily learn things but will not possess an unusual share of depth of intellect, &c.

The additional manifestations and combinations of individ., very large, may be inferred from those described under individ., large, the compar., of the reader being allowed to supply the increased influence of individ.

LARGE.—One having individ., large, has a great curiosity to see and examine whatever comes within the range of his observation ; is deeply interested in the mere examination of individual objects, aside

from their causes, uses, relations, and conditions ; is quick to see what is passing around him, and allows few things to escape him ; is a close and practical observer of men and things ; and, by associating his thoughts and arguments with some visible object, and by thus giving them a distinct identity and individuality, imparts to them a peculiar clearness and definiteness, and seeming tangibility.

One having individ., large, with event., also large, will not only be quick to see what is passing around him, but also have an excellent memory of what he has seen ; with large compar., added, will not only have the ability of comparing things, and noting wherein they resemble, or wherein they differ from each other, but will also take great delight in this exercise ; with good advantages, will possess a rich fund of general and particular knowledge, a ready command of facts, and a great fondness for reading and study, and have the requisite talent and disposition to become a superior natural scholar ; yet, to become a finished scholar, he must also possess form, local., ideal., and caus., large ; with large caus., will first notice things in their individual capacity, and then investigate their relations of cause and effect, their design and utility, and the effects they are capable of producing, and also be strongly inclined to philosophize upon them ; and, with the reasoning organs very large, will observe closely, yet reason more than observe, have excellent ideas, and also impart to them a clearness and tangibility that will render them easy to be understood, and thus greatly add to their power ; and, with the addition of large form, will be an enthusiastic and a successful investigator of human nature, and generally form correct opinions of the character and talents of men by their physiognomy, conversation, deportment, &c., and can successfully apply himself both to details and general principles : with ideal., large will regard objects as clothed with peculiar splendour, natural beauty, high perfection, &c.

FULL.—One having individ., full, with the reasoning organs large, will reason much more than observe, think more than look, and examine objects chiefly as connected with their causes, &c. : with moderate event., will be liable to forget things, and have but an indifferent memory of facts ; will manifest some curiosity to examine objects, and see whatever comes in his way, yet not be at much pains merely to gratify his looking propensity, and will not be distinguished, either for his observing powers, or for the want of them.

MODERATE.—One having moderate individ., will be somewhat deficient in his powers of observation ; have rather indistinct ideas of things, and describe them rather in a summary and general, than in a particular, manner, and, with the reasoning organs large, be much more engrossed with general principles than with their details, and more interested in investigating the relations of things, than with their physical qualities.

SMALL.—One having individ., small, will fail to observe what is passing around him ; take little interest in the mere examination of objects ; have little of that prying curiosity to see and handle things, which is imparted by large individ. ; often have but indistinct notions

of objects which he has seen ; fail to identify particular things, be vague in his descriptions of them, and find attention to details and the minutiae of business, unpleasant, and not suited to the character of his intellect.

VERY SMALL.—One having very small individ., will regard things, as it were, in a mass ; see nothing which is not forced upon his attention ; seldom regard objects in their individual capacity, and with marvel., small, may be led to doubt even his own personal identity.

LOCATION.—Individ., is located in the superior or first frontal convolution, at the root of the nose, and when large, it separates the eyebrows from each other, and causes them, as they approach the nose, to arch ; but, when small, the eyebrows nearly meet, and are nearly horizontal.

Individ., has two divisions, the lower portion gives physical observation, the upper part gives mental observation.

The organ of individ., is generally much larger in children than in adults ; which goes far to show, that it is highly useful in the process of forming ideas ; indeed, aided by compar., whose office it is to compare things and by event., which remembers what is observed and compared (and both of which are found highly developed in children), it constitutes the great medium of intellectual converse with the material world, and assists us in treasuring up most of the knowledge which we acquire.

25.—FORM.

That mental power which takes cognizance of the shape or configuration of objects, and recollects them.

A Mr. Gibson, of Washington, D.C., once suggested the idea that the shape of objects, consists of nothing more than angles connected by straight or curved lines, and that these constitute the form of objects ; and, moreover, that the faculty of form observes and recollects these angles, and size, the length of the lines connecting them. This view of the subject, is, at least, ingenious, and worthy of examination.

That no material object can exist without possessing the property of form or shape, is a self-evident proposition ; and without some mental power the function of which is to convey to the individual a distinct idea of the forms of different objects, no such idea could possibly enter the mind, any more than could the idea of the colour of an object without an organ of vision and a faculty of colour, or that of a savour or an odour without the faculty of taste or of smell. To the perfection of the human mind, then, some faculty whose office it is to take cognizance of the various forms of objects, becomes absolutely necessary.

The nature and operation of this faculty, may be inferred from the principle which proves the necessity of its existence.

VERY LARGE.—One having form very large, obtains, as it were, by intuition, a distinct impression of the form of the objects he sees will very seldom forget the shape or the appearance of things he has

once seen ; if he once fairly looks at a person, will almost always know him when he meets him again ; be able to recognise individuals even by a partial view of their face, by seeing them at a distance, &c. ; can readily discover family resemblances, and also detect differences in the looks of persons and things ; frequently recollects the name of a person by remembering its appearance upon paper ; can readily detect typographical errors, and, with lang., large, easily learn to spell correctly ; can see things that are very minute or indistinct, or at a great distance, and, with size and individ., large, can read very fast and very correctly, and at a distance which would enable ordinary form and individ., hardly to perceive that there were letters : with large local., will be able to study botany, mineralogy, geology, anatomy, and all the natural sciences with remarkable ease and success, &c.

LARGE.—One having form large, finds it easy to observe and retain forms ; readily catches the distinct appearance of things, and recollects them for a long time ; generally attributes certain shapes to particular things which he hears described, and even to immaterial objects, &c.

One having form large, with individ., large, recollects the faces of those whom he sees, and thus is enabled to know a great many persons : with individ., only moderate, does not notice the shape or the physiognomy of persons with sufficient accuracy to obtain a clear idea of their appearance, but, when his attention is once arrested by any thing special, and he has obtained a distinct impression of its looks, he seldom forgets it : with individ., and local., large, when he sees a person a second time, will generally be able to identify and locate him, though he may be unable to call his name, and, with event., large, will not only recollect that he has seen him before, but often, where he has seen him, and also many incidents which transpired at the time, and yet may feel mortified that he cannot call him by name : with imitat., very large, will be able to copy from memory : with large individ., size, local., order, and compar., will have all the talent requisite for becoming a good naturalist, botanist, anatomist, and chemist, and, with ideal., also large, will experience the greatest delight in the pursuit of these branches of science : with construct., size., and imitat., large, will be able to give the proper shape to the articles he may make, &c. : with size large, can read writing that is indistinct, and, with individ., also large, easily learn to read correctly, and seldom miscall a word.

To the mechanic, the artist, the naturalist, the anatomist, the botanist, and all those in public life who have to transact business with many individuals, a large development of this faculty, is not only of the greatest utility, but even indispensable to success.

FULL.—One having form full, after seeing an individual several times, and becoming somewhat familiar with his looks, will be able to recollect his physiognomy and appearance, yet cannot be considered as remarkable for his power, will have a respectable memory of faces and countenances, yet a long interval will weaken his recollection of them, especially of those with whom he is but partially acquainted ;

upon meeting those whom he has before seen, will have an indistinct recollection that he has seen them, but will be less certain and distinct in his recollection, than if it had been produced by large or very large form.

One having form full, with individ., large will have a very good recollection of the countenances, form, and gait of persons, and partly because he is so great an observer ; but, with individ., only moderate, will have but an indifferent memory of such things, partly because he will fail to notice them so particularly as to obtain a clear and fixed impression of their shape, appearance, &c., and partly because his memory of those which he does observe, is not remarkably tenacious.

MODERATE.—One having moderate form, retains only an indistinct and confused memory of persons, animals, and different objects, and must see them several times in order to know them again, especially after a considerable lapse of time ; is often quite uncertain whether he has, or has not, seen individuals whom he meets ; is capable of making but moderate progress in the study of the natural sciences ; cannot clearly distinguish forms at a distance, nor certainly identify a person or an object until he is near it, or has a full view of it ; will make many mistakes in reading ; find it difficult to read hand-writing, especially if it is not very plain, &c.

The additional manifestations and combinations of form moderate, may be inferred from a negative of those under form large.

SMALL, OR VERY SMALL.—One having form small or very small will be exceedingly troubled by forgetfulness of persons ; may meet an individual one day, and even converse with him, and not recognise him at a subsequent meeting, even though it may be very soon after : with approbat., large, will feel mortified on account of this deficiency, and endeavour to notice and recollect shapes, yet his efforts will be unavailing ; in reading, will miscall many words, especially if the print is fine or indistinct ; with individ., large, will see those whom he chances to meet, but will seldom notice the expression of their countenance, appearance, &c., and, therefore, not often recollect them ; but, with individ., small, neither sees nor notices those whom he meets ; so that, even those with whom he is quite intimate, are sometimes not recognised by him.

LOCATION.—Form is located in the superior or first frontal convolution upon the two sides of the *crista galli*, and, when large, causes great breadth between the eyes, and sometimes turns them outwards ; but, when small, they more nearly approach each other.

26.—SIZE.

*That mental power which takes cognizance of magnitude and proportion
—ability to judge of length, breadth, height, depth, distance, &c.*

Since no material object can exist without occupying space, it necessarily follows, that magnitude or bulk is a natural property of matter : and hence it also follows, that the human mind would be defective, were it not possessed of a distinct faculty the proper func-

tion of which is to distinguish this property of matter. Without such a faculty, man could not distinguish the difference between a mountain and a mole-hill, a river and a rill, an ocean and a fountain.

That the faculty of form cannot execute the function attributed to size, is clearly shown by the fact, that there exists no proportion between the shape of an object and its magnitude or bulk. The configuration of certain things, may be the same, but their size widely different. Nature would be at fault, therefore, did she not endow man with a separate faculty adapted to the cognizance of each of these properties of matter.

Again, the place, position, weight, and colour of objects are conditions or properties each demanding a separate faculty of the mind to judge of it.

VERY LARGE.—One having size very large will possess the powers described under the head of size large in an extraordinary degree, be able to form his judgment of the magnitude, distance, &c., of objects with surprising accuracy, and, as it were, by intuition; seldom need to employ instruments to measure with, because he will be able to measure so accurately by the eye, and calculate size correctly where no instrument can be employed; seemingly without an effort, will be able to detect even a slight deviation from a horizontal, a perpendicular, or a rectangular position, and be greatly annoyed by it; and not only perform all those functions described under size large, but execute them with astonishing accuracy and facility.

LARGE.—One having size large, will be able to judge very correctly of the height, length, distance, middle, centre, magnitude, &c., of objects; to determine with considerable accuracy, whether given points are on a water level; to judge very nearly of the weight of animals, men, and other objects by their size, ascertained merely by looking at them; by a cast of the eye, can readily determine about how much is, or can be, enclosed in a certain space; whether a given thing is in an exact perpendicular or horizontal position, and will, in this way, always measure objects with a view to ascertain these and similar points; will judge quite accurately in regard to the centre of a circle, the size of an angle, and proportion generally, &c.

One having size large, with form and construct., large, will have a very correct, mechanical eye, by which he will be often guided instead of by measuring-instruments; with imitat., and local., added, can draw by the eye mathematical and other figures with great accuracy; decide correctly upon the qualities of proportion and magnitude, and impart these qualities to his drawings and mechanical operations; and, with weight added, is naturally a first-rate marksman, and will need comparatively but little practice to make himself quite expert with fire-arms, &c. In Col. Crocket, these organs were all developed in a remarkable degree.

FULL.—One having size full will possess a respectable share of the powers described under size large, yet will not be distinguished for this talent; will manifest a deficiency of this faculty only when he is called upon to measure either long distances, or short ones with con-

siderable precision ; and possess a sufficient share of this power for all ordinary practical purposes.

MODERATE.—One having moderate size will be able, by practice, to measure short distances by the eye, especially in those things with which he is acquainted, yet will not be at all distinguished for his accuracy in doing it ; find considerable difficulty in comparing different magnitudes, and will have but an indifferent, mechanical eye.

SMALL, OR VERY SMALL.—One having size small will be decisively deficient in the power and qualities described under size large, be very inaccurate in his judgment of distance and proportionate bulk, and entirely fail in his descriptions and comparisons of the size of objects.

LOCATION.—Size is located in the superior or first frontal convolution, at the internal termination of the eyebrows, and develops itself on the two sides of the root of the nose. When it is large it causes the internal portion of the eyebrow to project, or shelve, over the internal portion of the eye nearly an inch ; but, when moderate, it is nearly perpendicular from the inner corner of the eye to that of the eyebrow. By inserting the thumb into the angle formed by the arch of the eye and the nose, when the organ is large and weight only moderate, a protuberance will easily be observed, in shape somewhat resembling a bean.

27.—WEIGHT.

Intuitive perception and application of the principles of specific gravity—ability to judge of the force and resistance of bodies, and of equilibrium—to preserve the centre of gravity, &c.

The whole physical world (including man, of course) is under the influence of the laws of attraction or gravitation. By their all-pervading influence these laws bind together the whole material universe. They hold the sun, the moon, the stars, and the planets in their orbits as they perform their respective journeys through the trackless fields of space ; causes the winds to blow, the waters to flow, the seasons to return, and chain to the earth all things that rest upon its surface. They also bind together those innumerable particles of matter which enter into the composition of all the different material substances that exist ; and, but for their operation, these various particles of matter which compose the universe could never have been held together for a moment, but must have been promiscuously scattered and afloat throughout the illimitable tracts of immensity. But for the operation of these laws the earth would still be “without form and void,” and no animate or inanimate thing would have existence.

By some philosophical writers, a distinction has been made between the attraction of cohesion, and the attraction of gravitation ; but, unless it can clearly be shown that there is a difference between that primary power which brings the particles of matter together, and that which holds them together, this distinction between the two kinds of attraction, will prove a distinction without a difference, and, consequently, not a proper one. Can such a difference be shown ?

or can it be shown, that the principle or power which brings together the larger masses of matter, differs from that which binds together the particles of the smaller masses?

The object of these remarks, however, is not so much to prove, or disprove, a difference between the laws of cohesion and the laws of gravitation, as to throw out the general idea, that for every set of laws in Nature, and their accompanying phenomena, with which man has to do, he requires a distinct faculty of the mind, adapting him to these laws and phenomena; and that, therefore, if the attraction of cohesion is governed by one set of principles, and the attraction of gravitation, by another, each of these sets requires a separate faculty of the mind.

The faculty of weight has to do, mainly, with those principles which relate to the specific gravity of bodies, in judging of the consistency, density, softness, hardness, lightness, and heaviness or resistance of bodies—qualities which cannot be decided upon by the mere sense of feeling or touch.

VERY LARGE.—One having very large weight, will possess the powers described under weight large, but in a much higher degree, so much so as to stand out alone, and excite the astonishment of those who witness his skill:—and all this he will be able to do seemingly by intuition, and without effort.

LARGE —One having weight large, will seldom lose his balance, even in difficult positions, and the instant he has lost the centre of gravity, be warned by this faculty, and directed to the muscular effort requisite to regain it; seldom slip or fall; readily adapt himself to the laws of specific gravity generally, and apply them to the accomplishment of his designs; can sling a stone, pitch a quoit, &c., very near the mark; will naturally and intuitively understand the laws of momentum and resistance; if much accustomed to riding on horseback, can be thrown only with great difficulty; will easily learn to skate, and take great delight in the exercise, and seldom fall upon the ice; with great ease, can balance things which those with weight, small cannot, and perform other feats of a similar nature with apparent ease and intuition; will walk upon a pole stretched across a stream, the frame of a building, a fence, &c., without falling, or fearing to fall, especially if self-e., is large; and, with construct., form, and caus., large or very large, will intuitively understand the power and the principles of machinery, and skilfully apply them to effect mechanical operations; is capable of becoming a good machinist, and, with large size, individ., local., and calcu., added, a first-rate engineer, or superintendent of machinery; can, at once, comprehend and apply the principles of hydraulics, hydrostatics, pneumatics, &c., and judge of powers and projectile forces with uncommon facility and accuracy.

FULL.—One having weight full, will apply the principles of weight, balancing, equilibrium, and resistance, with sufficient facility and correctness to get along with the ordinary business of life, but will not be remarkable for this quality; aided by considerable practice,

may possess those powers described under the head of weight large, yet they will be the result of practice more than of nature, &c.

MODERATE.—One having weight moderate, where only a moderate share of this faculty is required, as in the case of walking, running, &c., may manifest little, if any, deficiency in this respect, yet will not possess those powers described under the head of weight large; will be liable occasionally to lose his balance, to stumble, and, perhaps, fall, and to be thrown from a skittish horse; to experience dizziness, especially over running water, or from heights; will not be able to throw a quoit, stone, or other missile, just high enough, or low enough, just far enough to the right or left, and with exactly momentum enough to hit the mark, &c. One having weight moderate, with large imitat., form, and construct., will be able to use tools with great skill, yet will be no machinist, and will not readily and intuitively understand the operation and the powers of machinery, &c. The probability is that shooting running or flying game depends more upon weight than upon any other faculty.

SMALL, OR VERY SMALL.—One having small weight, will be decidedly deficient in those qualities described under weight large and very large; can be easily thrown from his balance, or from a horse; frequently stumbles, and, with large cautious., will fear to trust himself where he is liable to fall, because he will feel unsafe, &c.

LOCATION.—Weight is located adjoining to size, and a little internally from the middle of the arch of the eye. It is generally small in the American head.

28.—COLOUR.

Ability to perceive and recollect the various colours of objects, to compare them, and judge of the harmony or discord of their different shades when mingled.

In speaking of vision, it was remarked, that the eye could perceive the rays of light, and be agreeably or disagreeably affected by their various modifications or colours, but, that an ability to conceive the relations of colours, and compare them, to judge of their harmony or discord, and remember their tints must depend upon another faculty of the mind; otherwise, all painters who possess equally good eyesight, and who have had the same amount of practice, would be equally happy in colouring: but this is by no means the case.

The organ of colour is larger and more active in women than in men, and in some nations, and some individuals, than in others. Indeed, the authors have seen many persons who were possessed of excellent powers of vision, but who were utterly incapable of distinguishing (except black and white) one colour from another. Many other similar cases are also on record—all of which go to prove, that Nature, in perfecting her own handiwork, has seen fit to bestow upon the human mind, a primary faculty whose sole function it is to perceive, and judge of colours.

VERY LARGE.—One having colour very large, notices the colour

of objects as soon as he does any other quality, and recollects it as long ; is a natural and original colourist, and capable of painting with extraordinary skill and facility ; with compar., and ideal., large or very large, is a first-rate judge and critic of colours, and has a passionate fondness for employing the pencil or brush, and is highly delighted with rich and lively colours ; with caus., only full, and approbat., individ., and ideal., large, will be excessively fond of gaily coloured and gaudy articles of dress and furniture, and even run into extravagance in this respect ; with very large form, and large ideal., construct., imitat., size, order, and individ., is capable of becoming a portrait painter of the first class, and, with event., and compar., also large, a historical painter ; of using the brush with wonderful effect, and of transferring to canvass both the conceptions of his imagination, and real characters.

LARGE.—One having colour large, will readily remember, and be able to compare different colours, and even their various shades and tints ; will often notice the colour of a person's eyes, dress, hair, &c. ; manifest uncommon taste and skill in selecting, arranging, comparing, and mingling colours, and, as far as a natural talent for applying them is concerned, he will excel ; with large ideal., will be highly delighted with splendid paintings both as regards their colours and the composition, or imagination and taste displayed in them, and, with large form and imitat., can easily learn to paint, and that with uncommon skill, and with very large form, size, imitat., and construct., aided by practice, may be an excellent portrait or miniature painter ; and, in examining and purchasing articles of dress, furniture, &c., will have a particular reference to their colour.

FULL.—One having colour full, by considerable practice will be able to distinguish colours readily and accurately, yet this talent will be the product of Art more than of Nature, or, rather, of Nature greatly improved by culture ; will notice colours that are striking, or that are very well or very ill arranged, yet will seldom pay much attention to those that are ordinary ; with ideal., large, may display much taste and good judgment in mingling and arranging colours, and, with imitat., large, be able to learn to paint well, yet the mere colouring will form a less important feature in his productions ; will gaze with enthusiasm upon a splendid painting, but will be more interested in the imagination and taste displayed in it, than in the mere colouring ; but, with ideal., moderate, will not be at all partial to pictures or paintings, and only an indifferent judge of colours.

MODERATE.—One having moderate colour, will not take much interest in colours, unless something special calls his attention to them, and will seldom notice or recollect them ; can seldom describe persons by the colour of their eyes, dress, &c. ; and can learn to select and match colours only with considerable practice and effort : with ideal., large or very large, though he may be highly delighted with splendid paintings, will generally be more gratified with some of their other qualities and beauties, than with the mere arrangement of their

colours ; may distinguish one colour from another, but will not be able to distinguish their nicer shades and tints.

SMALL OR VERY SMALL.—One having small colour, will very seldom notice the colour of people's eyes or hair, or of any article of their dress, and even though familiar with them, will be unable to describe them by these indications; will seldom notice, or take any interest in, colours, regarding them all as amounting to about the same thing ; will find great difficulty in distinguishing their different shades, and, perhaps, between the different primary colours ; occasionally mistake one for another, and be comparatively insensible to the beauty produced by the arrangement and blending of different colours.

LOCATION.—Colour is located in the third frontal convolution under the arch of the eyebrow, a little externally from the middle, and between the organs of weight and order. In ascertaining it, there is occasionally some difficulty in consequence of the thickness of the bone that covers it.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., MARCH, 1892.

IN the *Lancet* for February 6th, an interesting lecture appears by G. Sims Woodhead, M.D., on "The bearing of recent biological researches on the practice of medicine and surgery." After speaking of cell stimulation in the various functions of the body, he goes on to say, in no region of experimental research has there been a more immediate outcome as regards treatment—especially from the surgical point of view—than in that of nervous pathology and physiology, and the whole band of enthusiastic students of a most interesting branch of physiology may congratulate themselves that they, at any rate, have not carried on their work in vain. The localization of function in certain areas of the brain—though still a matter for discussion and experimentation—has opened up a new region of surgery, a region in which our best surgeons have excelled themselves, and one that has afforded brilliant opportunities of obtaining most successful results, to some of our younger surgeons trained to the most exact methods, and prepared by a long course of accurate experimentation, in which the importance of carrying out exact details and new methods has been insisted upon in an almost exaggerated degree. The triumphs of cerebral surgery by contrast throw

into comparative insignificance the work that has been done on the spinal cord.

The subject of abnormal keenness of the sense of smell in the blind has been brought before our notice of late. Is there such a thing as a memory of odours? There are not wanting proofs that there is. Wordsworth, who was ordinarily deficient in the sense of smell, once smelt a hay-field, and never forgot it. James Hearn never lost the memory of the smell of the baker's shop in a street of Bassora. A Melbourne colonist, again, declared, some five years back, that nothing will ever drive from his memory the smell of the first boiling-down establishment he visited in Australia, which odour so affected him that it remains vividly impressed on his memory, though he is far from the scene now. How many cases can you, reader, recollect of odour reminiscences? The power exists, but it generally lies dormant, though in some cases the faculty has been highly cultivated. We can understand that the savages and Peruvian Indians are so acute that they can detect the difference between the footprints of white men, Indians, and negroes. The Arabs in the desert have been known to smell firs thirty miles away. The detection of these smells could only exist from recollection of former similar smells. But with regard to the blind, and the deaf and blind, this subject is most curious and touching. Such persons acquire a knowledge of the outer world largely through the organ of smell; and it is difficult to resist the conviction that memory must be at work here to assist the patient in discriminating between one odour and another. James Mitchell, one of the few known individuals who have been at once deaf, dumb, and blind, had a remarkably acute sense of smell. "When a stranger arrived," we have it on the authority of Dr. Kitto, "his smell immediately and invariably informed him of the circumstance, and directed him to the place where the stranger was, when he proceeded to survey him by the sense of touch." "When a stranger approached him," says Wardrop, "he eagerly began to touch some part of his body, usually his arm; and after two or three strong inspirations through the nostrils, appeared decided in his opinion. If it happened to be unfavourable, he suddenly went to a distance with every appearance of disgust; if favourable, he showed a disposition to become more intimate, and expressed by his countenance more or less satisfaction in accordance with the degree of his appreciation." An old volume of the Philosophical Transactions records another curious case. A lady was attacked with small-pox of such terrible severity that she became blind, deaf, and dumb, and

almost incapable of taking any nourishment. The knowledge of her infirmities rendered her averse to being seen by strangers, and her friends were obliged to adopt precautions to prevent this. One day a friend called upon her, went to her chamber, and through the medium of some sort of finger alphabet, urged her to come downstairs and sit with the rest of the family. This she consented to do after some time, and went down to the sitting-room ; but no sooner was the door opened than she started back, and withdrew in much displeasure, alleging that there were strangers in the room, and that an attempt had been made to impose upon her. The fact was that strangers had entered the room while the friend had gone upstairs, so that she had not known of their being there. In reply to a question, the blind, deaf, and dumb woman stated—again presumably by means of the finger alphabet—that she knew the intruders to be strangers by the sense of smell. It was this case, and one or two others cognate in character, that suggested to some ingenious minds the idea that it is possible to teach the blind to read by having an odour to represent each letter of the alphabet—an idea which, by-the-by, excited Sydney Smith to say, “We may even live to see the day when men may smell out their learning, and when a fine-scenting day shall be considered as one peculiarly favourable to study.” There are exceptions which ought, perhaps, to be included amongst cases of memory ; but, whether or no, the proposition, as a rule, stands good. It was remarked during his lifetime that Mr. Fawcett was always able to tell of the presence of strangers, from the same acute power above mentioned.

THE SIZE OF SIR WALTER SCOTT'S HEAD.—The Editor of the *Edinburgh Phrenological Journal*, vol. 12, 1839, gives the following information concerning Sir Walter Scott's head:—“On Wednesday, a lady who called on Mr. Dick, of Edinburgh, and left £5 for the monument, related the following unpublished anecdote of Sir Walter. ‘When he was a boy, residing with his family in George Square, he and his brothers, along with the brothers of the lady, were in the practice of vying with each other in feats of physical agility. On one occasion they proposed to force themselves through the railing of the Square, the centre of which was then a sheep park. All of them got through but ‘Watty,’ as he was called by his companions, whose head, from its extraordinary breadth, stuck between two rails ; nor could it be extricated until a blacksmith was sent for, who, by lever power, contrived his escape.’—*Scotsman*, June 20, 1840. Two of Scott's four

brothers were older than he, the younger of them by about three years. The spaces between the present rails, which, being not at all modern in their aspect, are probably the same that existed at the time referred to, vary from about $5\frac{3}{4}$ to $6\frac{1}{8}$ inches, as we have ascertained by measurement. With reference to the medical certificate published by Mr. Lockhart, and which bears that Sir Walter Scott's brain was found on dissection to be not 'large,' we have good authority for asserting that one of the medical gentlemen present at the post-mortem examination, thought it, on the contrary, large, and was even struck with its unusual size. Though forbidden to publish the grounds on which this assertion is made, we are at liberty to answer privately the inquiries of any one who desires further information on the subject."

Fowler Institute.

MEMBERS' NOTES.

"Life is not mere existence, but the enjoyment of health."

OWING to unforeseen circumstances, Mr. Ward was unable to express his "Thoughts on Theosophy," as previously arranged for the February monthly meeting; judging from the attendance, these "thoughts" had been looked forward to by many, who will probably be satisfied in this respect at an early date.

* *

"The Wallace System of Hygiene," was the title of a paper read by Mr. Coleman. He said, "Health lies at the foundation of all reform, whether physical, political, social, or moral. The prevalence of disease is sufficient proof that there is something radically wrong in the orthodox mode of living, which the founder of this system claims to have discovered. Disease is the expression of the efforts of natural laws to expel effete matter from the body, and should therefore be welcomed as purifying, and not regarded as an evil. The nature of this effete matter, whether from a boil, tumour, or what not, has been proved by Mr. Wallace to be identical in nature with the white corpuscle of physiology, and the yeast cell of botanists. We believe fermentation to be the basis of disease, and therefore abstain from all food containing yeast, or which readily ferments. Meat is a poor article of dietary at best, possessing much water, too much nitrogen, a poor heat giver, but worse than all, is actually accompanied by this disease element, the white corpuscle. Considering vaccination from their standpoint of this system, it would be difficult to understand how pus matter—called on certain occasions pure vaccine lymph—could produce anything but its like, disease. There is an ethical side to the food question worthy of a paper to itself, but if pure food did nothing more

for us than purifying our minds, then we still have the strongest argument possible why it should be universally adopted."

Mr. Samuel then rose and criticised the paper at some length, in his usual able manner; Mr. Hall followed, and said that, after some consideration, he had concluded Mr. Coleman's explanation of the white corpuscle was the correct one, and the diet suitable to a pure and healthy life.

Mr. Munro spoke of the curative effect of disease, and explained why inorganic substances were of no use to the human organism. Several other members spoke, and questions were asked, which were afterwards answered.

* * *

Owing to the success which attended the debate a few months back on "Mind *v.* Body," it has been decided that the March monthly meeting shall take a similar form, the subject chosen being, "How can Phrenology be best employed scientifically in the education of children, and the selection of a suitable pursuit."

* * *

From information made public only recently, it seems that Professor Josef Hyrtl, of Vienna, is the happy possessor of Mozart's skull. The Professor inherited this unique relic from his brother, who received it from a grave-digger, who, in December, 1791, assisted in carrying the coffin of Wolfgang Amadeus Mozart to its resting place, not the last, however, for ten years after, according to rule, it was removed with others to make place for fresh occupants, and the grave-digger took advantage of this circumstance to remove the skull and jaw-bone. We are told "The skull is large and of a well-shaped oval form, coming neither under the category of long or short skulls. The profile corresponds perfectly with the profile portrait of Mozart, and the sutures reveal to the anatomist the fact that the skull belongs to a man of from thirty to forty years of age. The ear apertures are large; such as might be expected in a man with large ears, which Mozart was known to possess. On the other hand, no traces are to be discovered which would confirm the old-fashioned phrenological views as to the localization of the musical instinct."

If this last statement be correct, there is little doubt that Professor Hyrtl has been to the trouble of mounting upon a "stand of polished black wood with a glass cover," the cranium of some unknown individual.

* * *

The *Standard* of February 10th contains the following:—"A wonderful calculating young man, by name Inaudi, was yesterday introduced to the Academy of Sciences, Paris, and greatly astonished that learned body by the rapidity and accuracy with which he solved, by mere head work, the most abstruse calculations. One specimen will suffice: M. Bertrand asked him on what day of the week fell the 11th of March, 1822. He immediately replied 'Monday,' and simultaneously formed the square of four thousand eight hundred, diminished by one, and divided it by six. His performances in algebra and geometry were equally astounding. M. Inaudi is a native of Piedmont, and his skull is reported by Professor Broca to present extraordinary features. He is

only twenty-four years of age." Inquiries have been made in Paris by the President of the Fowler Institute regarding this second Zerah Colburn.

* *

Miss E. C. has forwarded a note to the effect that "the death of Mr. Frederick Bailey has taken place at Wickham, at the advanced age of 91. He was the first apprentice of George Stephenson, the eminent engineer, and used to remark that many people of Killingworth, especially the horse-owners, actually wished for Stephenson's death at the time he was developing the steam engine. About 60 years ago Bailey went to South America for a time, but on returning continued to work at his trade until he became too infirm."

* *

While a canal was recently being dug near Brün, the capital of Moravia, four and a half skulls were found of dolichocephalic type, together with several bones and teeth of mammoth rhinoceros and reindeer. Close to these prehistoric remains lay some 500 fossil snails, several calcimous stones with holes in the centre, also a rough figure cut out of a mammoth's tooth. This discovery is considered to be of much importance from being a proof of the existence of human beings in the mammoth period.

G. B. COLEMAN.

Notes and News of the Month.

THE hospital recently opened at Glasgow by Lady Aberdeen, is free to women only, and is to be worked by a staff of lady doctors.

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THE Earl of Meath says that recent legislation has practically closed publichouses in the rural districts of Norway, and greatly reduced their number in the towns. As a result, there are no men or women to be seen in rags, no drunkards, no brawlers, no beggars, no taverns.

* *

DR. LIMONTON, in the *Chicago Journal*, calls attention to the fact that the human nose is frequently not in the centre of the face, and he emphasizes the importance of this fact with reference to the accurate fitting of glasses. The difference in the breadth of the two sides varies from one-sixteenth to one-eighth of an inch, but he has not found it more than an eighth.

* *

THE ROMAN NOSE AND CRIME.—It is very interesting that the arched or Roman nose should have been found remarkably frequent among murderers. A peculiar illustration of the supposed relation of this organ to character is found in Arabia, where horses with arched noses are not admitted to the breeding stables, lest they transmit an evil temper to their offspring.

* *

PROFESSOR BOYS' experiments fully confirm the inference drawn from earlier observations that the heat of the moon does not accumulate by penetrating beneath her surface; it lasts only from moment to moment as supplied by the sun.

MISS LOUISA MACDONALD, M.A., of London University, has been selected by the authorities of Sydney University as Principal for the Women's College in connection with the University. The appointment is worth £500 a year, with board and residence.

* * *

MRS. MCKENNA, daughter of Sir M. Mackenzie, has joined the ranks of "lady journalists," and a son of his is one of the most sought-after managers of theatrical touring companies. It was a practical idea, which others would do well to follow, that a man in their father's position—reported to have taken the biggest fees on record—should have taught two of his children a trade.

* * *

ANIMAL PHYSIOGNOMY.—Lavater made but few observations on the facial characteristics of animals; those that he has recorded are, however, to the point:—"The skull of the dog speaks, as I may say, determinate powers of sense. The throat is rather that of tranquil than cruel or ravenous appetite, though it participates in both. I imagine I discover in the eye-bone and its relative proportion to the nose a degree of fidelity and sincerity. Though the difference between the wolf and the dog is small, still it is remarkable. The concavity of the skull of the former, the convexity above the eyebones, the straight lines from thence to the nose, denote more hasty motion. The under jaw has likewise the stamp of malignity."

* * *

THERE are some striking points of coincidence between the late Mr. Spurgeon and the late Mr. Bradlaugh. Both died of Bright's disease at the unusual age of fifty-seven; both were men of the people, absolutely sincere, entirely fearless, and born orators; Mr. Bradlaugh began to speak in public at seventeen, and so did Mr. Spurgeon; each was partial to cigars; both were teetotallers. Mr. Bradlaugh expired on January 30, 1891, and Mr. Spurgeon on January 31, 1892.

* * *

DR. GEORGE KINGSLEY.—The late Dr. George Kingsley removes the last of a brilliant trio of brothers. There was much in common between the three—Charles, Henry, and George Kingsley. They all had the same animal spirits, the same intense vitality, the same boisterous humour, the same keen sympathy with nature, and the same love of sport, travel, and adventure. In Charles the poetic gift was the most strongly developed, the story-telling faculty in Henry, and scientific insight in George; but none of these qualities was wholly wanting in any of the three. They were singularly rich in natural endowments. George Kingsley entered the medical profession, and his energy and skill in coping with an outbreak of cholera in 1848 were commemorated by his brother Charles in the portrait of Tom Thurnall in "Two Years Ago." But his incurable love of wandering prevented him from settling down to the routine of medical practice.

ALFRED CARPENTER, M.D. LOND., M.R.C.P. LOND., J.P., &c.—For the last forty years the name of Dr. Carpenter has been at once familiar to and respected by all who have been interested in the progress of sanitary matters during the past half-century. Himself the son of a medical man, his general and medical education received marked attention, and his career as a student of St. Thomas's Hospital, when it was in less pretentious quarters than at present, is one which will compare with the most outstanding in the profession. He took several qualifications, ultimately becoming M.D. of London. His work was one of reform, and extended into many fields of labour. Early closing, sanitary progress, public baths, establishment of sewage farms, house drainage, and adulteration of food were subjects on which he spoke and wrote with unfaltering voice and unflinching pen.

* * *

SIR SPENCER WELLS IN INDIA.—We learn from the *Englishman* of Calcutta that Sir Spencer Wells has been the guest of the Medical Society of Calcutta, at a crowded meeting presided over by Dr. Kenneth Macleod. The assembly included most of the leading practitioners in Calcutta, European and Native, a number of lady doctors, and some of the more advanced students of the medical college. We can imagine how sincere were the words in which Sir Spencer Wells expressed his pleasure in seeing such an assembly, representing so many different races and creeds, and receiving from it a warm welcome.

Hygienic and Home Department.

CARE OF THE FINGER NAILS.—Since the science of reading character by handwriting has come in, it is said that the care taken of the finger nails affects the handwriting. The long, almond-shaped nail is a great support to the middle finger, which guides the pen. It is said that people with imagination are apt to have long, taper fingers, and beautiful finger nails. They have a handwriting in which the long up strokes and down strokes cut into the lines above and beneath them. The heads of their capital letters are large. When it has a marked downward movement this handwriting shows order and impulse, and a tendency to melancholy. An aptitude for criticism is shown among people who bite their nails. These people are cynical and severe, uncharitable and bitter; they write a small, cramped, illegible hand. The good-natured critics are said to possess small, well-shaped nails, and their handwriting is somewhat angular. Diplomacy has a long, supple hand and a beautifully kept finger nail. The handwriting of a diplomatist looks like a snake crawling away.

FOOD BEFORE SLEEP.

BY H. K. MORRIS, M.D.

WE have said much about the value of sleep, now let us reason together about food before sleep.

When I make the assertion that we, like animals, need food in our stomach when we go to sleep, let me prove it. As I stated in a previous article, a glass of hot milk is especially good to induce sleep, taken immediately before retiring, because it warms the stomach, thereby calling into activity the nerves that control the stomach; these being called into action, the nerves that manage the brain are relieved of their tension or pressure, and are consequently nearly at rest. The pneumogastric nerve and its branches really form the so-styled sympathetic nervous system—branches of this nerve control digestion; that alone would allow us to style it a most important factor in our construction. So many of our so-called heart troubles, shortness of breath, palpitation, and sense of suffocation, arise from indigestion, because the food is not quickly digested. When in the stomach, it is of a favourable heat or warmth to form a ferment, from this ferment arises gas; this closes up the stomach; it being a sort of elastic organ when filled with gas, presses back and upward on the heart, and we are troubled about breathing properly, when there is no trouble whatever with the heart proper. Now let us go back to the original thought that it is better to sleep on a full stomach. I firmly believe that a great many people who are not actually sick, keep below par in strength and general tone from fasting during the long interval between supper and breakfast. I believe that the complete emptiness of the stomach during sleep adds greatly to the amount of emaciation, sleeplessness, morning headache, irritable state in the forenoon, and much of the general weakness we have to contend with. The stomach bears the same relation to the human body that the fire-box does to the furnace; be uniform in feeding the furnace and the result is uniform—the same with the body.

Physiology teaches that within our body there is a perpetual change taking place; that there is a constant waste followed at once in health by a constant re-building, a new, perpetual disintegration of animal tissue whether sleeping or waking; this fact leads us to the belief of the necessity of a nearly continuous supply of nourishment, especially in those who exhibit any weaknesses of the body; by this nearly continuous supply of nourishment we would counteract their emaciation and lower degree of vitality, as bodily exercise is suspended during sleep, and the wear and tear of the body of course is

likewise diminished, while digestion goes on quite as well during sleep ; this digestion, assimilation, and nutritive activity continue as usual. The food that is furnished during this period adds more to the body than is destroyed by wear and tear, and the consequence is, an increase of weight and improved general vigour is apparent. All beings, except man, are governed by natural instincts, and every being with a stomach, except man, eats before sleep, and even the human infant, guided by the same instinct, must have food to sleep well ; if its stomach is empty long, it cries loud and well.

Digestion requires no interval of rest, and if the quality and quantity of food used in twenty-four hours is not beyond the physiological limit, it makes no essential difference how few or how short the intervals between eating, but it does make a difference, and a great difference, in the weak and feeble, to have a light lunch in the stomach during times of sleep, so that instead of the body being consumed by bodily action, by the wear and tear of the mechanism of the body during sleep, it may be nourished and sustained through digestion.

I am convinced that were the weakly, the people whose nerves are starved, those who are emaciated, and the wakeful, to take a light lunch of simple, plain food, as an apple and graham cracker, or bread and milk, before going to bed for a period of seven or eight hours' sleep, a large percentage of those would be lifted out of weakness into strength, remembering always that your standard of health depends so much upon yourself. A large percentage of the people who suffer from throat and catarrhal troubles can help themselves into health by nourishing the body in place of using severe gargles, and before going to bed to take a good saucer of oatmeal and cream, merely for a few months. Nature throws off many diseases, if you but help her, by nourishing the body, enabling it to eliminate or throw off the waste of the body, which is the result of friction ; if this waste of the body is not eliminated, it is dead and effete material, and if not thrown off must necessarily be re-absorbed. Sustain the body, and it will bring you health. Of course people who are plethoric or stout must follow the opposite course to these suggestions.

AMOUNT OF SLEEP REQUIRED.—The Rev. T. De Witt Talmage is credited with the following : There is not one man or woman in 10,000 who can afford to do without seven or eight hours' sleep. All those stories written about great men and women who slept only three or four hours a night make very interesting reading ; but I tell you, my readers, no man or woman ever yet kept healthy in body or mind for a number of years with less than seven hours' sleep. Americans need

more sleep than they are getting. This lack makes them so nervous and the insane asylum so populous. If you can get to bed early, then rise early. If you cannot get to bed till late, then rise late. It may be as Christian for one man to rise at eight as it is for another to rise at five. I counsel my readers to get up when they are rested, but let the rousing bell be rung at least thirty minutes before your public appearance. Physicians say that a sudden jump out of bed gives irregular motion to the pulse. It takes hours to get over a too sudden rising. Give us time after you call us to roll over, gaze at the world full in the face, and look before we leap.

WHY THE HAIR FALLS OUT.—Dyspepsia is one of the most common causes of baldness. Nature is a great economizer, and when the nutrient elements furnished by the blood are insufficient to properly support the whole body she cuts off the supply to parts the least vital, like the hair and nails, that the heart, lungs, and other vital organs may be the better nourished. In cases of severe fevers this economy is particularly noticeable.

GREAT MEN'S WIVES.—In a chapter on great men's wives Elizabeth Cady Stanton tells how Dr. Franklin's domestic happiness was wrecked. He left his wife behind when he went to Europe, and did not see her face for eleven years. She remained at home and drudged while he enjoyed the splendours and luxuries of European courts. When he came back she was no match for him. Franklin quarrelled with his sons, and disinherited one of them. Their headstrong dispositions had had birth in the discontent and disappointments of their mother. Oliver Ellsworth's wife was a woman of different mould; she kept her cheerful temper during her husband's long absences at Washington, and her children grew up to high honour and usefulness. But the lesson she learned caused her to give this advice to her daughters: "Keep with your husbands; go for a few weeks every winter to Washington; never mind the long, tedious, hard stage ride; keep with them at any sacrifice. Read, think, study the questions of the hour, the literature of the day; keep pace with them in knowledge and attainments. Thus can you be companions united to each other." Franklin's experience is that of thousands of great men, who have forgotten their wives in their ambition to rise. They can never know how much help they would have received if they had kept these willing and faithful friends in home companionship.

Mr. Coleman very kindly prepared a paper for the last Monthly Meeting, on Mr. Wallis' diet question, which was most scientifically treated. It called forth some strong opinions, adverse, and in favour of pure vegetarian diet, and the Anti-vaccination question.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

BAPTIST SCHOOLROOM.—Professor A. J. Coles delivered his second popular lecture, entitled, “My right place in life and how to find it.” “My right wife and how to find her.” The chair was taken by the Rev. W. A. Hobbs, and there was a crowded audience, some having to be seated on the platform. The professor held his audience spell-bound and there were many signs of approval. Platform delineations were given which proved to be very accurate.—*Taunton, Somerset Express*.

AN interesting evening was occasioned through the reading of a paper on Skull Physiognomy, before the members of the British Phrenological Association, on February 2nd. The paper was written by Mr. J. Coates, and read by Mr. Webb (president.) A discussion on skull measurements followed, in which a number of members took part. The next meeting will take the form of a *Conversazione* on March 1st.

ON January 28th, at Upper Holloway Chapel, under the auspices of the British Women's Temperance Association, Miss Fowler, Hon. Sec. of that body, delivered a scientific lecture on the influence of alcohol on the brain. She illustrated her points by means of models of the human brain, and dwelt upon the importance of keeping the brain clear, which was not possible if alcohol were present, these having a most deleterious effect upon the nerve centres of the brain. Miss Fowler also urged the importance of total abstinence on the part of both men and women, especially in view of the tendency of the age towards higher education. Mrs. H. J. Osborn, who presided, also spoke of the scientific and educational phase of the temperance question as being most important, as it was very necessary to reach the heads as well as the hearts of the people. She herself well remembered the influence upon her own mind of a paper read sixteen or seventeen years ago, when she had not long been an abstainer, by Miss Fowler's mother, at a conference in Birmingham. The subject of the paper was the hereditary influence of alcohol, and she (Mrs. Osborn), made up her mind from that time that no child of hers should inherit the taste for alcohol from herself.—*Temperance Record*.

MR. L. N. FOWLER lectured on February 3rd, on “The coming Man;” and Mr. Hollander on the 17th, on “Animal Instinct,” which was an exceedingly interesting lecture, and was followed by a spirited discussion.

DURING the month Miss Fowler has also lectured at Walham Green, and Lady Ashburton's Hall, E.

Correspondence.

To the Editor of the PHRENOLOGICAL MAGAZINE.

DEAR SIR,—The enclosed cutting is from the *Oldham Chronicle*:—“The Oldham Literary and Philosophical Society.—On Wednesday evening a lecture was given at the Town Hall, Oldham, by Dr. Andrew Wilson, on ‘Curiosities of Brain Power,’ as illustrated by dreams, mesmerism, and ghost-seeing. Dr. Platt presided. Having noticed the various parts of the brain, and made the audience familiar with it as an ordinary structural organ, the Lecturer traced the building up of the brain from the lower animals to man, showing that there was no type of brain peculiar to man, and that the lower animals presented a fundamental idea of the structure which they found present to the fullest extent in the human being. As to dreaming, the Lecturer explained that that was the work of the middle portion of the brain when the more intellectual part was resting. Dreams were really only coincidences. Mesmerism was the action of the same portion of the brain, and mesmerists ought not to be allowed to practice the art. Only medical men should have authority to do this, as was the law in Belgium and other countries. The lecture was illustrated with diagrams, and was both interesting and instructive.”

The admission is much in favour of Phrenology. The words “middle portion” include Ideality, Sublimity, Wonder, or Spirituality, Hope; but Dr. Wilson did not use Phrenological names. Still, what was said corresponded with what Phrenology teaches. There is one point he did not touch, viz., the nature of the dreams to which a person will be most liable—which the Phrenologist is able to predict or point out from the shape of the head. The nature of dreams depends on the healthy condition of body and mind, and the activity of certain faculties, together with those in the middle portion of the brain, as pointed out. Sir, from attacks made at various times by the learned doctor, the above is an admission, either consciously or unconsciously, in favour of Phrenology. Thanking you in anticipation for the insertion of this letter.

I am, yours truly,

Oldham.

A PHRENOLOGIST.

GRAPHOLOGY.

To the Editor of the PHRENOLOGICAL MAGAZINE.

SIR,—A short sketch in your February issue, by Mr. E. T. Craig, entitled “How the Caligraphic Art may become a Science” seems to call for some explanations and corrections.

That “Caligraphy is an Art” no one will dispute; but though this is what Mr. Craig says, it is not what he means. He really refers to Graphology, and the two are not interchangeable terms. Caligraphy is the “art of beautiful writing;” Graphology the art of judging character from handwriting—two widely different things. That Graphology is an Art is partly right and partly wrong; in actual practice it is certainly more of an Art than a Science; but in this respect wherein does it differ

from either phrenology or physiognomy? Do not both depend on the skill of the expert? If by science Mr. Craig means "knowledge reduced to a system," then Graphology can lay claim to that distinction, for it has a "scientific basis from which to draw conclusions;" personally I should prefer to call it a system

Experts in Courts of Law have nothing whatever to do with delineating character from handwriting. Their business is to decide whether two writings, one natural and one disguised, emanate from the same hand; and wonderfully skilful some of them are too. These experts are seldom or never Graphologists; while on the other hand, Graphologists are seldom experts. The two things are quite distinct.

Further, Mr. Craig states that "a good, practical phrenologist, gifted with a good development of form, size, individuality, and comparison, should become a good calligraphist." That is "an elegant penman," according to my dictionary. Yes, and he could become this without the individuality and comparison. A good Graphologist is another thing; for this he would find a sharp, keen intellect, plenty of human nature, and a respectable development of causality useful, as well as the faculties mentioned by Mr. Craig. Mirthfulness, language, culture, experience, and good general information will also be found very necessary, if he is to present his delineations in a pleasing and "taking" form. It should be remembered graphological delineations are seldom verbal ones.

Anything which throws light upon character is valuable, if we would keep abreast with the times. Man know thyself, is not expanded to its full scope until it embraces all that the term anthropology covers. Phrenology and Graphology are not antagonistic, but complementary to each other, and may be combined with advantage. Unless the phrenologist has an actual living head before him, he is a very helpless mortal; not so the Graphologist. Handwriting has this advantage over a portrait, it must be faithful, which a portrait rarely is. Therefore, even though more limited in its scope than phrenology, Graphology will always be popular because of the facilities which exist for applying it. A letter can be obtained when photographs and living beings are out of the question, and as a little knowledge "in hand" may, under many circumstances, be worth a good deal "in the bush," Graphology will continue to flourish.

Yours truly,

EUGENE GORRIE.

Melton Mowbray, February 10th, 1892.

[We have heard of persons who could show several styles of writing, and have puzzled the Graphologist quite as much as a photographer with his "deceptive art." Hence, in the arts of Graphology and Photography, it appears to be about six one way, and half-a-dozen the other, in point of correctness. —ED.]

When Sir Isaac Newton was asked why he did not smoke, he replied, "I would not make to myself any new necessity."

Book Notices.

THE January number of the *Phrenological Journal*, etc., has for its first subject, General Schofield, Commander of the U. S. Army. The portrait shows the veteran in his uniform, and the sketch by the editor is appreciative. Next a summary of the work accomplished by the World's Fair Commission is accompanied with views of several of the great Exposition buildings. Mrs. Wells brings her interesting account of Dr. Boardman to a conclusion, and following that is the portrait of an octogenarian farmer of Canada, who has done notable service as a teacher and writer. Dr. U. E. Traer discourses well on the utility of phrenology, and a Californian lady puts in some good points on practical mental science. Florence Hull Brown talks on governing children most sensibly, and there are two or three other good things in the Child Culture department that will be read carefully. Science of Health has a leading article entitled "Health : What is it?" "Good Advice in Helping the Wounded;" a sketch of the centenarian, Mrs. Deborah Powers, and a good portrait. Notes from anthropological sources discuss interesting facts in human life, and the various editorial comments touch upon live questions.

"Love, Courtship, and Marriage," by Mr. John Taylor, price 6d. London : L. N. Fowler, Ludgate Circus.—This is the report of a course of four lectures given in various parts of the country by Mr. John Taylor (who has lately gained the certificate of "The Fowler Institute").

"Delsarteau Physical Culture," illustrated, by Carrica Le Favre. Fowler, Wells, and Co., New York. London : L. N. Fowler, Ludgate Circus. Price : paper covers, 1s. ; cloth, 3s.—This is a practical exposition of natural physical exercises in the line of Delsarte principles. It can be confidently commended to all who seek physical improvement in both strength and grace. Especially adapted are the directions and illustrations for school and class uses. The author advocates refining and training the body to a high degree of expressiveness rather than develop merely animal bulk. There is a chapter on Walking, and how to carry an umbrella, that will delight the aesthetic, and equally well, the hurrying business man. It is well written by one who knows, and the price is within the reach of all.

"Character in Handwriting," or the A B C of Graphology, by Eugene Gorrie. Price, threepence. London : L. N. Fowler, Ludgate Circus.—This is an interesting little pamphlet on the subject. Illustrated with *fac-simile* autographs of Queen Elizabeth, Mrs. Bancroft, Miss Florence Nightingale, Sir Henry James, Napoleon I., Dr. Livingstone, the "Chelsea Philosopher," the "Sage of Coniston," Mr. Kinglake, Mr. Craig, and M. Talleyrand.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

W. B.—Is organized for labour; will be in his element at work out of doors, or as a carpenter or mechanic. His mind works very thoroughly; he makes up his mind on the spur of the moment; he is quick to observe, and intuitive in coming to his conclusions. He will be in his element as an overseer or a manager, but he will not be content with ordinary labour and someone to plan for him. He has a natural talent to discern character and motives, and his imagination is beginning to bother him somewhat with extravagant plans and modes of doing things. All things considered, he is better adapted to be an agent, or else to go into the work of life as a farmer or builder. Encourage the idea of going West.

JESSIE.—Has an organization that may pass for a Mother in Israel, for almost everyone is inclined to call her mother. She is exceedingly motherly, and knows how to sympathize with old and young. She would have made a good doctor, and is in her element when occupied in caring for the sick. She has a very practical turn of mind, and is capable of doing most things connected with everyday life. She knows almost as well as if she had studied the subject practically, for she is noted for her common sense, and she is guided by her experiences along with it. All her neighbours and acquaintances go to her for advice. She is very intuitive in discerning the real spirit of other people, and is thoroughly practical in her judgment. She can manage rude boys and unmanageable people first class; if she were in an insane asylum she could get along with almost anyone as a patient. She is particularly kind-hearted; her whole nature is moulded by her sympathies. She does not change much in her ways and manners. She came into womanhood early, and learned to discharge duties suitable for persons much older than herself. She never was much of a girl.

B. A. (Toloa).—Has a Shakesperian kind of head; he easily gathers facts, and does not lose sight of his experiences, but takes common-sense views of things. His powers of observation are good; he is systematic in his habits and modes of thinking, and is methodical in his life and actions. He does everything as correctly as possible the first time. He is a great student of Nature, and especially human nature, for he watches people closely, and has an uncommon amount of intellectual curiosity; he seldom loses sight of any new phase of character

or mode of doing things. He is so orderly and methodical that he thinks he has occasion to find fault with others, because they are not perfect in their sayings and doings. He is naturally versatile in his talents, and can do many different things as the occasion requires. He is refined in his disposition, and has no sympathy with coarseness of language or manner. He could succeed in literary work as reporter, delineator of character, or in a sphere of life that required common sense, and availability of mind.

W. R. RAY.—Has an ample amount of warm blood ; she is a magnet and draws others around her ; she has plenty of friends, and they are liable to call on her when they want to be entertained and have a jolly good time. Her magnetic power would be of great service to her among the sick and weary ; she has the faculty of relieving people, they always go away from her in better spirits than they came. She can be selfish and look after number one if necessary, but she so adapts herself to others that her selfishness is seldom shown. She has tact, and knows how to accomplish her ends without expressing her desires. She is orderly and systematic ; she is a good observer, and is able to tell what she has seen, especially concerning character and disposition. She is very emotional, fond of the spiritual, and mysterious, and gathers rather strange opinions ; she generally becomes acquainted with the affairs of the neighbourhood, more than others would under the same circumstances. She has a good organization for an artist, milliner, dressmaker, or housekeeper, but more especially would make a good companion to a husband who wanted sympathy and aid. She seldom irritates or comes in contact with others unpleasantly. She is long lived, and when with plenty to do, is quite in her element. She works hard, and scarcely knows when she is tired, unless she is on her feet very much, and would make a capital nurse.

FRANCES.—Has high ideas, possesses an elevated tone of mind. She is not satisfied with the work and drudgery of life ; she cannot be idle, and she wants to work where she can do the most good to the greatest number. She is more gifted in a variety of ways than many, for her brain is fully developed and her faculties are strongly marked. The tendency of her mind is to the moral and the spiritual, rather than merely to worldly display or popularity. She shows evenness of intellectual development, and would succeed about as well in one department of study as another, except that she has more ambition for science and philosophy than for language and literature. Her sympathies are strong, her feelings are comparatively juvenile and youthful, and she easily becomes in favour with young people ; she will not grow old as early as many, and as an aged woman will appear rather girlish. She has ease and grace of manner, adapts herself to a variety of situations, and seldom fails in anything she takes hold of to do.

JESSIE (A) B.—Is highly nervous, very intuitive in her feelings, strong in her likes and dislikes, exceedingly ambitious, very quick to notice when she is slighted, and appreciates attention very much ; she has considerable talent, and exerts quite a personal influence in the circle in which she moves. She is decidedly executive, and creates a

sensation where she goes. She is orderly, methodical, practical, intuitive in her judgment, knows what she knows about persons and things the first moment she pays attention to the subject. She is a little strange at times, for her mind works by extremes, but usually she is rather brilliant, very knowing, positive, decidedly executive, and is always thinking for her friends. No kind of knowledge comes amiss to her; she would like to study medicine, law, and politics, and know all about doing everything; she would do very well in the medical profession in diagnosing disease. She is something of a prophet in her way; she foresees very distinctly what is to be; is clear-headed, and rather talented.

J. M.—The general balance of power is such as to enable this man to live a certain life. He will never go to war if he can help it, but will fight for his friends more than anything else. He is charitable in his disposition; is of a philanthropic turn of mind; generous in his opinions, and liberal in his religion. He is not so strong a partizan as to lose sight of the evidences on the opposite side. He exerts a genial influence among his friends, and a severe influence among his enemies; but such a man cannot have many enemies. He has a favourable development of intellect, for taking common-sense views of life, for seeing things as they are, and for being able to take the advantage of circumstances. Among sharp, selfish, business men, he will not take high rank, but among persons who are noted for their friendship, sympathy, and social disposition, he will stand well. He cannot make enemies, but will certainly make friends, and will set a good example for many to follow.

W. W.—Is not what he appears to be; in other words, as he grows older, he will exhibit much more force and strength of character than he does now. At present he is under the control of prudence, circumspection, and a certain amount of reserve, which will make him appear to a better advantage in after life, when he is full-fledged, and his powers are at his command. He will show good powers of observation, good practical talent, and great love for history, and will take great interest in the labours of life. He will be exceedingly fond of chemistry, and all kinds of performances where principles are involved. He has a good thinking mind, is quite sagacious in discerning character and motives, will succeed in learning languages, and eventually will make a good speaker. He had better begin early to qualify himself for lecturing, preaching, and so forth.

The first condition of human goodness is something to love; the second something to reverence.”—GEORGE ELIOT.

The aim of all intellectual training for the mass of the people should be to cultivate common-sense.—J. STUART MILL.

The music that can deepest reach
And cure all ill, is cordial speech.

—EMERSON.

THE
Phrenological Magazine.

APRIL, 1892.



MR. JOHN ALLEN.

THIS gentleman has a predominance of the mental motive temperament, and is so organized that he cannot live an idle life. His brain predominates in power, but he has a good physiology, which enables him to accomplish a great deal of work. He possesses more than average ardour, earnestness, and intensity of thought and feeling. He gives his closest attention to any subject in which he is interested. His animal force serves as so much energy to enable him to accomplish his work; but he has no surplus to throw away. He should be characterized for the following:

distinct qualities of mind : first—he is very much given to thinking, reasoning, comparing, drawing inferences, and perfecting whatever he takes in hand ; secondly—he is known for his firmness, perseverance, tenacity of mind, desire to make a finish when he has made a beginning ; thirdly—he is respectful to superiors, and mindful of sacred things. He is no trifler. His sympathies appear to have a universal influence over all his faculties, hence he must take broad and liberal views of subjects ; but is not so easily overcome by his sympathy in one direction that he cannot give a proper amount in another. His intellectual and moral faculties take the lead. He is social, friendly, and domestic, but his real strength of mind is in his reason and moral sense. He has a due degree of self-respect and independence of mind without having a haughty or dignified manner. He enjoys the society of the highly cultured, and can be at home in positions where he has to take great responsibilities ; or he can play with the boys and enjoy their sports equally well. He should be known for his order, method, and system, and for doing everything as perfectly as the occasion requires. The perceptive intellect is fully developed, but order being decidedly large, makes him very particular how everything is done. He cannot leave his work for others to look after, if it is possible for him to do it himself. He has more than average versatility of talent, and can do many different things equally well. His constructive ability is good, and he is quite inclined to contrive and devise the best ways and means of doing things, and he cannot neglect his work ; but it must be done perfectly if at all. He has more than ordinary industry and economy. He will give liberally if the cause warrants it, but he has nothing to waste or throw away. His constructive talent, joined to causality and comparison, enables him to improve on most things he sees or he does. He has taste, imagination, scope of mind. He cannot be a rigid sectarian, although he may be very strict in his principles. He has great force of mind ; the executive faculties are all large. He is in his element when he is overcoming impediments, clearing the way, and doing everything better than the last time it was done. He has fair abilities as a speaker, but he would be more correct than copious in his style of talking. He would not make so much effort to be an orator as he would to express himself so as to be perfectly understood. He can keep his own secrets very well, and so compose himself that others do not see that he is doing so. He has a full share of cautiousness and forethought, which make him quite mindful of the conditions and opinions around him. He can easily impart knowledge to others, and is very precise and particular

over everything he undertakes. He adapts himself fairly to circumstances. Imitation being rather large enables him to show versatility of manner. His jokes are liable to be quite practical and rather personal, but not intentionally so sarcastic as to hurt the feelings of others. He enjoys the sublime and grand in Nature, and delights to unfold all great thoughts and plans, and takes an interest in all the leading movements of the day. His versatility of talent is such that he can turn it to account in almost any way, whether in solving difficult problems, engaging in complicated mechanical work, or in philosophical investigations. His mathematical talent is by nature favourably developed, and he seldom has to ask aid in developing a new principle. His memory for the most part is good, but more particularly his power of association. He has an intuitive mind; he is generally correct in his first impressions; he seldom changes his opinion about people; he is a good judge of human nature, takes delight in studying character, and should know the condition of another person's mind at first sight. His organ of comparison is strongly developed, and gives him a very penetrating mind. It enables him to see discrepancies, and to illustrate his subjects with marked success.

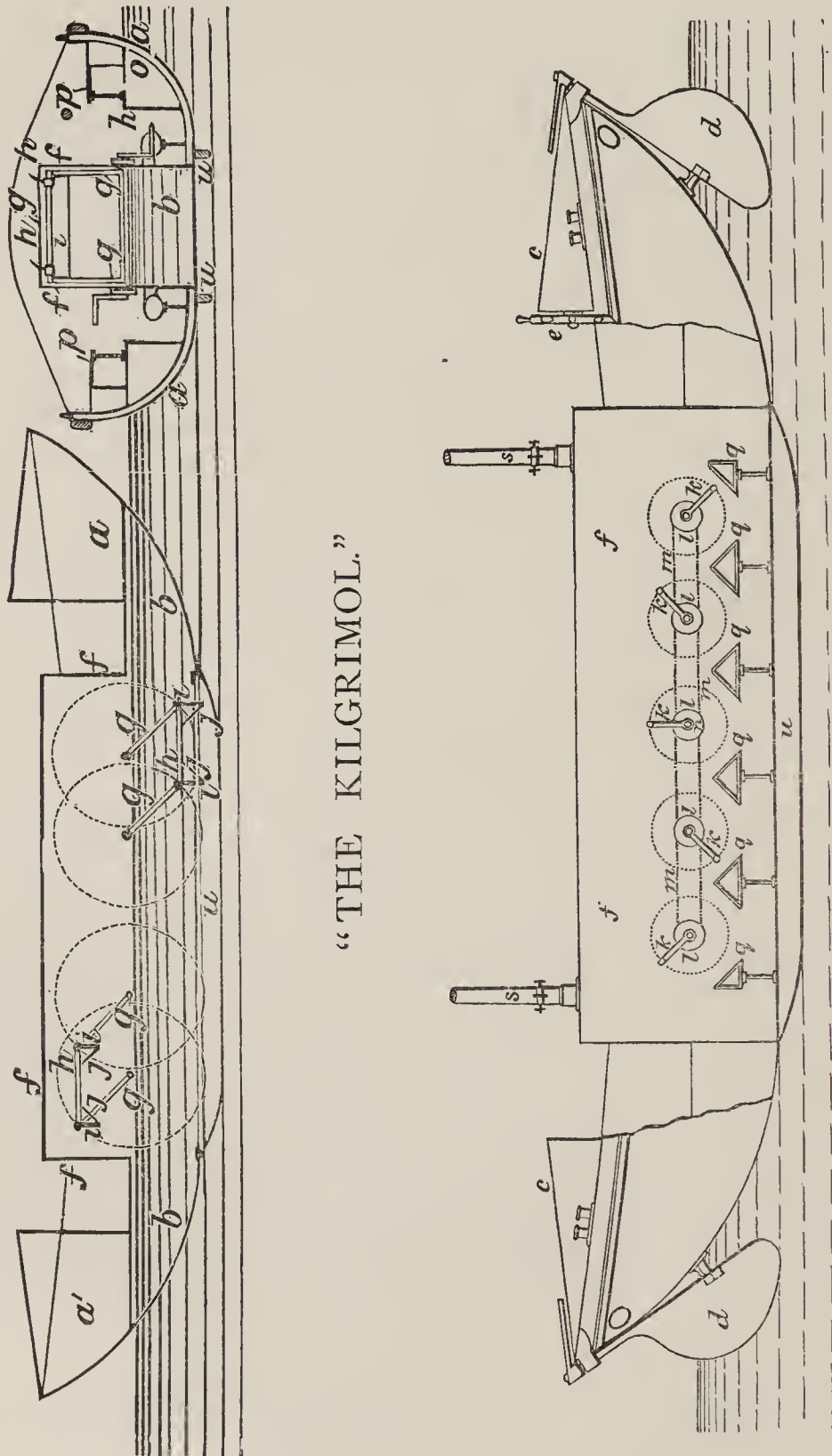
L. N. FOWLER.

Mr. John Allen was born in Leicestershire, in 1831. His parents were engaged in the lace trade, and brought up their son to business habits. He was subsequently engaged in several kinds of business, though he always entertained the idea of eventually becoming a teacher. He has now a flourishing school at St. Anne's on the Sea, where his practical experience is of great value to his pupils in fitting them for their life work. Mr. Allen has been for the past two years one of the Examiners of the Fowler Institute. He has devoted considerable time to mechanical contrivances. He has just patented the following mechanically-propelled uncapsizable lifeboat, though the thought originated in his mind thirty-five years ago.

MECHANICALLY-PROPELLED UNCAPSIZABLE LIFEBOAT.

This style of boat and its method of propulsion are the invention of Mr. John Allen, of St. Anne's on the Sea, between which place and Southport, it will be remembered, the terrible lifeboat disaster of 9th December, 1886,

occurred. In devising this boat, which is appropriately named "The Kilgrimol," the objects aimed at by Mr. Allen are :—To construct a practically uncapsizable vessel of light draught, suitable for a coast where shallow water and



"THE KILGRIMOL."

dangerous channels have to be navigated ; with a method of propulsion that shall utilise to the fullest extent the force exerted on it, whether by hand or any other motive power ; and an arrangement for steering that will do away with the necessity for turning the boat round in case it is required to

reverse its direction. The boat is constructed, so to speak, of two half boats, which are separated by a waterway running from end to end, the vertical sides being opposed to each other. The ends of the half boats are connected and secured together by hooded and air-tight heads, to each of which is attached a rudder, either balanced or of the ordinary type. The central axle also furnishes the means of applying either pedals for an additional worker, compressed air, electricity, or anything else as a motive power. In addition to the propeller, oars and sails can be used in the ordinary way when desired; in such case the floats can be lifted entirely clear of the water. The boat space, about 5-ft. 6-in. in width, along each side of the paddle box, is divided longitudinally into a higher and a lower deck; the higher and outer deck (covering air-tight compartments the whole length) is furnished with seats for the accommodation of from twenty to thirty passengers and oarsmen: the lower and inner deck accommodates the ten men, or engine employed in turning the cranks. The illustrations represent a boat 40-ft. long and 16-ft. beam (length two-and-a-half beams). It is proposed to build it throughout of steel, with air-tight compartments running along each side and across each end, making the boat practically unsinkable as well as uncapsizable. The keel to each half-boat, and rudder at each end, will ensure great stability and exceptional manœuvring properties for the boat, as was proved beyond any doubt by the experimental trip already alluded to. The weight of a full-sized boat is estimated to be about five tons, the draught under three feet, and the cost, complete, about £500. As already stated, a highly-successful trial trip was made on the 9th of October last by a craft (21-ft by 8-ft.), half the dimensions of the full-sized boat which had been constructed at the Lytham shipbuilding-yard for the inventor. The journey from Lytham to St. Annes, a distance of about five miles, was made in forty minutes, without any appreciable over-exertion on the part of the workers.

The accident which happened to the small craft whilst moored at the end of the St. Annes Pier, during the late severe gale, proves to be irreparable. It therefore rests, says the inventor (who has not the means to construct a fully-equipped lifeboat), with some capitalist, or some benevolently-disposed person, to construct a complete and fully-equipped boat for some station similar in character to St. Annes. Patented January, 1888.

A more complete description of the boat, with fuller information, may be obtained from the Inventor.

ANIMAL INSTINCT.

BY B. HOLLANDER.

DR. GALL'S original observations and deductions are only just now receiving recognition. It is granted that he was an eminent anatomist. It is granted that he laid the foundation of modern physiological psychology. But few men are aware that he was also a distinguished naturalist. Indeed, his works are a perfect storehouse of facts concerning the intelligence of animals. They might have been written after Darwin expounded his theory of evolution, whereas they were actually written sixty years before that event. Many men have endeavoured to popularise Darwin's teachings—one of the most successful is Mr. Romanes. Gall's views being known to the readers of this magazine, I shall only give a few of the principles of the modern naturalist's school, for comparison.

First of all, it is taught, that instinct involves mental operation, and therefore implies consciousness. This is the point which distinguishes instinct from reflex action. Next, instinct is said to imply hereditary knowledge of the objects and relations with respect to which it is exercised. It may therefore operate in full perfection prior to any experience on the part of the individual. Again, instinct does not imply any necessary knowledge of the relations between means employed and ends attained. Such knowledge may be present in any degree of distinctness, or it may not be present at all; but in any case it is immaterial to the exercise of the instinct. Instinct is always similarly manifested under similar circumstances by all the individuals of the same species. Instincts are not rigidly fixed, but are plastic, and their plasticity renders them capable of improvement or of alteration, according as intelligent observation requires.

The more instincts the animal has, the more it leads a life of hesitation and choice—an intellectual life. Apparently, because it has no instincts; really, because it has so many that they block each other's path. Thus man is more uncertain in his reactions than the lower creatures, because he possesses all the impulses that they have, and a great many more besides.

All instincts must originally have been of an intelligent nature; but the actions which they prompted, having through successive generations been frequently repeated, became at last organized into a purely mechanical reflex, and therefore now appear as actions which we call purely automatic or blindly instructive. There are many instincts on the other

hand that have probably never been of an intelligent character, but have begun as merely accidental adjustments of the organism to its surroundings, and have been laid hold upon by natural selection, and developed into automatic reflex actions. Animal instincts may then arise in two different ways. They may arise from the performance of actions which were originally intelligent, but which, by frequent repetition, have become automatic; or they may arise from survival of the fittest preserving actions, which, although never intelligent, yet happen to have been of benefit to the animals which first chanced to perform them. But although there is a great difference between these two kinds of instincts if regarded psychologically, there is no difference between them if regarded physiologically; for regarded physiologically, both kinds of instincts are merely expressions of the fact that particular nerve-cells and fibres have been set apart to perform their reflex actions automatically—that is, without being accompanied by intelligence.

As regards the emotions, there can be no doubt that animals possess fear, affection, passionateness, pugnacity, jealousy, sympathy, pride, reverence, emulation, shame, hate, curiosity, revenge, cruelty, emotion of the ludicrous, and emotion of the beautiful. Now, this list includes nearly all the human emotions, except those which refer to religion and to the perception of the sublime; these, of course, are necessarily absent in animals, because they depend upon ideas of too abstract a nature to be reached by the mind when unaided by the logic of signs, that is, without language.

The distinction between instinct and reason is shown by the fact that the former is not able to do things specially characteristic of the latter, and by the fact that it can do other things for which reason would, in like circumstances, be impotent. Thus, no animals employ rational language, nor do they deliberately act in concert, nor make use of antecedent experiences to intentionally improve upon the past. Apes are said, like dogs and cats, to warm themselves with pleasure at deserted fires; yet, though they see wood burning, they are unable to add fresh fuel for their comfort. Swallows will continue to build on a house which they can see has begun to be demolished.

But instinct can do things impossible to reason. Thus, chickens newly hatched will so correctly adjust their movements as at once to pick up various objects. Some young puppies, M. Gratiolet tells us, that had never seen a wolf, were thrown into convulsions by the smell of a small portion of wolf-skin. Birds of the first year migrate readily to avoid

a cold, of which they can have no knowledge. The young female wasp (sphinx), without maternal experience, will seize caterpillars or spiders, and stinging them in a certain definite spot, paralyse them and so deprive them of all power of motion (and probably also of sensation), without depriving them of life. She places them thus paralysed in her nest with her eggs, so that the grubs, when hatched, may be able to subsist on a living prey, unable to escape from or resist their defenceless and all but powerless destroyers. Now, it is absolutely impossible that the consequences of its actions can have been intellectually apprehended by the parent wasp. Had she reason, and not her natural instinct, she could only learn to perform such actions through experience and the teaching of older wasps. Now, if such complex actions can be performed in this unconscious manner by insects, why may not the most seemingly rational actions of higher animals be performed in a similar manner ?

Animals are quite as able to form abstract ideas as we are ; if under abstract ideas, we include general ideas of qualities which are so far simple as not to require to be fixed in our thoughts by names. Animal intelligence is unable to elaborate that class of abstract ideas ; the formation of which depends on the faculty of speech. It is wholly impossible to overestimate the value of language as thus the handmaid of thought. For, in the absence of language, it would be impossible for thought to rise above the very simplest of abstract ideas, while, in the presence of language it becomes possible for us consciously to predicate qualities, and so at last to feel that we are conscious of our own consciousness.

Of course the gulf between animal intelligence and human intelligence is very great ; yet enormous as it is, we can find a bridge by taking the lowest of savages, and the highest of trained animals. In savages abstract ideas are mostly confined to feelings ; so that for instance, the ideas of number which are presented by the lowest savages, are not very much superior to those which are presented by the higher animals. Savages, like animals, have a remarkable tendency to act in accordance with performed habits, rather than to strike out improved modes of action. On this account there is in both a strong tendency to imitation, as distinguished from originality. Again as in animals, so in savages, the reflective power is of an extremely undeveloped character, and quite incapable of sustained application. And, lastly, the emotions of savages, as of animals are vivid ; although as contrasted with the emotions of civilized man, they are in a marked degree more fitful, impetuous, shallow, and transitory. So that, altogether,

the lowest savages supply us with a most valuable transition stage between mind as we know it in ourselves, and mind as we see it manifested by the higher animals. With regard to children, it is to be expected, on the general theory of evolution by inheritance, that if we were attentively to study the order in which their mental faculties develop, we should find it to be the same as the historical order in which these faculties were developed in the animal species.

Very young children present only those lower faculties of mind, which in animals, we call instincts. With advancing age, the first indication of true intelligence seems to consist in the power of forming special associations. Memory thus appears early in life, and long before a child is able to speak, it links together in thought, ideas of objects, which it finds to be associated in fact. Again, the emotions begin to assert their presence at a very early period, and attain a high degree of development before any of the characteristically human faculties can be said to have appeared. Moreover, in young children, we meet with nearly all the emotions which I have named as occurring in animals, and their general character is much of the same kind. In more advanced childhood, the emotional life of children more resembles that of savages. With regard to the more purely intellectual faculties, language is largely intelligible to a child long before it is itself able to articulate; but soon after it is able to articulate, the faculty of abstracting qualities and classifying objects by the aid of signs, begins its course of development.

But, in comparing the intelligence of a young child with that of an adult animal, we are met with this difficulty—that as the bodily powers of children at so immature an age are so insufficiently developed, the mind is not able, as in the case of animals, to accumulate experiences of life. In order, therefore, to obtain a fair parallel, we should require a human being, whose mental powers have become arrested in their development at an early age, while the bodily powers have continued to develop to mature age, so serving to supply the aborted human intelligence with full experiences of life. Now, the nearest approach that we have to these conditions, is to be found in the case of idiots. There are, of course, all degrees of idiocy. As we descend in the scale from the higher to the lower grades of imbecility, so we find the characteristically human faculties are the first to disappear, while those faculties which man shares with the lower animals are the most persistent. Or, the reverse way as we ascend in the scale, so we find first the animal faculties only, and higher in the scale, some of the more characteristically human.

Thus, there are very few idiots so destitute of intelligence that the appearance of food does not arouse in their minds the idea of eating, and as we ascend, we find ever increasing power of memory. In the case of the higher idiots, as in the case of the higher animals, it is surprising in how considerable a degree the faculty of special association is developed, notwithstanding the dwarfed condition of all the higher faculties. Thus, for instance, it is not a difficult matter to teach a clever idiot to play dominoes, in the same way as a clever dog has been taught to play dominoes. But the idiot may be quite as unable as the dog to play at any game which involves some understanding—such a game for instance as draughts. And, similarly, many of the higher idiots have been taught to recognize the time on a watch, but they could not reply to the question, if it is 10 minutes to 3, how many minutes is it past 2 ?

The higher faculties are almost totally absent. There seems, for instance, to be an almost total absence of the idea of right and wrong, so that the faculty of conscience, properly so called, can rarely be said to be present. Those of the higher idiots, indeed, experience a feeling of remorse on offending the sympathies of those whom they love, but, so it seems, some dogs know when they have done wrong, and hide themselves from their master.

Lastly, the emotional life of all the higher idiots, as of all the higher animals, is remarkably vivid as compared with their intellectual life. All the emotions are present—except perhaps that of the sublime and religious emotions. But more than this, just as in animals, children and savages, so in idiots, the emotions, although vivid and keen, are not profound. A trivial event will make the higher idiots laugh or cry, and it is easy to hurt their feelings with a slight offence ; but the death of a dear relative is very soon forgotten, while the stronger passions, such as love, hate, ambition, etc., do not occur with that force and persistency which properly entitle them to be called by these names.

Upon the whole, then, with regard to idiots, it may be said that we have in them a natural experiment, wherein the development of a human mind is arrested at some particular stage, while the body is allowed to continue its growth.

Therefore, by arranging idiots in a descending grade, we obtain, as it were, an inclined plane of human intelligence, which indicates the probable order in which the human faculties have appeared during the history of their development, and, on examining this inclined plane of human intelligence we find that it runs suggestively parallel

with the inclined plane of animal intelligence, as we descend from the higher to the lower forms of psychical life.

CHARACTER SKETCH OF MISS CLOUGH.

MISS CLOUGH (Principal of Newnham College, Cambridge) —This lady derived her mental constitution from her father, or the masculine side of the house. She was naturally given to thought, and was characterized for the soundness of her judgment, and her ability to take original views of things. She was particularly thoughtful and sensible. She had method in everything she did. She was quite versatile in



MISS CLOUGH, Principal of Newnham College, Cambridge.

contriving, devising, and doing various kinds of work. She had more than average imagination, scope of mind, and broadness of views. She had no littleness in the workings of her mind. She was far from being close-minded, although she was very particular to have everything done as perfectly as possible. She was exceedingly ardent, earnest, and threw her whole soul into everything she did; and having much versatility of talent, she was able to impart information on a great variety of subjects. She appears to have had a well-balanced mind, having nothing in great excess or deficiency.

She was able to sustain herself in a great variety of work. She was genial in her nature, and drew persons to her. She kept her friends until they were old. She made children and other people love and confide in her. She commanded respect wherever she went. She enjoyed herself in a universal way, and if she suffered it was in the same way. There was not much conflict or antagonism in her nature, but she could give her whole attention in any one direction so long as it was necessary, hence she finished what she began. When her labours are examined, it will be found that she did everything as well as possible, with great scrupulousness and thoroughness. She was not in the habit of neglecting any known duty, or leaving it until some convenient time, but it was everything at the time it should be done if possible. Her sympathies took in the whole human race, and she was less prejudiced by nationalities than most persons are, for a human being to her was a human being like herself. Miss Clough came from a Welsh family, and during her childhood lived in South Carolina, U. S. A. She began teaching school in 1842, and in 1871, at the invitation of Professor Sidgwick, she went to Cambridge to take charge of five girl students. From this humble origin sprang Newnham College, which was built in 1875, and in 1880 a second building was required, and in 1888 a third was opened. She was of late assisted by Miss Gladstone. It was said that few people have so thoroughly fulfilled their ideals, and left the world so much better for their exertions as Miss Clough.

ORION.

FORMATION OF CHARACTER.

BY L. N. FOWLER.

[Continued from page 95.]

Circumstances have a powerful influence in forming character. It was formed more slowly when there was no mail, newspapers, nor libraries, no windows, and nothing but pitch, tallow, or oil, to light the house by night; no ways of travelling but on foot or by ox, mule or horse team, with the poorest roads, and no Progressive or Mutual Improvement Societies. But now character is formed more rapidly when we travel by steam, send news and transact business by lightning, read by gaslight, take portraits by the sun's rays, carve, engrave, sew, knit, spin, weave, set type, and wash dishes by machinery, and print and plough by steam; when our tables

and shelves are loaded with papers, and books, and various illustrations ; when every schoolhouse has a library, and every Church has a Sabbath school, and a Mutual Improvement Society, and a Choral Society ; when there are over 1,000 different religious denominations, and the world is busy forming societies, opening exhibitions, fairs, bazaars, clubs, and giving entertainments and lectures.

To build a house requires a foundation. After all the materials are furnished one stone is laid upon another according to a plan, to rear the structure and prepare the way for the capcheaf stone and the finishing stroke. All buildings must commence at the foundation, and work gradually up to the finishing point. So there is a foundation to the formation of a character in the existence of the primitive faculties. And every want, desire, circumstance, are stimulants to action, and like so many men to raise the building. And every experience and impression made upon the mind are like so many stones laid upon the building, thus building up the character from infancy to manhood and maturity, preparing it for the climax-crowning impression, the Grace of God.

It falls to the lot of some men to form the characters of whole communities, and even of nations and posterity, and they are more successful in proportion to the strength and moral elevation of their own characters—like Abraham, Daniel, Moses, and Alfred the Great. Man, aside from his moral nature, is subject to the same laws and regulations as all productive nature. Nature gives us the foundation, the stock, the quality, and varied gifts. Education develops, directs, and disciplines, and thereby increases the power of our natural gifts. A spiritual life intensifies, elevates, and helps to give the moral and spiritual faculties a controlling influence. The body being the medium through which the mind is manifested, it is a good or a bad medium, according to its quality of organization, its harmonious and healthy condition, and the ruling functions that control its actions. The power vested in man to retard or improve human development is very great, and the responsibility is equally so. It is not safe to build up the character on the quicksands of self-indulgence ; or the sandy foundations of shifting and ever changing fashions ; or the unsafe, unstable influence secured through politics, titles, and position ; or expectations coming from wealth, and rank, by the death of relatives ; or by bets, stocks, and gambling. It is always safe to base the character on honesty, truth, purity, and humanity, on good actions, polite manners, faithful work, keeping appointments, being a true friend, having an elevated object in view as a stimulus

for action, and striving continuously to improve the whole man.

To have a character for honesty, integrity, circumspection, stability, industry, skill, application, and judgment, is to possess a character worth having. Some combine two or more of these qualities. Few have them all. To go through the world without a character is like going across the ocean without a compass. A bold, strong, positive man, who is born a little ahead of time, and dares to think for himself, gives off his ideas to the world in a positive, unqualified manner. Others less positive and original, but inclined in that direction, take him as their leader; a society or church is formed, and these ideas are promulgated and become established as saving truths, and as the church gains strength it enforces ideas on others, like the Mohammedan; and after generations have passed by, they are revered for their antiquity, until the mind, by its own development, outgrows these thoughts, and another bold thinker proves all the foregoing to be untrue, and gives off his advanced thoughts, and draws the multitude after him, and another church is formed, and becomes as intolerant and dogmatical as the first, and it in time is supplanted by one of a reverse opinion, and thus society is divided against itself. Religion, politics, law, medicine, mechanics, systems of philosophy of education, government, and modes of warfare, in their turn have gone through many changes; and revolutions have occurred in proving the one to be right or wrong, false or true. Probably each system was as true as the mind could then comprehend, and the best for the time. But more light, thought, and experience taught advanced minds of past errors, which resulted in agitation; and not unfrequently, persecution, war, murder, burning, has been the result for believing or not believing as others did. Thousands, if not millions, of lives have been sacrificed in this way, each preferring to die than submit. Constantinople and Rome have persecuted more persons for believing and not believing than any other two cities in the world. Tolerance comes when we see our ignorance, and feel our weakness, and are conscious of many existing truths far beyond our power to fully comprehend.

All nations can point to their great men of strong and marked characters, from Noah to Nimrod, down to the present day. Diogenes lit his lamp to find a man—the Greeks had degenerated so much. All nations had or have their standard of a man. The Chinese had Confucius and Mencius; the Greeks had Socrates, Demosthenes, and many others; the Romans had Cæsar, Cicero, Aurelius Titus, and others; the

Jews had Abraham, Moses, Samuel, Daniel, David, Solomon, &c. ; the Italians had Savonarola, Garibaldi, Count Carsus ; the French Charlemagne, Napoleon, Cuvier ; the Russians had Peter the Great, and Catharine the first ; the Scotch had Bruce, Wallace, Knox, Chalmers ; the Irish had St. Patrick, O'Connel, Emmet ; The English had Alfred, Cobden, Peel, Cromwell, and Shakespeare ; the Americans had Washington, Patrick Henry, Lincoln, General Thomas Franklin, &c. ; the Germans had Luther, Humbolt, Gœthe, Kepler, Beethoven, Mozart, Paul Jean Ritcher, and Bleumenbach. But what is the type of a man ? Circumstances, trials, and troubles do much towards giving and forming the character of nations and individuals. Had Abraham died in his youth ; had Joseph not been sold into Egypt ; had Moses not been pulled out of the bulrushes ; had Luther joined Tetsel ; had Henry the VIII. continued to live with his first wife Catharine ; had Alexander the Great gone West, and his cousin gone East, their fortunes would have been reversed ; had the American Colonies failed ; had the slave rebellion succeeded ; had Confucius, Buddha, and Mohammed not been born ; had England and America in their struggles failed to secure their liberty ; had the slave traffic continued ; had all been born with silver spoons ; had no one any trouble or obstacles, the world would be in a very different condition from what it is now.

Some are like the would-be popular and honest Roman Senator, who had his house made of glass so that all his neighbours might see all he did. Some hire the brains of others, and put their names to other men's ideas, and thus appear to be wonderfully wise, while all the time they are sailing under false colours. Some have the appearance of being great men, for they are great in body, look thoughtful and sober, and if they would only keep their mouths shut they would pass criticism. Some having no character of their own, and being ambitious to have one, resort to all expedencies to gain one. Some encourage all the fashions, go to all the fashionable places of resort, make themselves conspicuous in public places, give money ostentatiously to popular causes, get themselves into the newspapers, and make themselves talked about. Others surround themselves with mystery, make themselves scarce, are reserved, travel *incog.*, or in a close carriage, or in the night, come out only on great occasions, occasionally giving very select receptions, and specify the style of dress, and live in houses back from the road with high brick walls and glass on the top, and with locked gates. They do everything, enjoy everything by themselves, and have everything as unlike others as possible, as though

they only were civilized Christians, and all the rest of the outside world were barbarians. Exclusive people who cannot travel, act, and associate as others do, I have generally found have not yet reached perfection.

Native gifts and qualities, when in a healthy condition, are appropriate to the wants and duties of a human being, and are the basis upon which an education depends. An educated character is where all the native gifts and qualities are developed, disciplined, and directed to their legitimate action and gratification in a single or combined action. A spiritual character is where all the natural gifts and faculties are guided and influenced by a higher power than that of earth or man, living a life that prepares a person for another life, as well as to enjoy this. To live a spiritual life all the faculties become intensified, more active and better controlled, resulting in more usefulness, thereby increasing the power of the natural mind. In proportion as persons are guided by high spiritual influences will they live obedient, modest, humble lives, being conscious of their accountability and responsibility. Their aims in life and objects in living are higher than this world can give or satisfy. As it appears to me, the living a spiritual life consists in the use of the love nature in a spiritual direction, giving obedience to moral law, and submission to Divine government. Individuals living a spiritual life have more influence than when governed by a worldly, selfish nature, because they have additional power. Such love changes the life and character, like making a shift in the scenery. It brings forward before the curtain powers of mind that were behind, and those of a selfish nature that were in front are placed in the rear. It brings forward faculties that were more dormant, and helps to give greater control over faculties that were previously more prominent, resulting in a higher standard of action, more purity of life, more disinterestedness of feeling, and a higher object of love, thus elevating the whole character, and giving a more powerful stimulus for action.

Value the ends of life more than its means ; watch ever for the soul of good in things evil, and the soul of truth in things false, and, besides the richer influences that will flow out from your life on all to whom you minister, you will do something to help the solution of that unsolvable problem of the human mind and heart, the reconciliation of hearty tolerance with strong, positive belief.—*Phillips Brooks*.

ETHICS AND HYGIENE.

BY M. L. HOLBROOK, M.D., EDITOR OF THE *Herald of Health*, NEW YORK.

I ONCE heard a most brilliant and fascinating preacher of Ethics, deliver a discourse on the Ethical life, which interested me deeply, not only on account of the beauty of its language, the charm of its oratory, but the course of its thought.

“The Ethical life,” said he, “is not to be found in doing the simple duties which society, custom, and law demand of us. The man who pays his debts, supports his family, educates his children, and trains them to habits of industry and economy, is not necessarily a moral man. He is expected to do these things. A moral habit and a moral life demands that he shall do more than these; something beyond his duty, something which will be a sacrifice; require some extra trial, perhaps painful toil. Christ’s life was according to this idea—a highly moral one, because He went beyond what we ordinarily call duty, gave more than He need to have given. The man who joyously gives his life for the good of others, even though it brings ruin to himself, is the Ethical, the moral man. Howard was a conspicuous example; Garrison was another. The pages of history are illuminated by a not too large list of such brilliant examples. A somewhat similar view is given in that thoughtful lecture, entitled, ‘What Ethics can do for us,’ by Mr. Salter. ‘Do unto others, says he, as you would that they should do to you,’ does not indicate what happens, or ever has happened, or ever will happen. It is a rule not gathered from experience, nor founded on experience, ‘it is a demand for the mind.’ It is a purely ideal rule, difficult, if not impossible to obey. Such lofty views of Ethics are no doubt very useful. They enlarge our natures, and lift us up to the serene atmosphere of the highest life. They keep religion from becoming commonplace; they broaden our philosophy, and dignify and glorify the lives of those who can live on so exalted a plain. Such views of Ethics, however, have only a slight relation to Hygiene. Indeed, they often require a violation of all Hygienic laws. If all men were to live on so high a plane, the race would be destroyed by its own virtues. The Ethics of evolution, however, do have a most positive relation to Hygiene. As voiced by its most able advocate, Mr. Spencer, Ethics relate to conduct; conduct of every kind so far as it effects welfare. Perhaps I can not do better than to quote a few calm words from this great philosopher, who has done so

much to lift Ethics out of a supernatural, on to a rational basis.

He says : " When we remember how commonly it is remarked that high health and overflowing spirits render almost any lot in life tolerable, while chronic ailments make a life gloomy under the most favourable circumstances, it becomes annoying that both the world at large and writers, who make conduct of life a study, should ignore the terrible evils which disregard of personal well-being inflicts on the unborn, and the incalculable good laid up for them by attention to personal well-being. Of all bequests to children, the most valuable is a sound constitution. Though a man's body is not a property which can be inherited, yet his constitution may be compared to an entailed estate ; and if he rightly understands his duty to posterity he will see that he is bound to pass on that estate uninjured, if not improved. To say this is to say that he must be egoistic to the extent required to satisfy those desires associated with the due performance of functions. Nay more, he must seek in reasonable amount the rational pleasures which life offers, for beyond the effect these have in raising the tide of life and maintaining constitutional vigour, there is the effect they have in preserving and increasing a capacity for receiving enjoyment. Endowed with abundant energies and varied tastes, some can get gratifications of many kinds from opportunities hourly occurring, while others are so inert and so uninterested in things around them that they cannot even go to the trouble to enjoy their own existence. And unless heredity be denied, the inference must be that due acceptance of the rational pleasures of life conduces to the capacity for enjoyment in posterity ; and that persistence in dull, monotonous, unhealthful life by parents, diminishes the ability of their descendants to make the best of what gratifications fall to them."

I have given this passage quite full, because it illustrates what Mr. Spencer means by the need of cure of self first. I do not know where I could go for higher authority to sustain the idea that Ethics and Hygiene have a very close relation, and this brings up the question, Is sickness a sin ? There are many who hold to this view. Some even go so far as to say that disease is the original sin, and that the thief, the liar, and the murderer are no worse ; they maintain the belief that a diseased man cannot be a good man in its largest sense ; that virtue is a product of healthy, well-balanced organs, and vice the result of diseased and unbalanced ones. Every day that doctrine is finding more favour. The laws of health, say these persons, are just as much the laws of God as any other

laws, and it is just as wrong to violate them. There is no dodging this argument. It is true the public at large have not accepted it in all its fulness, but they have accepted it at least negatively, men are saints and sinners more than ever, in respect to their bodies. No saint any longer claims superior merit for living in a cell, going without air, wearing a hair shirt, sleeping on a plank, and mutilating his body. He goes to the other extreme and calls the body sacred, and the temple of the Holy Ghost, which, I suppose, only means an instrument for high and noble thoughts. All consent to the doctrine that anyone who brings sickness on himself by his own ignorance, carelessness, or wilfulness, is not entitled to so much of our sympathy, and is guilty of immoral conduct if not of crime, as sure as any of the crimes in the catalogue.

But there is another side of this question, say some. Half of us are born with some physical defect, some tendency to disease. And surely we are not to be blamed for this. Yes, but these defects, these tendencies are the result of some ancestral deviltry, and while we are powerless to prevent what has happened we may, by wise physical, and other training, for which there are so many opportunities, overcome them. And duty demands that, so far as possible, we should do this, and not send the evil down for future generations to grapple with.

I might speak of the impossibility of avoiding altogether the germs of diseases which exist in the air. Who could keep out of the way of *La Grippe*, when the myriads of micro organisms which cause it, come down on us like the locusts on the Egyptians. And if not, then it is not a sin to have the disease. Or I might mention the fact that old age brings on weakness and failure of functions, even senility.

Or I might mention the good which sickness sometimes causes. Certainly our immense knowledge of anatomy, physiology, and hygiene, are the outcome of it. And sometimes it is said, men are made better by sickness. They get time for reflection, and learn to consider their ways, and perhaps cure them. Such things have been, but not often. Nine times out of ten disease makes us worse. I believe most of us would rather have a liar or a thief around us than a man whose nervous system is so shattered as to make him ever irritable and incapable of joy or joyous thought. Any disease that racks the nerves, makes a man less moral, less capable of recognising and resisting evil; any disease that weakens the will, utterly fails to make the heart and the life better.

Says an eminent writer on this subject, "If many invalids

are patient and gentle, far more are cross and impatient ; the direct effect of physical derangement is to bring on spiritual derangement. When the nerves are unstrung, the soul is apt to lose its balance. Where the blood is overheated, there is danger of an overheat of the spirit. Disease ministers to repining and complaint, whether acute or chronic. Nine tenths of all who suffer from prolonged maladies become less and less amiable, and they know this themselves as well as their friends know it. Sickness makes men selfish far more frequently than it makes them generous, and we marvel when we hear of a generous invalid. Where there is one such as was Amos Laurence, there are hundreds whose physical infirmities foster avarice, jealousy, and indifference to the sufferings of others. And, if the heart is not hardened, its sympathies are narrowed. How many of us who have suffered from sickness can testify that it has made us better. We do not go to the hospitals to find the highest examples of spiritual culture."

But, lest I weary you with my argument, I will simply conclude by saying, that if we accept the relation of Ethics to Hygiene, which evolution teaches us, then this subject takes a wider range than under old beliefs. And it becomes as much our duty to supply ourselves with fresh air, suitable food, exercise, recreation, and the rest that we require, and to live within our bodily income, as it does to live purely, honestly, and to love God, and to keep His other commandments.

GRAPHOLOGY.

BY A. N. PATENALL.

THE true student of human nature—by which we mean the one who studies it for its own sake, and the pure love of it—will be led sooner or later to interrogate the subject from every available standpoint, whether mind expresses itself cranially or facially, by way of the functions and movements of the body, or in any one of the many acquired aptitudes of this or that member of the same. To such persons expression everywhere, and always, is manifestation, and as such they are impressed by it.

That handwriting should have claimed during the present century the lion's share of attention may to some extent be accounted for by the great impetus afforded to general education.

When people could not write they did not. For the generality two or three attempts at putting their ideas and feelings upon paper (*i.e.*, at a birth, or a burying, or when Thomas, residing in such a town, wanted to know whether Keziah, of the adjoining village, would become his wife) sufficed for a life time. Fifty years ago comparatively few letters were written, and most of these under circumstances and conditions too abnormal to be of any service to the graphologist. Now everybody writes letters, and in the case of public characters, everybody reads them. Where a letter, or part of a letter is unobtainable, an autograph is requested to add to the collection of this College Miss, or the other University freshman, who have been seized with a craze in that direction. With such increasing advantages, then, no wonder at the rapid increase in the interest taken in this study of hand-writing.

What is there in it? Does it indicate character? and if so, to what extent? The eagerness with which so many are trying to test these questions, is sufficient reason for any one who may have gained experience in this line to contribute what they know, even though greater experts, as Miss Rosa Baughar, and others, are already in the field.

If character reading from hand-writing is true, experts will agree as to fundamentals, and each will but confirm what the others have to say.

It may be objected, however, that hand-writing is frequently a matter of mere imitation, in which the pupil has followed the style of the teacher, but since this is not always so, nor in the greater number of cases, we have really an argument in favour of graphology, as it evidences that such writers are wanting in originality, and that whoever copies servilely, giving no personal traits at all, is one of the weakest of characters.

But out of twenty-five writers educated at the same school no two of their hand-writings were alike; and not one of them to any extent a fac-simile of the master's, though he was a teacher who exerted over his young people more than ordinary influence.

Again it may be urged that persons write differently at different times, and also as they are in different states and conditions of the body; for instance, when one is very cold their writing will be cramped and stiff, while, if the body is excessively heated, the writing will bear traces of the languor and indolence resulting. We grant this also, but if the rules laid down subsequently are observed, the Graphologist, we think, will be in no danger of mistaking a passing condition

of the body for a permanent state of mind ; while changes in the writing of the same persons at different periods will be found to denote development or confirmed changes in their character.

Another objection is that the idea or sentiment expressed gives the key, or that something is conveyed of the writer's sphere of life by means of the very paper itself, which may be scented, as it were, by a sensitive manipulator. All we need reply to this is that such a delineation is not graphological.

Before giving the essential principles of graphology, it may be well to state certain conditions to be observed by the writer, if disappointment would be avoided.

First.—Present no writing to a graphologist which has been executed under abnormal conditions, such as hurry, weariness, undue excitement, &c. ; nor the strained effort peculiar to those who have not learned to write sufficiently well to form the letters without thinking about them.

Secondly.—Do not write expressly for the purpose of affording the graphologist a specimen. In which case your specimen will be formal, and so far, unnatural.

Thirdly.—Do not expect a full delineation of character from an autograph ; this may not give scope enough, as the predominance of one letter, showing certain characteristics, may lead to a conclusion which would have been modified by others indicating opposite traits. Accuracy depends upon noting all the formations, and when two contraries are in the ascendant a balance must be struck between. The best specimens will be found among crude MSS., or some part of a letter known to have been written in the general state of feeling in which the writer lives.

Fourthly.—Write with the pen and on the paper you are in the habit of using.

The fundamentals of graphology are in a nutshell, so to speak. As all writing consists of lines and curves, or circles, or (as we used to say in the old school days) of strokes, pothooks, or round O's ; lines, whether perpendicular or horizontal, will be comparatively thick or thin, long or short, and in that ratio are significant. Curves—sloping and graceful, or more upright and awkward, to that degree tell their tale. Loops and all such letters as approximate to the circle are more or less complete, and to that extent are expressive. The manner in which letters are connected with the crossing of the T's and the dotting of the I, are eloquent also ; and capitals will prove more important than small letters, though the latter will repay a study.

Softly sloping lines with rounded curves indicate tenderness, and when the tail of the letter lies on its back, as it were, an excess of this, but a very upright form of writing, reveals coldness. The writer may have a heart, but the head guides it.

Clear writing, with all the letters of the same height, shows truthfulness, and sincerity, and when the letters dwindle to a mere line, and the movement is serpentine and irregular, the reverse of this.

Writing more angular than rounded, and somewhat ascendant and dashing, shows energy and ambition. A more rounded hand, with such accompaniments, the energy will be more impulsive.

Failure to join the curve of a letter throughout, the writing shows listlessness and indifference. The writer will be of an easy-going, nonchalant character. If the curves are very rounded, and the letter T invariably looped instead of barred, there will be positive indolence, and if the "finals" have a downward tendency, despondency will be added, unless some redeeming qualities appear. Such persons will be of the shiftless order, too desponding to seek work, and too idle to do it when obtained.

When the loops of the letters are very open, an open disposition is manifest ; there is little secretiveness, and if the curves to all the terminations of the lines are rounded, the words and lines far apart in careless profusion, and the up and down strokes long and flying, there will be generosity ; but if the up and down strokes are short, the capitals small, and the words and lines close together, and abruptly finished with hardly any terminal, the reverse, and an economist is indicated.

Large-headed and graceful capitals, with an apparent vigour of vitality, and often, alas ! with an illegibility, show imagination.

Graceful but very simple capitals, all the "finals" being graceful, also reveal an exquisite sense of beauty and artistic or poetic taste, while a simple and perfect form of the letter C is an invariable sign of a poetic mind, though the small letter is not so expressive in this respect as the capital, the latter affording more opportunity for the manifestation of conceit or vanity where it exists. Where the capitals are invariably ugly, there is little or no taste for art ; yet, if they are eccentric, they may reveal strong originality.

The letters of a word often being not joined together, idealism, and intuitive perception are manifest. While, if not only the letters of a word are joined, but several words are run into one another, there is reasoning power and sequence of thought.

Fine and graceful lines evidence refinement. Thick down strokes, and the writing angular, tenacity of will power, and determination. While very thick writing, in loosely formed characters, shows sensuality.

An A joined to its preceding and following letter, indicates a graceful and flowing ease of expression.

When the down stroke is constantly written without the loop there will be firmness and dignity, with energy.

When letters are so angular that the loop seldom appears, secretiveness and dogmatism are combined. When angular terminal strokes are made up of short broken lines, there is extreme finesse; and writing that glides along throughout, leaving the letters ill, or not at all defined, shows caution and secretiveness, with love of mystery. If, however, the finals terminate on a straight line, there will be cautiousness, with evenness of mind and feeling.

Where the dot that should be over the I is not made, or where it is put over letters following it, the writer will be more energetic than orderly.

If the T's are barred high with a heavy black line, a despotic will is indicated; if they are barred low with a short thick line, the will is dogged and obstinate. If the bar flies over its head, or away from it sideways, a quick impatient and impetuous will; while a faintly barred or looped T throughout the whole of the writing shows want of will as well as energy.

Excess of flourish shows extravagance, and vanity. The former may also be shewn by lines being much too long, across letters, or too high in the ascendant above the line; this often indicates recklessness, as truly as a final much below the line, indicates despair.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., APRIL, 1892.

“ARE the Lower Animals approaching Man?” is the title of a paper by W. H. Ballou, Esq., published in *Health*, which advances the following hypothesis on the mental evolution of the lowest animals, and brings forward the following propositions, namely:—1. That many species of lower animals of to-day possess a higher mentality than primeval man, and that some species are endowed with a higher mentality to-day than the

lower classes of men. 2. That the mental differences of man and the lower species are to some extent the result of training, experience, and tenacity of life. 3. That the mental future of the lower animals may become more equalized with that of man; that a method of conversing with animals is possible. He tabulates the orders of location as follows:—The lowest species mentally include low and ignorant mankind, Aborigines, insects, many lowest animals. Next higher order—trained lower animals, pets, and some domesticated animals. Highest—educated man. Herodotus related 2,500 years ago, that the priests of Egypt told him of the migration of the Egyptians from the East to the hill country 10,000 years before their time. Le Plongeon, the archæological explorer, professes to have verified this story, and announces the existence of the Egyptian in Yucatan 15,000 years ago. Granted that the genesis of the history of mind must be located in Yucatan 9,000 years before the stated time of Adam, then the 15,000 years of mysterious silence of the lower animals he charges to man.

What do scientists say of the physiological pathology of the brain? Mr. Herbert Spencer, one of the most profound thinkers of the day, has remarked: "No physiologist who calmly considers the question in connection with the general truths of this science, can long resist the conviction that different parts of the cerebrum subserve different kinds of mental action. Localization of function is the law of all organization whatever. Separateness of duty is universally accompanied with separateness of structure, and it would be marvellous were an exception to exist in cerebral hemispheres. Let it be granted that the cerebral hemispheres are the seat of the higher psychical activities; let it be granted that among those higher psychical activities there are distinctions of kind, which, though not definite, are yet practically recognisable, and it cannot be denied, without going in direct opposition to established physiological principles, that these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres. To question this is not only to ignore the truths of physiology as a whole, but especially those of the physiology of the nervous system." Mr. Spencer further adds, "either there is some arrangement, some organization, in the cerebrum, or there is none. If there is no organization, the cerebrum is a chaotic mass of fibres incapable of performing any orderly action. If there is some organization it must consist in that same physiological division of

labour in which all organization consists, and there is no division of labour, physiological or other, of which we have any example, or can form any conception, but what involves the concentration of special kinds of activity in special places."

Fowler Institute.

THE ANNUAL MEETING.

On Wednesday evening, March 9th, the Second Annual Meeting of the above Institute was held. Light refreshments were served in the library and consulting rooms at 7 o'clock, and at 7.30 the proceedings of the evening commenced with a few remarks from Mr. Piercy, who introduced the Chairman of the evening, Mr. Armstrong, who said he had come all the way from Newport that morning on purpose to shake hands with Mr. Fowler and the members of the Institute. He was glad on this occasion to do his share by presiding over the meeting, and to learn of the progress that had been made by the students, and trusted that by another year he too would be entitled to receive a like diploma, even if it required his coming to London several times. He had known Mr. Fowler for the last twenty years, and was pleased to see him present that evening.

The Annual Report was then read, which ran as follows :—

MEMBERS AND FRIENDS,—I have heard of two classes of commercial travellers, the one on his return home did not mind if the principal were away enjoying himself at the seaside, or anywhere out of his reach, as he had had a very bad journey, and the second was hoping in his heart that the principal would be the first man he shook hands with, as he had great progress to report. Now, the latter case is somewhat my condition, as on the second birthday of the Fowler Institute I have good progress to report. Last year we had a membership of sixty, to-day we have on our books one hundred and twelve. It is with deep regret that I have to mention the death of two of our valued members, Dr. Eadon, of Bristol, who passed away in December, after a long life of usefulness in the cause of humanity and science; and Mr. Jas. Plastow, of Grimsby, who was struck down in the prime of life. He had sought the South of England to try to regain his health, and called at the Institute on his return home. During his call he asked if he could leave his "finger marks," and further how a person could leave his skull for scientific purposes to the Institute. It was explained that a person must leave directions in his will if he desired it to be so left. He died two days after his return home, from apoplexy, caused by a recent accident. A post-mortem examination was made of his brain, when a clot of blood was found on the opposite side of the head to the one that received the blow. His sudden death put aside any desire he may have had to leave his own brain to the Institute.

Our work is increasing in every way. Lessons by post was a feature begun last year, and members from Jamaica, Africa, and many

parts of England, have taken advantage of this department. The Artizan, or Preparatory classes, have so far proved satisfactory, 23 members having passed through the two sessions. In these classes the teachers of the Institute have been assisted by last year's Associates. For this particular branch of the work a friend of phrenology offered eight Exhibitions to encourage beginners in the study of the science, five having been obtained. The advanced classes have been well attended; forty lectures or more have been given in the two courses. Twenty-two students have attended the lectures, ten of whom entered for the examination. Each candidate was successful in a greater or less degree, three having obtained diplomas with honours. The examiners report greater success this year, as will be seen by the attached report:—

“The Second Examination of the Fowler Institute, held January 14th, 15th, and 16th, 1892.—In presenting this, our Second Report, it gives us pleasure to state that the candidates, all-round, manifest a clearer understanding and a better grasp of the subjects examined in, than was the case last year. Even the worst of the theory papers is very creditable to the student who wrote it; and although three only of the candidates have reached the very high standard laid down for the diplomas, it has been decided on account of the great excellence of some of the others, to divide the successful candidates into three classes instead of two, and therefore the diploma with honours has been awarded to those whose marks reached 90 per cent and over, of the maximum number; the diploma to those over 80 per cent; and the certificate to those over 70 per cent.; the first and second classes being qualified to become Fellows, and the third class Associates of the Institute. The practical portion, although considerably in advance of last year's, still admits of greater experience. The value of each answer of each candidate, and his or her place in the result, will be seen by reference to the synopsis.

“(Signed) “JOHN ALLEN,
“L. N. FOWLER,
“J. A. FOWLER.”

The examination is made as practical as possible, and in order to pass, a knowledge of the various subjects connected with the science is necessary. Many who are interested in phrenology are able to examine a head correctly, but they have not taken time to acquire a theoretical knowledge of the subject, which is so necessary to meet arguments advanced by scientific men. The weekly Lecturettes are another useful branch connected with the Institute, Mr. Fowler being the principal lecturer, and during the past year he has been assisted by the Rev. W. J. Dawson, Rev. Owen Davies, Messrs. Brown, Tompkins, Cox, B. Hollander, Madame Patenall, Miss A. J. Oppenheim, and Miss J. A. Fowler.

The members' meetings have been varied and interesting, Two of the summer meetings were held at Mr. Fowler's house, in Kent. At the June meeting our President's eightieth birthday was celebrated; during the afternoon photographic groups of members and friends were

taken as a memento of the event. The following members have read papers at the above meetings:—Madame Patenall, Messrs. Coleman, Tompkins, Smith, Samuel, and Fris.

During Miss Fowler's leisure time she has given lectures for the Institute in and around London, besides attending drawing-room meetings, and giving a course of lectures on Phrenology, Health, and Hygiene.

The Annual Soiree was held in January, when some seventy friends and members assembled in the artistically decorated rooms of the Institute. A valuable addition has been made to the Museum by the presentation of 30 skulls from the collection of the late Mr. Hawkyard, of Leeds, by his wife, who is lately deceased; and also by purchase, a disarticulated skeleton and some skulls, and lastly, a unique measuring machine for taking cranio measurements, made by one of the members, Mr. J. Baldwin, which we have here for inspection. A collection of finger-prints has been made, to which further additions are desired. We feel assured that phrenology is making decided advancement. We have to thank Mr. Stead for his valuable article which appeared in the December PHRENOLOGICAL MAGAZINE, which he reproduced in the December *Review of Reviews*, page 600, and which has been copied extensively in other papers, and has brought many disbelievers to the Institute to test the science.

Lastly, our object is to make the Fowler Institute a scientific centre for phrenology and kindred subjects. The work takes time to grow, but we start on our third year with much encouragement to push forward.

(Signed) M. H. PIERCY, Secretary.

The Chairman then called upon Miss J. A. Fowler, who said: Ladies and Gentlemen, Students and Friends,—It is with a degree of pride that I address my remarks to-night principally to the students present. After we have talked to you steadily for the past year, week by week, I think I can say we are in better health than ever, and have succeeded in proving to ourselves that work is strength. In any other work I believe we should have found the pressure at times too much; but when we look out into the wide space of our enquiry, and along the line of our work, we feel strengthened and sustained, and realise that our cause is a glorious one, and that our reward is in having the privilege of working among and teaching such intelligent minds. When we think of what is the subject of our study—mankind—we feel that the harvest is indeed great; but when we consider how few there are who live and labour for man, it really appears as though “the labourers are few.” Thousands of men are seeking to do good, are seeking for knowledge in various ways; but how few there are who are pursuing a line of thought calculated to learn all that may be learned of the greatest facts in the universe that we know anything about—man. The more we learn then of ourselves, of our constitution, physical and mental, the more we seek to solve the problem of our being, and learn its inter-play of fact and faculty. The greatest minds have ever spent their strength and time upon the study of mind; and yet, until the days of Gall, the

world sought for mental truth like a blind man ; until the brain was studied, which is the centre of human existence, the source out of which all spiritual intelligence comes ; until the nature and special offices of the brain were discovered by Dr. Gall, men were unable to discover truth in regard to mind. Thus the best part of man was a hidden story. Men studied the anatomy and physiology of the limbs, but when they came to the brain, it was a region unexplored. It has been said that anatomists and physiologists studied man as high up as his eyes, and then stopped ; and even to-day the world knows very little about mind ; it knows a great deal more about everything else beside mind. Some men can tell you all about the worms. Agassiz knew all about fishes ; others who are scientists and who are honoured for their science, know ten times more about the ants and the parasites that infest plants than they do about the *genus homo* itself. Now, we propose, in this Institute, to go the other way about, and study man first, and his requirements and surroundings. When you study the brain and you have the centre pivot to work upon, when you study human life as it manifests itself through the brain in all the work of intellect, you have the main spring which sets in motion every other object in life. You Students of Phrenology will some day become Teachers (for you will not be able to hold your knowledge to yourselves) ; remember, that in the mind of teachers whom you influence in the right development of their children, you have commenced a great work for them, for the children, and for the world, that will last for generations and generations. When we think of what a rightly trained mind can do, we may appreciate the magnitude and the worth of our work ; he who makes a hat does a good thing, but it does not last for ever ; the block on which the hat rests or the brain that constructs the hat is far more important. He who starts a new and right idea in the human soul as to how it shall culminate in controlling life, and how it shall be nourished and fostered, has started a factor in God's work that shall last for ever. This is your kind of work. It is not to clothe human bodies, it is to teach human souls how to act, how to live, and how to augment their being and glorify their Creator. I am grateful to my human father for implanting in me the desire to work for this glorious science, which subject, I trust, will steadily grow in importance, and be electrified and carried forward by earnest students, such as you have become. I hope that you may all have caught echoes from my father's voice that will remain with you as long as you live, and may these echoes help you to melt away prejudice from this important subject.

“ Think truly, and thy thought shall the world's famine feed :
 Speak truly, and each word shall be a fruitful seed ;
 Live truly, and thy life shall be a grand and noble creed.”

Mr. Fowler then said it did him good to be there that evening, and he wished to heartily congratulate the students on their progress. He believed they were on the threshold of leading useful lives, being capable of helping others better because they had learned something about themselves. They would now use their powers to the utmost to raise

phrenology wherever they were, and encourage men to study themselves more scientifically. Phrenology was undoubtedly making progress in every direction. The Institute had doubled its members during the year, and he trusted it would continue to work steadily on.

Mr. Fowler then proceeded to distribute the diplomas and certificates, giving to each an appropriate word of encouragement. The list stands as follows :—

Diplomas with Honours	{	MISS EDITH RUSSELL. MR. PHILIP TOVEY. MR. JAMES BALDWIN.
Diplomas	{	MR. WILLIAM ASHLEY. MISS E. CROW. MISS S. H. MAXWELL. MR. DOMMEN.
Certificates	{	MR. D. E. SAMUEL. MR. TAYLOR. MRS. JAMES WINTERBURN.
Exhibition Awards in order of Merit	{	MR. LEPAGE. MISS DEXTER. MR. BARNSDALE. MR. WATERHOUSE. MR. HELLYER.

The successful winners of diplomas were then called upon to address the meeting.

Miss Russell said: I am sure that all of us who have been studying here during the past year must be convinced of one thing,—that whatever time and trouble it may take, whatever work it may involve to study Phrenology practically, scientifically, thoroughly, it is certainly worth all it may cost to do so. We have learnt this not only from what we know of Phrenology for ourselves, but also from what we have heard in our class from time to time. Not only have we been taught the importance of Phrenology, but also the importance of earnest work. The latter has created in us a greater desire than ever, to live for and be true exponents of the science we love, and which has done so much for us. If we are to advance Phrenology, whether it is in the home circle only, or whether we have a larger sphere for action, we need to have our heart in our work, not merely the enthusiasm which shall take it up for a time and then lose all interest, but the enthusiasm which must be a part of our very life. We need too, an unfaltering faith in our work, and a courage that will dare to always uphold and fight for the truths we believe in, for I do not think that all phrenological battles are over yet. If Gall, Spurzheim, and others, have fought for us the great wars, there are still skirmishes in the border land that are as much as some of us as yet feel capable of taking part in. Week by week throughout the year we have been taught Phrenology, not only in our class, but by Mr. Fowler's lectures. We have indeed had many opportunities of profiting by what he is always so ready and willing to give us—his experience. He has told us how to live and how to work,

and use all our faculties in the highest and best way. He has given us many truths that we shall do well to remember, and many wise counsels to follow, but it is ours to see that we act up to what we have heard and what we know, that at the Annual Meeting of this Institute in 1893, Mr. Fowler may see that we are nearer the stature of perfect men and women, and Miss Fowler find us more earnest students than we are even to-night.

Mr. Tovey remarked, among other points, that our first phrenological proposition is that the brain is the organ of the mind. We believe that mind exists as a distinct entity, but seek to trace its manifestations on a physical plane only. Our thoughts, ideas, and will, are attributes of the mind. We do not know how impressions of external objects are transmitted to our consciousness. The reflected image on the retina is doubtless conveyed to the brain, but how the mind assimilates the reflection we cannot say. The brain does not see—the mind sees—and in the same manner the mind hears, tastes, talks, and walks. The mind is the man. Is it impossible, then, to conceive of the mind existing after the death of its physical instrument, exercising the same faculties in a spiritual world that it exercised in this material sphere? Let us pursue this train of thought, we shall then agree with Mr. Stead when he says, “There is a ghost within each of us.”

Mr. James Baldwin said: It is gratifying to me to hear the encouraging remarks of our President and other speakers; also the annual report, which I am sure we were all most pleased to receive, the tone of which speaks well for the amount of work done for the past year. It is stimulating to note the increase of members. Growth is always the sign of life, and I am pleased to say not only the size, but also the quality is increasing. This Institute has not only done valuable work in advancing the cause of Phrenology, but it has been most careful in the training and developing of its students. As a student myself, I may say that the past year has not been wasted, and the result of the recent examination speaks for the great activity and enthusiasm which has been infused into our studies under the guidance of our President and Miss Fowler. It would have been a slight on their labours if a less favourable result had been shown. The object of this Institute is one that is both fascinating and popular. The study of mind and its medium of operation has always occupied a leading position with master minds of all ages. We are indeed privileged in having such a sound basis as Phrenology affords, in our investigation of this all-important subject. Henry Ward Beecher once said that there is no natural system which seems to correspond to human nature as Phrenology does. Again, Horace Mann declares himself a hundred times more indebted to phrenology than all the metaphysical works he ever read. It is indeed the climax science, bringing us from the lines of speculation and conjecture to ascertained truths; from mere hypothesis to positive laws. When we consider the faculties of the mind in their various combinations, as revealed by Phrenology, they are almost innumerable, especially when taken in connection with the varieties of temperaments, education, and external circumstances,

habit, &c., of different individuals, sufficient at least to produce the endless diversity and ever-changing variety which exist in the manifestations of the mind. Here is opened the most extensive field imaginable for philosophical research, a field embracing the whole range of mental phenomena, and everything pertaining to human nature. We shall never be able to pay the debt we owe to Drs. Gall and Spurzheim as founders of this science, and the efforts of their disciples in advocating its doctrines, and most of all to our President, whose labours have done much in sustaining its dignities and worth. What was once but a feeble flicker, and threatened to go out altogether, has now become a steady flame, not only affording light, but giving warmth to all those who come within its range. People are everywhere waking up to the fact that such a science as Phrenology exists. The first impressions have been made, and now is to be found the spirit of enquiry. People are always anxious to know—in fact, this is the age of enquiry—and this science is and will receive its share of questioning. We must be alive to this curiosity, and be ready to satisfy it, and by good first impressions gain fresh supporters. The survey of the future presents plenty of work, and our encouragement may lie in past success, and afford us ample stimulus to press forward the movement which shall broaden our views of mankind, of the laws of life and being, and the association and environment to which we are related. May it be ours, by constant attention of thought, and ardent, animated resolution, to break through every opposition, and flash the phrenological light of the human mind upward, that the results of this next year may reach twice as far, and its purposes accomplish twice as much good.

Miss Crow said : It is a great pleasure to me to be here this evening, and certainly I never expected to stand here as a Fellow of the Fowler Institute. Although it is a pleasure to me, I recognise it is also a great responsibility, and means much hard work in the future. I fully understand now a remark I overheard our Vice-President, Mr. Brown, make last year after the examination. He said, "To gain the diploma is not a mark that we have finished our studies, but rather that we have only just begun our work." Certainly the more we know, the more we find we have to learn. Phrenology seems a very deceptive or artful science in this way ; it will not allow one to take it up and go a little way, as I intended to do. When I first began to study Phrenology I thought I would just gain enough knowledge to entertain myself and friends ; but no ! it is too deep, and far too fascinating for that, and when a student has gone a little way in the subject, she wants to go a little further, and a little further still, until she find herself quite absorbed in it. To be a phrenologist is no light matter. One is no longer a free agent, for it opens such a wide field for doing good, and helping others, that it claims unceasing efforts in that direction, as well as in other ways. To fit oneself for this department of the work alone, calls for great self-culture and development of character, and if it gives to us this power, surely we have no right to let it lie dormant. Therefore, I say it is a great responsibility to hold such a diploma, for it bids us all be up and doing. Personally, I

know of nothing that aids a person to understand others, and to improve their own characters, like Phrenology, and I should strongly advise those who have not yet studied this subject to do so, if it is only for the pleasure and help they would receive themselves, and be able to render to others. Mr. Fowler in his remarks referred to me, and said he had known me as a child, and knew me now as a woman, and one would hardly credit that the two could be one and the same. If this is true, and I am bound to confess I believe it is, I have been taught to feel that even I can do something in this field of labour. I say without the slightest hesitation that the change is largely due to Phrenology and its exponents. As for the course of instruction adopted by this Institute, I can only say it is a most thorough one (which we who have just passed the examination can well testify to). The course we have just concluded has afforded me the greatest profit, and I shall always feel grateful to the Institute and its teachers for the help they have given to me.

Mr. Ashby said : I am known for my interest in bees, and at one time was called the "bee man," but now my spare time is devoted to Phrenology. I look at people in a different way since I have become a student of Phrenology. I quite agree with Miss Crow that the hard study has still to be continued.

Further remarks were also made by Miss Maxwell and Mr. Dommen.

Mr. Sly occupied the chair the latter part of the evening, and made some practical allusions to the use phrenology had been to him, and recalled the time when he had first seen their Grand Old Man, and how he had profited by Mr. Fowler's first examination of his head.

In another column will be found an account of a graceful presentation to Miss J. A. Fowler.

UNLESS forces were intelligent there could be no manifestation of intelligence in forms. The manifestation of a higher intelligence in a form is due to the operation of a higher force. Low intelligences are controlled by lower forces.

"THERE comes a time when children judge their parents as men and women, in spite of filial duty ; and woe to those whose actions change affection and respect to hatred and contempt."

I PUT you here that you might take my three great remedies in the best and easiest way—plenty of sun, fresh air, and cold water ; also cheerful surroundings and some work.

Hygienic and Home Department.

HOME DISCIPLINE.

“To retain the confidence of a child to young womanhood or manhood is not always dependent on the disposition of the child, as is often supposed, but on a wise guidance on the part of its parents, which needs to be begun in infancy. The treatment of children has greatly changed within twenty or thirty years. The old system of ‘spare the rod and spoil the child’ is fast giving way before the rightful idea that one who cannot govern children without the use of the rod is not fitted to have the care of them. Those mothers who are ever ready with reproof very seldom have the full confidence of their children. Imagine taking our own troubles and sorrows, and confiding them to one who would only rebuke us for our follies ! We expect sympathy, and it is for that we have humbled ourselves to speak of our wrongdoings. Does a child, who needs it much worse, receive this consideration ? Generally speaking, he does not. If he does, it is administered with so much reproof, that he wisely determines to keep his own counsel in the future. Result, deceitfulness. You are quite sure he did not inherit the trait from you, and knowing that the sins of heredity are cautiously supposed to skip one generation, and manifest themselves in the second, in your mind it is very plain that some great aunt or uncle whom you have never seen must be responsible. Parents have no business to tempt their children to falsehood, and that is what undue severity of discipline often does. There are lies on the consciences of many children who suffer mental torture, in consequence that it is to be hoped are recorded where they belong, on the page of parental failings. It sometimes seems that of all faults, deceitfulness is the worst to contend with. If principles of truth and uprightness cannot be early fixed in a child’s character, there is a sure inlet for the growth and development of many other faults. After all, how many parents really understand their children ? Not one in a thousand. It is the straws that show which way the winds blow ; so it is often our inability to point the straws that mark the traits in a child’s character, that leads us to condemn as faults that which is really virtue. It may not be always fair to call a boy indolent who sits upon the bank and directs his comrades, while they build the snow fort or rake the leaves for a bonfire ; he may be possessed of executive ability which will be of use to him in the future if you have but the wisdom to see it in that light.”

“Some parents goad their children on to insubordination, as a spirited horse is goaded by a whip. One is brought to subjection by a curb-bit ; the other by reproofs as cruel and cutting. There is no necessity for either. A lighter hand in either case would obviate the necessity of either curb-bits or punishments. It must seem to some children that their parents were born grown up, since they appear to have entirely forgotten their own childhood, and are incapable of understanding or sympathizing with their youthful troubles. To win a child's confidence so that it will disclose its inner life to you is one of the best safeguards for its future. To do this needs common sense, tact, love, and patience unlimited—and it pays.”

THE BEST PLACE TO LIVE IN.—“To decide upon the sanitary properties of a place,” said one who had studied the subject, “you must look at the old people and young children.” If judged by this test, the Sound side of Westchester County must be particularly healthful, three deaths having occurred within the last three years of old people who were well on in the nineties. It is very rare that people living in the same neighbourhood and in the same social set can count among their contemporaries several friends of ninety odd. The case of the oldest of this remarkable trio was quite curious, and may serve as an encouragement as well as a suggestion to all those who possess exceptionally delicate children. As a young child he was very puny and sickly, and his mother often said that she never expected to see him live to grow. For a year or more he went on crutches, and it was chiefly on his account that the family decided to move to Westchester County, where they bought a small farm on Long Island Sound. The lad was taken from school and set to work at outdoor pursuits, and in a few years all traces of delicacy disappeared ; and, although never quite so robust looking as his brothers, he survived them all, although they too lived to be very old men.

Mothers with delicate children may well take courage when they read of the sickly life of some of the exceptionally long-lived men. Whether it is the extreme care taken that thus strengthens their constitutions, or whether the ailments of the system are worked off in their many illnesses, it is certain that not a few who were particularly frail as children have outlived many of their more vigorous contemporaries. A notable instance of this was the Emperor William I. of Germany. For many years he was frail and delicate, giving great anxiety to his mother, and it was only through unremitting care that he was safely brought through his ailments to develop into a superb specimen of mankind, a veritable king among men in stature and physique. No mother, therefore, who goes through the intense anxiety of rearing a delicate and beloved child need despair of seeing him in the end strong and vigorous.

MEMBERS' NOTES.

“In exalting the faculties of the soul, we annihilate in a great degree the delusions of the senses.”—ANNIE MARTEN.

The discussion upon “How can Phrenology be best employed scientifically in the education of children, and the selection of a suitable pursuit,” at the March monthly meeting was opened by Mr. Baldwin (Mr. Coleman occupied the chair), who, in the absence of Miss Fowler, read some remarks prepared by her, of which the following is a brief summary:—There is a growing tendency to attend to the weight measurements of children, but this should be done accurately at stated periods, and a record kept, so as to test the rate at which the body develops. Their physical and mental condition must be studied, and the physical and mental food regulated accordingly. The measurements I recommend are the height without shoes, weight without clothes, length of arms and legs, circumference after deep inspiration and after deep expiration, circumference of waist, and also of the hips at the widest part. Then should follow the four primary cranial measurements, the frontal, coronal, occipital and basilar regions, after which more particular measurements of the head should be taken; also the temperamental conditions must be thoroughly studied. These measurements will insure not only an examination of physical and bodily powers, but also measurements of cranio-topography, which will give a scientific psychological basis for testing the powers of mind and body.

Miss Dexter said she “thought temperament especially should be studied by teachers, in order to give them that knowledge which they now only acquire by long experience. Delicate and peculiar children would be much benefitted by being taught separately when their special developments could be considered.”

Mr. Samuel said, “it is especially important mothers should have a knowledge of phrenology that they might assist in training those organs which early develop. The perceptives are active long before the reflectives, and children should be allowed to handle objects of various form, sizes, weights, and also be taught to measure distance. The phonograph might prove a great help in training the organ of language, when many languages could be acquired with comparative ease. Between the ages of sixteen and twenty-one parents would do well to cultivate a spirit of independence in their children; there are so many ways in which this science could be utilized for their benefit, that a volume might well be filled setting them forth.”

Miss Crow thought that “children were often blamed wrongly, and that instead of a parent arousing the organs of distinctiveness or combativeness, if the affections were appealed to the result would be much more satisfactory; we must also remember that the body must be well-cared for before the mind can be developed.”

Mr. Eagle said that "after some experience in managing boys I find they require leading by kindness, or some one or more of the moral faculties should be stimulated; we must seek to know ourselves first, however."

Mr. Baldwin remarked that "Gall not only discovered phrenology, but also the secrets of a true education, which really implies a drawing out and training of the faculties of the human mind. Teachers and parents would be astonished at the progress children would make if educated strictly upon the science of mind."

Mr. Wheatley made some comments to the effect that "education should be made pleasurable so as to arouse a child's interest, and that the theories of a subject should be explained, instead of wasting time in the mere acquisition of words."

It was proposed by Mr. Baldwin, and seconded by Mr. Eagle, that the meeting be adjourned until next month, when the first question alone should be again discussed, the two questions having already proved too much for one evening. This will therefore take place upon Monday, April 11th.

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The following letter explains itself:—

"SIR,—I am desirous of availing myself of the space at your command to express my grateful appreciation of the method of education adopted by the principals of the Institute, and in so doing feel sure I am only echoing the sentiments of all the students of this last session. Such an expression is justly due to both Mr. and Miss Fowler for their kindly attentions and unceasing exertions which have characterized their work. Not only have we received the aid of their valuable experience, but have been fired with a spirit of enthusiasm which has in a great measure effected the splendid results at the recent examination. The benefits we have received must prove of lasting worth for our self-culture, and a valuable help in our endeavours to further the cause of phrenology. I may say that it was not until the examination that I discovered the amount of facts I had gathered from the instruction received, and I would recommend these classes to those who may wish for a rapid and thorough knowledge of theoretical and practical phrenology.—Yours sincerely,

"J. BALDWIN.

"March 12th, 1892."

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Another year of the Institute's existence terminated with the second annual meeting on March 9th, which was very well attended. A review of the progress made during the past twelve months, together with the examiner's report, is certainly most encouraging, not merely from a point of numbers, but from the great interest taken by members and friends who cannot fail to diffuse the wholesale influence which emanates from the study of mind.

As a slight appreciation of the thorough and efficient manner in which the classes have been conducted by Mr. and Miss Fowler throughout the session, the members of the advanced class presented the latter esteemed teacher with a beautifully bound volume of Lowell's Poems, and a bouquet of lilies of the valley, which she gratefully acknowledged in that sincere and expressive manner with which we are all acquainted. Nor was it from this act alone that the appreciation of the students was evidenced, but also from the very excellent speeches which followed the presentation of the diplomas and certificates.

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Miss E. Russell holds the honourable position of having attained nearly the maximum number of marks in this year's examination, and during the meeting proved her ability in the transformation of thoughts into words in a way that some might do well to copy.

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Mr. Fowler, our Grand Old Man, as Mr. Sly thought well to call him, had his usual cheery word for each successful student in turn, urging them on to greater results in the future.

G. B. COLEMAN.

The Employment Bureau.

The Employment Bureau has been opened by the Fowler Institute to assist people who are seeking employment, and also to aid heads of firms to secure suitable employeès. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.

A lady desires to teach French. A Russian gentleman desires to teach the languages, or do literary and Secretarial work.

Mr. William Musgrove, Miller Street, South Shore, Blackpool, having removed from Oldham, intends practicing phrenology at the above address. We wish him success.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

CRESCENT CHURCH GUILD.—On Monday evening a very interesting and instructive lecture was most ably given by Mr. F. C. Barratt (phrenologist), entitled “An hour with human nature,” illustrated by several human skulls and portraits, when the lecturer pointed out the practical use and necessity of this science. There was a very good attendance, and at the close a few public examinations were made by the lecturer.—*Kebel's Gazette.*

MR. FRIS, member of the Fowler Institute, gave an interesting lecture at Brixton, on Wednesday, March 16th, on Practical Phrenology.

BRITISH PHRENOLOGICAL ASSOCIATION.—The annual soirée of the British Phrenological Association was held at 63, Chancery Lane, W.C., on Tuesday evening, March 1st, when there was a fairly large gathering, including Misses Fowler, Oppenheim, Harrison, and Maxwell, Dr. Renner, Mrs. Devereux, Mrs. Piercy, Messrs. Donovan, Hall, Hollander, A. F. Hubert, Morrell, Piercy, Webb, and a number of friends from the Fowler Institute (about 80 in all) were present. The walls of the room were well covered with life-size portraits and engravings, and the tables set out with anatomical and physiological specimens and illustrations, a number of microscopes with objects of interest from the Royal College of Surgeons, phrenological literary curiosities, some rare and valuable phrenological works, Messrs. Hall and Melville's new measuring instrument, and other objects of interest to students of mental science, kindly lent for the occasion by Messrs. Webb, Fowler, Hall, O'Dell, Samuel, and others. In the course of the evening Mr. Webb, in an introductory speech, referred to the progress, work, and prospects of the British Phrenological Association.—Mr. Hollander (in the unfortunate absence of Mr. Melville through ill-health) gave a very concise address on the history of phrenology, its principles, its scientific basis as confirmed by recent physiological research, and its utility.—During the evening some very interesting phrenological character readings were given by Messrs. Hubert, Webb, and Hall, and physiognomical readings by Miss Oppenheim.—G. Cox.

DURING the month Miss J. A. Fowler has been speaking for the Institute at the following places: At Dr. Paramore's Drawing Room Meeting, Gordon Square, Bloomsbury; Miss Buss' High School for Girls, at the Old Scholars' Meeting; at Maidenhead twice; for the Junction Road Young Men's Progressive Society; for the Sociological Society, Maida Vale; for the Young Men's Improvement Society, Chelmsford; and at the Wesleyan Schoolroom, Willesden.

Notes and News of the Month.

MDME. MARIE ROZE declares that "wines of every sort are injurious to the vocalist. I cannot be too emphatic in warning all girls who aspire to be singers to abstain from them. I have known some of the most promising voices to be utterly ruined by even the smallest indulgence in wine."

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"NEARLY 18,000 of our fellow-creatures," says Dr. Clouston, of Edinburgh, "have lost the use of their reason through drink."

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INTELLECTUAL CULTURE.—A cultivated mind may be said to have infinite stores of innocent gratification. Everything may be made interesting to it by becoming a subject of thought or inquiry. Books, regarded merely as a gratification, are worth more than all the luxuries on earth. A taste for literature secures cheerful occupation for the unemployed and languid hours of life; and how many persons in these hours, for want of innocent resources, are now impelled to coarse and brutal pleasure. How many young men can be found in this city who, unaccustomed to find a companion in a book, and strangers to intellectual activity, are almost driven in the long dull evenings of winter to depraving society.

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SMALL STATURE OF GREAT MEN.—It is a remarkable fact, although rather paradoxical, it must be admitted, that many of the world's greatest men have been small of stature. Sheridan was known as "Little Bill" the world over. George B. McClellan was of but little larger build. Napoleon's nickname, "The Little Corporal," is a household word in every civilized country. "The Iron Duke" (the Duke of Wellington) was often twitted on account of his small stature and big nose. General (Lord) Wolsey is said to be ridiculously small and to be compelled to shorten his stirrups until they would hardly serve a ten-year-old boy when he rides horseback. One's mind eye is likely to picture Gladstone as a giant both physically and intellectually, but it remains a fact that the Grand Old Man is but five feet eight inches high; while Stanley is about five feet four inches.

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WRITES WITH HIS TEETH.—Capt. L. B. Cousins has received a letter from his old army comrade, E. B. Latham, of Barton, O. The letter itself would not seem remarkable to any one not conversant with the facts, as it appears to be simply a chatty, friendly letter, written in a bold, plain, business-like hand. The remarkable feature of the letter is that Mr. Latham carries on his correspondence with his teeth. During the war he had both arms shot off and his right eye shot out. Although a man with habits matured he has, since losing his arms, learned to write by holding his pen in his teeth. He is a good penman, and does the office work for the firm of which he is the senior partner, and which does a very extensive business. He keeps the accounts, and no one would suspect by a glance at his books, that his mouth, instead of his

hand, is his penholder. Necessity is the mother of invention. The ingenuity of the mind is ever on the alert with wonderful schemes for carrying on the work of life.

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MARCH 15TH, the Annual Meeting of the British Phrenological Association was held, when officers for the ensuing year were elected. The Association now numbers 112 members. Mr. Nicholas Morgan was elected president. Some alterations in the rules were made, and other matters discussed.

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THE Institute is open every evening from 7.15 to 9.15 for phrenological examinations.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

“LOVERS.”—The build and make up of this gentleman gives a decided bias to his character. He is warm-hearted and cheerful in disposition, and is inclined to those pursuits where activity and life are most evident. His nature is one of intense love of variety and change; he is restless and of a roving disposition, can easily turn from one kind of work to another; he is most suited to those pursuits where the tasks are varied and offer considerable variety of work. He is all alive to things going on around him, and is an observer of men and nature. He is a gatherer of facts, and has a general stock of information on most subjects; has a wonderful memory of faces, and should scarcely ever forget a person after having once seen him. He should be able to reproduce what he has seen, and draw remarkably well. In disposition he is active, restless, seldom idle, and must be doing something; is prudent and cautious generally, hopeful, and full of enterprise, decidedly ambitious, has strong sympathies, and strong conjugal affection. He is ingenious, and should show considerable ability in his business or profession.

The photograph of this lady indicates that she has all the qualifications which go to make a desirable companion; she is disposed naturally to look at the brighter side of things, is not desponding, or in any way disposed to gloomy and melancholy views of life, but is full of hope and sanguine of success, and always ready to take responsibility in the spirit of hopeful success. Her disposition inclines her to enjoyment, and she creates considerable pleasure out of her circumstances; she is quite agreeable and companionable, and a good entertainer,

is full of affection, and quite frank and outspoken. She readily makes friends and keeps them ; she is quite intuitive in her judgments, and is very quick of decision. Has a good memory, and store of general information ; is neat in her ways and work, and is quite systematic and orderly. Her temper is well under control, and she is prudent and circumspect generally.

No. 1 (Harwich).—This lady has a strongly marked physiognomy and above the average size brain, is rather impressible and intense in thought and feelings. She is decidedly warm-hearted, and makes a good friend. She is generally active and energetic, and is in her element when she has plenty to do. She has a practical and available mind, is not narrow or contracted in her thoughts, but takes in the whole of a subject. She is deep-thinking, comprehensive, and sound in judgment ; she is quite intuitive, and is almost prejudiced by her likes and dislikes of persons and things at first sight, rather sensitive of the opinions of others, and does much to gain the approval of her friends. She is generally of a hopeful and trustful disposition, full of sympathy, and of a lovable nature, is prudent, and thinks a subject well out before deciding. She is thorough in her actions, and cannot do things by half measures, and expects others to be the same. She has good powers of observation and an aptitude for learning ; has a good memory of faces, is very neat and methodical, and has a good general memory. She is a good talker, and is very entertaining in her manners generally ; she has a disposition most adapted to the home and social circle.

No. 2 (Harwich).—Has a superior development of brain power. She has considerable ability to generate thought, the powers of reflection being a part of her nature. She is at her best when planning, setting out, arranging things. She naturally understands a subject, and thinks without apparent effort. She is quite thorough and whole-hearted, throwing all her powers into whatever she undertakes, and is most happy when thinking and working for others. The desire for the happiness of others is one of her chief characteristics. Her friends find her a ready help, and a good sympathizer. She quickly makes friends, and can easily adapt herself to people ; can imitate well, and easily take off the ways of others. The tendency of her mind is an upward one, and her thoughts most are where the most good can be done.

“NAN.”—The quality and make-up of this lady’s organization is such as to incline to a fair share of health and strength, giving her powers of endurance and spirit to undertake things that require great force and energy to accomplish them. She is decidedly ambitious, and desirous of making the most of things, and of doing her best in everything she undertakes. She is full of energy and executiveness, and is sure to come to the front. She could not be contented with the quieter walks and occupations of life, but is constantly at work, striving both to be and do something that shall win distinction. Is full of tact and management, and keeps her affairs to herself ; is cautious and prudent generally, hopeful and anticipating. Is decidedly social, and full of affection ;

is best understood by those who know her most. She has good conversational powers, and is very effective in her conversation ; can be severe and turn her remarks to good account if attacked, and is quite able to defend herself. She has a strong spirit, and cannot rest unless she realizes her anticipations, and will do much to bring them to a successful issue.

“BRONWEN” (Neath).—This lady possesses a highly social and warm-hearted disposition. She is full of life and has a keen appreciation of it. The troubles of this life are not for her, and she does not meet them half-way, but deals with them when they come, and quickly rids herself of them. She is full of spirit and determination. She is very decided when once she undertakes to do anything, and does not give up until she has achieved her purpose. She is wonderfully tenacious to her opinions and ideas. She has a mind of her own, and thinks for herself, and is quite capable of managing her own affairs. Her mind is an active one, and will lead her to those spheres where responsibility and management are most called for. She is not contented to do small things, but must have something to do more and above the ordinary. She must manage and direct. She is very quick of judgment, and has quite an insight into the right ways of doing things. She is penetrative, and sees further than she tells. She is quite critical, and is scarcely ever satisfied with what she does, and is always seeing the faults and improving them. She is quite methodical and systematic in what she undertakes, has a way of her own, and is best pleased when things are done as nearly so as can be. Her photo indicates character enough to be of decided influence in her sphere, and will generally be looked up to, and her efforts appreciated in whatever she does.

“L. E. B.” (Shoreham).—The head of this lady is well developed, and as a whole indicates great activity of mind and a wide-awake disposition. She is thoroughly alive to her surroundings, and is deeply interested in all that is going on. She possesses a keen appetite for learning, and is quite anxious to understand and know all that she comes in contact with. She possesses an enquiring mind. She is a good observer generally ; her mind should be well stored with facts and general information. She possesses a good memory, and is quite ready to tell what she knows. She makes a good companion, and keeps company all alive. She is decidedly active. She is full of energy, and should be noted for the enthusiasm that she puts into whatever she undertakes. She is naturally cautious, and tests a subject thoroughly before she places belief in it. She can keep her own counsel if necessary, and does not give her mind away too freely, though at times she may seem to. Full of fun and spirit, is quick, sharp, and critical, and is altogether of a wide-awake disposition.

“TREBLIG” (Aberavon).—The photo of this gentleman indicates a mind of decided activity and aspiration. The desire to be and do something above and beyond the ordinary is quite manifest. He is decidedly ambitious, and intends to do his best in whatever he undertakes. His photo indicates a well-shaped head, one capable of being

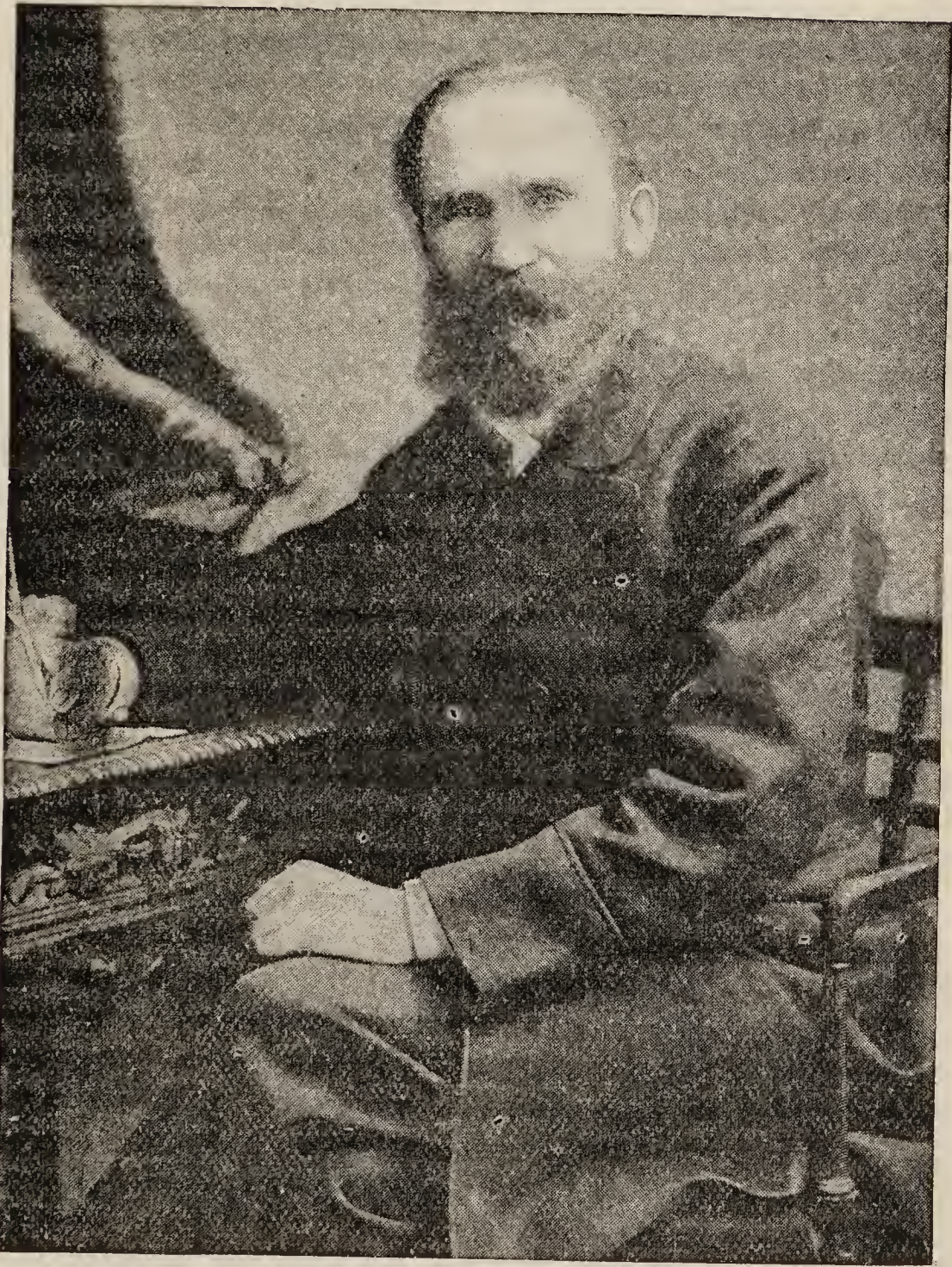
equal to the emergency and of undertaking any task. His temperament is mental, and disposes him more to work with his brain than with his hands; to think, study, write, teach, and do the indoor head-work, rather than manual labour. His disposition tends to refinement and polish, and he would succeed best in finishing off and embellishing when the rougher work has been done; can improve on others, rather than carry the work right through himself. He is an improver and finisher. He is kindly disposed to others, has many friends, and is social and warm-hearted in his affections generally. He is decidedly companionable, and full of fun and merriment, and is in his element when he can be entertaining others. He will generally take his character from surrounding influences, and pass quietly through life. His knowledge of phrenology should aid him in overcoming the weaknesses he speaks of.

“BELLA” (South Shields).—The photo of this lady indicates a good vital organization, giving her ardour and enthusiasm, and an all-round cheerful disposition. She lives to enjoy, and life has for her a continual round of pleasures. She enters into the spirit of things, and throws her whole energy into whatever she does. She is quite alive to her surroundings, and has a wide-awake disposition. She is quick to see and to understand things that she comes in contact with. She has quite an enquiring mind, and shows an eagerness for information and learning generally. Her sympathies are not contracted or selfish, but are broad and extended. She is largely interested in those around her. She has an intuitive mind, one that understands people and things generally. She seems always to do the right thing at the right time. She is very entertaining, and quickly makes friends. She is quite sociable and warm-hearted. She cannot be harsh or cruel, and if she fails in life it will be from being too lenient and considerate of others. She would be quite in her sphere in teaching and developing the minds of children; they would readily take to her, and do her credit, for she can tell what she knows in a very apt manner.

E. M.—This photograph indicates a gentleman of high tone of mind, great mental susceptibility, and intensity of thought and feeling. He is poetical in his tendencies, and rather universal in the application of his mind. His mental temperament greatly predominates, hence he is fitted for some intellectual pursuit that has a decidedly moral bearing. He should by all means be devoted to intellectual work, as a writer or teacher. He has abilities for a scholar. He is much interested in details. He is a close observer of nature, very critical in his studies, particularly practical in the tendencies of his mind. He wishes to reduce everything to practice. He has more than ordinary intuition of mind, and discerns character and motives with great accuracy. If he had his choice he would prefer to be employed in the study of mind. His sympathies extend over the whole human race so far as he knows anything about it. He has versatility of talent, and knows how to turn his experiences to the best account. He will be interested both in science, art, and music, but would prefer art, music, and literature.

THE
Phrenological Magazine.

MAY, 1892.



REV. A. M. FAIRBAIRN, M.A., D.D.
PRINCIPAL OF MANSFIELD COLLEGE.

THIS gentleman is very highly organised. He possesses the mental temperament in the sublime degree, consequently as a cultured man he should be remarkably prolific in thought. The tone of his mind is exceedingly elevated, and not so much under the

control of the physical organization as many. He thus easily takes broad views, and makes everything appear plain and distinct. His head is most favourably developed, being full in all parts. He has a broad head which gives energy, force, spirit and general resolution. His height of head favours elevation of mind, sentiment, emotion, and a high moral and spiritual tendency of thought. His imagination is uncommonly strong. He is particularly emotional and capable of looking at the same subject in a variety of ways. He has great versatility of talent.

He is broad in the temples and high in the forehead which renders him specially gifted in presenting his ideas, or in dealing successfully in a variety of subjects. He has a mathematical mind, is orderly, methodical, systematic, and finishes what he begins. His ingenuity greatly aids him in presenting his thoughts in many ways. He is remarkable for his power to understand principles, and to comprehend the whole subject. He is youthful in his disposition and is well qualified to amuse and entertain, and will never grow old in his feelings.

He has not only a philosophical mind but one of great poetical tendencies, and is particularly sentimental, emotional, and capable of ventilating a subject fully. He is liberal and versatile in his mind as a scholar. He is peculiarly adapted to intellectual pursuits, to subjects of an imaginative nature.

He has an all-round kind of mind, and whatever subjects are brought before him for consideration, he appears to be quite at home with. He is not wanting in any conservative power, but his mind is too liberal and open hearted to allow him to be very conservative, and he uses his force very appropriately and judiciously. He is not careless in presenting his thoughts, nor is he indifferent to the effect of what he says. He would be particularly well adapted to presenting new and broad ideas to students, and assisting them in looking at a subject intellectually. He does not appear to be defective in any special point of character.

He is so well balanced that he can be almost equally great to whatever he gives his attention. He is not only philosophical, but practical ; not only scientific, but metaphysical, amusing, entertaining, and youthful in his style. He easily adapts himself to different conditions in society, and is one amongst the number in which he is placed for the time being. He can either enjoy the things that are taking place around him, and take the world as it comes, or become exclusive and devote himself entirely to his own thoughts. What he says will be repeated. The examples he sets will be

followed ; hence he is a constitutional leader without trying to be so. It is a rare head ; and is somewhat of a universal genius. His social brain, if developed at all, in harmony with the shape of the head, is very strongly marked, and he will make many friends and keep them when made.

L. N. FOWLER.

THE EVOLUTION OF A MIND.

BY NICHOLAS MORGAN.

(*Copyright.*)

Read before the Fowler Institute, April 6th.

MIND is known by its phenomena. It is neither an observable nor a tangible object. Yet it is a reality, which has in all periods of civilization been thought a proper theme for highly endowed and cultured intellects. Mind is the seat of conscious sensibility, and the source of power. It is impressible to numerous environing forces and influences, and manifests its state in various ways.

The phenomena of mind are divided into three kinds—(1) Feeling ; (2) Volition ; (3) Intellect ; and each of these is attributed to a different state of mind. In other words, mental phenomena are analysed and classified into three varieties in accordance with the respective states to which the mind is subject. Though the mind is considered as unity, there is, so to speak, a division of labour observed in the mental workings, and each division of phenomena is spoken of as arising from a distinct property of the mind. Let us now glance at the three prime mental attributes ; and first, at Feeling.—

FEELING is the root stem of mental growth ; or to use another figure, it is the foundation of the superstructure of mind. Suspend feeling, and you rob us for the time being of conscious existence. Feeling is not sensitiveness. A plant is sensitive, yet it cannot feel. Though it may close its petals in the evening, and open them in the morning, it can neither feel the pinch of cold, nor enjoy the genial warmth of the sun. Deprive man of feeling, and you reduce him to vegetative life. Pain and pleasure are the prompters on the stage of action. When the former stares us in the face, and we apprehend an attack, we are naturally stirred to self-preservative effort ; but when it seizes us with a firm and poignant grip, it is a more potent incentive to endeavour to release ourselves. On the contrary, we court pleasure, and ardently pursue it. Every praiseworthy thing that contributes to the fund of pleasure is interesting ; and if the choice of pleasure-producing things is

in our power, we are, by the laws of our constitution, induced to choose that which seems to offer the greater satisfaction.

Pain is not definable, neither is pleasure ; the one stands in contrast to the other ; but both have to be felt to be understood. An individual suffering from a painful affection could probably describe it in words denoting degrees of intensity, volume, or acuteness, so as to convey an idea of his pain to another who had similarly suffered ; but a person that had never been pained could not understand any such description. Contrariwise, everybody knows from personal experience what pleasure is, though all people neither enjoy nor pursue the same kind of pleasure ; for there are as many individual tastes as there are different sources and degrees of pleasure.

Feelings are further divided into Sensations and Emotions. The distinction between a sensation and an emotion is not a fanciful one : it is real and understandable ; but to make it clear, so as to bring it within the comprehension of the public mind, is not an easy matter. To fully comprehend it, a knowledge of the nervous system and its functions is a pre-requisite.

A sensation is produced by a physical stimulation. Example—a sight, a sound, a smell, or a touch of sufficient force impresses the nervous mechanism concerned, and thus stimulates it to activity, and causes a sensation. Now if the stimulation were to expend itself in the sensorium or seat of sensation, no other effect than a sensation would be felt. On the other hand, if the stimulus were to go beyond the sensorium, it would incite some other part or parts of the brain, and arouse one or more emotions. It will be seen, then, that an emotion incited by an external stimulus is something added to a sensation through the diffusion of the stimulus, and by bringing into activity other masses of nervous matter. Such emotions are said to have a peripheral origin. All emotions, however, do not arise from this source. Some have a central origin. That is to say, they begin in the brain—the part or parts of which being excited to activity by internal stimulus. This is a very marked characteristic of emotion, and one by which it is distinguished from mere sensation.

An example of the physical and mental operation in the production of emotion will cast additional light on the subject. You are suddenly startled and shocked by a screech. Now as far as this is merely a shock it is only a sensation, and has no emotional effect, and as such it would remain if the stimulus was detained by the sensorium, or should expend itself there, and you would pass on unconcerned ; but if your

attention were arrested, and the intellect moved to consider whether the screech arose from frolicsomeness or distress, this would show that the stimulus had not been inhibited by the sensorium, but had passed on to the intellect ; and should you find the screech was caused by a ruffian ill-treating a woman which nerved you to defend her, this would indicate that the stimulus had been farther diffused through the brain, and had increased a measure of emotional excitement proportionate to your conception of the outrage. This would not be caused by one emotion only. Several would be called into play. Again, if you knocked the ruffian down and subdued him, and rescued the sufferer, you would be repaid for the exertion by the pleasure of success, to which the emotions of anger, power, pride, justice, tenderness, etc., would largely contribute.

The physical organs involved in these emotional effects would be as follows :—Some of the aerial waves that were put in motion by the cries of the woman, having struck the ear and impressed the auditory nerve, the stimulus would be conveyed to the acoustic centre of the optic thalami, thence to the sensory cells of the cortical substance, and from there transmitted to the motor cells, which would liberate a quantity of nerve force, and thus arouse you to action through the pressure of strong feeling.

As an additional illustrative example, I quote the following from "Brain and its Functions," by Luys, at pp. 60 and 62, he says,

"Let us take things as they normally occur, following the natural channels by which excitations from the external world penetrate into the organism. Let us take, for example, the impression upon a sensitive nerve-vibratory phenomenon which calls into activity the cells of the retina, or those of the acoustic nerves ; what then takes place in the secret recesses of the nervous conductors ?

"Immediately following the direction of their natural channels, these vibrations applied to each particular sensorial nerve bring into play the specific activities of the different cells of the centre of the optic thalami. These immediately take up the vibration, and by means of radiating fibres which unite them to the different regions of the cortical periphery, transmit to their sensitive partner-cells, the new dynamic conditions in which they have just been placed by the fact of the external excitation. External sensorial impressions do not therefore propagate themselves through and through from the plexuses of the sensorial to the cortical periphery, until they have awakened various intermediate cell-territories which give them a new form, cause them to undergo a peculiar metabolic

action, and only launch them into the different plexuses of the cortical zones, after they have animalised them, and rendered them somehow more assimilable. Each special kind of sensorial excitation is thus dispersed and quartered upon a special area of the periphery of the brain."

This, I remark, is a purely physiological view of the mind's physical mechanism, and of its manner of working. Let us now take a psychological view as presented by Dr. Bain. He specifies the difference between sensations and emotions thus :—

"Sensations, as such, are primary and simple ; emotions, as such, are secondary and compound." Having stated this as a general principle, he illustrates it by examples. He says "The pleasure of a fragrant odour, in so far as mere sensation, is a primitive or elementary fact ; it is believed to be a derived and immediate consequence of the physical stimulation ; the pleasure of a fine statue is a derived and compound effect ; in its formation there intervened a process of education or acquirement." "Emotions and the Will," p. 69.

These are very guarded statements. Undoubtedly sensations, as such, are primary and simple ; that is, if an impression made on the circumference of the body were, in its transmission to the centre, to be arrested immediately at the point where conscious sensation takes place, no other feeling than sensation would occur ; and possibly an individual's olfactory mechanism might be stimulated by an odour that would expend itself in the sensorium, and consequently would not affect any other part of the brain beyond that point. In such a case, however, the external impression would be very slight, so slight indeed as to be merely capable of inducing the mind to take cognizance of the fact ; hence the amount of pleasure thus afforded would be so little as to pass away at the moment of its reception ; and such an odour would hardly deserve the designation fragrant.

No doubt, the pleasure of a fine statue is a derived and compound effect, because it originates not from either emotion or intellect alone, but from both combined ; and not only so, but from the æsthetic culture and appreciation of the beholder ; and it is so far a derived emotion and pleasure as those faculties have been cultured and trained in the art of sculpture. This is not all, however, there is a physical and mental basis of pleasure-receptivity to the influences emanating from a fine statue ; but all people are not equally endowed with this basis, or the qualities of which it is composed.

Dr. Bain, in a foot-note of page 71 of the above work, says : "Mr. Shadworth H. Hodgson remarks that the emotions

are to be regarded as a new kind or mode of feeling, depending upon the constitution and operation of nervous matter. Hence, he objects to the theories (of Hobbes and others), that seem to regard them as mere sensational compounds." This is precisely my own view of the subject. Then let us look at it for a few minutes from the same stand-point as we have been examining the preceding. We have observed that a slight external impression may simply awaken consciousness without producing any other result; and that a strong impression, may not only cause a sensation, but arouse the intellect to activity and ideation. What then is intellect? We know it is not a sensational compound, but that it is a property of the mind, dependent on nervous matter for its operation, which is different from that on which sensation, as such depends. What reason then have we for supposing that emotion is not dependent on special nervous matter for its operation? None whatever.

Analysis of the mental working of the pleasure of a fine statue shows that it arose in the first instance from a sight-sensation, and consequently had a peripheral origin; and that the subsequent recollection of it, in the absence of the object itself, or any other object resembling it, was purely ideal and had a central origin. Now, the objective vision would bring into exercise all the fundamental qualities of the mind; namely, feeling, volition, and intellect; also the two divisions of feeling, namely, sensation and emotion; but the subjective or ideal vision would merely call the intellect and the emotions into action; for sensation, as such, would take no part in the reproduction. It is clear then, that, in such a case, emotion is not a compound sensation, but a different kind or mode of feeling, which originates in specially related cell-territories of the cortical substance of the cerebrum.

The part that intellect plays in beholding a fine statue, and how much it contributes to pleasure, are questions of considerable interest; they alone form a theme for a lengthy disquisition. The parts the intellect and the emotions would take, in any case, and the pleasure they would yield, would greatly depend on the attending circumstances, such as the knowledge, taste, discriminative capacity, and appreciation of the spectator. Moreover, if he came on the subject unexpectedly, the first mental shock would be pleasurable surprise; but if he went to see it with expectant anticipation of pleasure, surprise, if manifested at all, would not be the first to show itself. On the contrary; it would be late in coming on the stage. It would then be introduced through the judgment having decided that the statue was a wonderful piece of workman-

ship, the product of true genius. This, however, would not depend on the accuracy of the criticism, but on the individual's capacity, artistic taste, and culture. Again, another spectator might be intellectually well qualified to form a judgment, he might also, however, be unfavourably biased against the sculptor; and if he were himself an unsuccessful aspirant in the same profession, jealousy might wound him, and introduce another element to warp his judgment, and incite displeasure.

Already, we have got several species of emotion at work, and many more could be mentioned; but instead, let us suppose a thoroughly capable and well disposed critic, viewing a fine statue for the first time, and try to analyse his state of mind. We must further suppose the adjective fine, as used by Dr. Bain, to include real excellence in every respect; for the material, the workmanship, and the design might all be fine, still the statue might not deserve this designation. It might be defective in the most essential element of fineness, namely, a true likeness—a real embodiment of the original. Moreover, it might be an excellent physical portraiture, but be deficient in expression—the soul speaking power that genius alone can infuse into inanimate matter.

The question, then, for solution, is not the pleasure that a duly qualified artist would feel in looking upon a truly fine statue, but what intellectual faculties would be brought into play, and what emotions would contribute to the general fund of pleasure.

The first thrill of pleasant sensation would arise from the combined activity of intellect and emotion; then, which of them would first come into action? Certainly the former. Discrimination is necessarily the first act in the production of such a mental state. The practised eye would take in at a glance the beauty of the representation as a whole. Here a nice question arises, Can beauty be felt before it is contrasted with ugliness, or with something that is not so beautiful? To put the case differently, is there anything in itself beautiful which speaks directly to æsthetic emotion without having first been sifted by the understanding? Let this be as it may, discrimination, in all such cases as that just mentioned, precedes emotion, when we view a beautiful object for the first time, the pleasure that accrues from the inspection, is an intellectual and emotional compound; but how much of the one or of the other that the mixture in any case contains, mostly depends on the organization of the individual.

However much the artist might be thrilled with emotion at the first sight of a fine statue, he would not be satisfied. His critical faculty would be incited to a closer and more

minute inspection. He would note the form, posture, and expression of the figure, and the proportions of its parts; then would pass in review the design of the pedestal, and he would judge of the whole as a work of art. Now, this proceeding would bring the will and the intellect into activity as well as the æsthetic emotion. Again, if he personally knew the individual portrayed, and his aims and life work, this knowledge would form another basis for criticism, and call other intellectual faculties into action. He would compare his ideal of the original with the sculptural representation, both as a likeness, and as a historical record; and if the statue did not harmonise with his views in every particular, he would pronounce it so far defective, though, at the same time, he might consider it a meritorious work, and a thing of beauty.

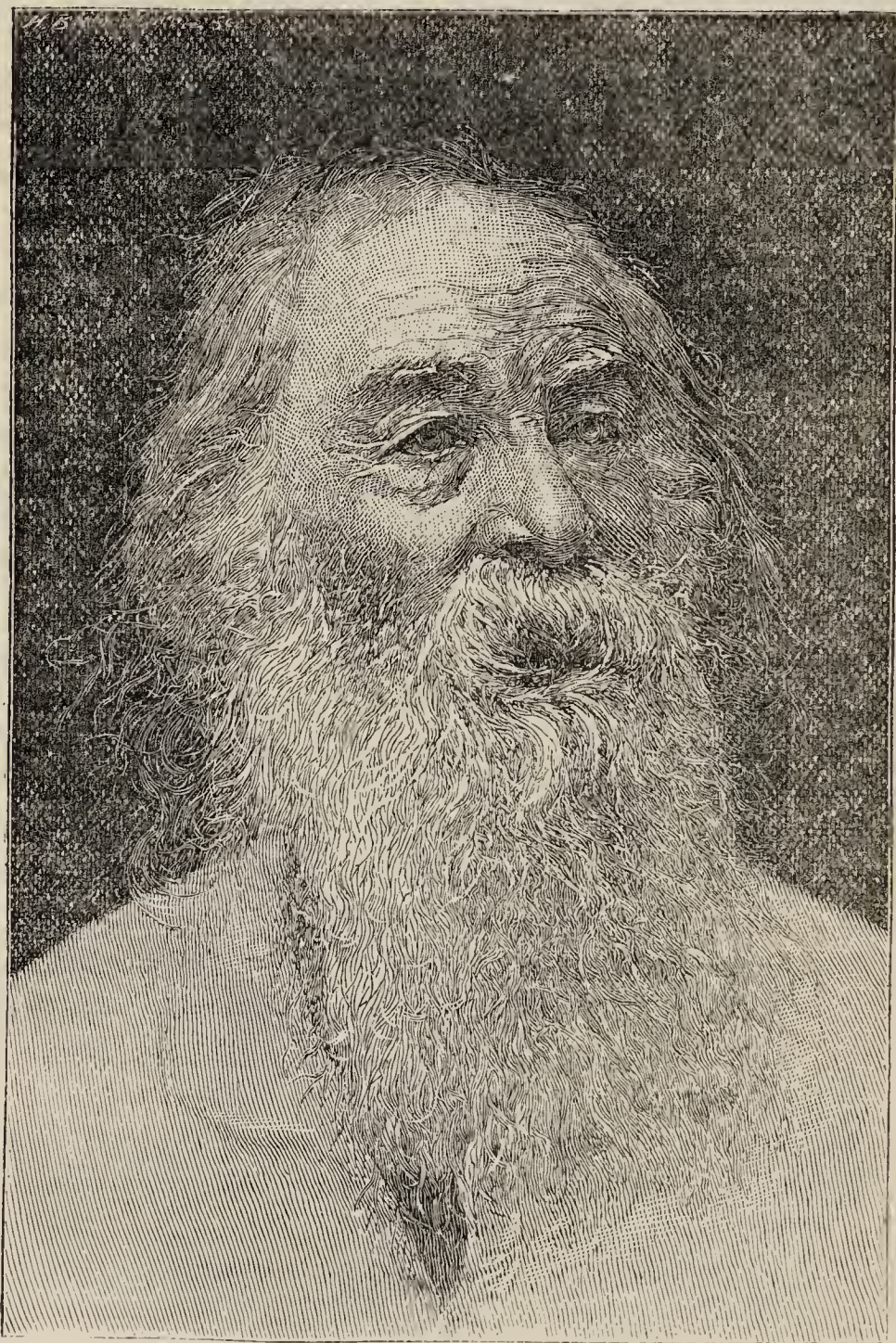
Discrimination takes the first place in intellectual processes. For example, we discern two objects, and distinguish one from the other; but, before we can do this, we must discriminate the difference there is between those objects. If we were not endowed with discriminative capacity, the world would be to us little more than a blank. Everything would appear alike. Sight, hearing, touch, smell, and taste, would have no meaning, neither would pleasure nor pain. Though the senses convey to the mind the stimulus that originates from the object world, it is discrimination that reveals the objects themselves, and shews the vast landscape of enjoyment, or the source of trouble, as the case may be. Deprivation of this property would reduce us to a deplorable condition, so deplorable indeed as to baffle the imagination to conceive.

(To be continued.)

CHARACTER SKETCH OF WALT WHITMAN.

The organisation of this gentleman indicates that he had power of constitution and a strong cast of mind. He had great breathing power and capacity to enjoy life. He was remarkable for his capacity to get pleasure out of almost everything, for he took life easily, enjoyed as he went along and made the most of all the pleasures that surrounded him. He was true to nature and lived a natural life. He was remarkable for his faculty of acquiring knowledge by observation, He remembered most clearly whatever he saw. He had great powers of conversation, and could use language most freely. The tendency of his mind was to science, facts, and things as they transpired.

He had great powers to systematise, could arrange his ideas very clearly. He was distinctly a student of nature, few more so. He cared less for the artificial ways of living than most men, in fact he rather disliked high notions and artificial ways of living, saying, and doing things.



MR. WALT WHITMAN

He had a superior memory of all that came under his observation, as well as all that he did and heard. He was particularly good in comparison, in describing persons, things, and qualities. He was specially intuitive in his perceptions of truth and his knowledge of character. His thoughts when expressed were not the result of any close, deep thinking or originality, but the simple outcome of the

natural workings of his mind. He understood human nature very well, and in acting naturally few excelled him.

His ingenuity along with comparison, and the perceptive faculties enabled him to tell what he knew to the best advantage, saying what he had to say in a most appropriate style. He was so true to nature that others could not help but be struck with its truthfulness. He was not remarkable for refinement, brilliancy of imagination, nor taking on the ways and manners of others, but was perfectly natural in saying things just as he thought and felt ; in taking advantage of surroundings ; and so said things that were particularly truthful and appropriate.

He was comparatively ingenious and versatile in his ideas. He had a good command of language, and when warmed to a subject, he exhibited more than ordinary eloquence. As a young man, he was particularly lively, entertaining, and he did not take any pride to himself in being affable or versatile in his style, but preferred to talk and act with perfect freedom, as though he had a right to say whatever he had in his mind to say.

ORION.

PRACTICAL PHRENOLOGY.

BY THEODORE WRIGHT.

THE accomplished lecturer and public delineator of character—the latter especially—may be regarded as the typical practical phrenologist. Having at the outset first stored his mind with the theory of his science, so that it may be available as systemized knowledge, the would-be practical phrenologist then proceeds to submit his theoretical attainments to the test of experience by the examination of heads. If he has been sufficiently careful and precise mentally in the location of the faculties, and has anything like a just conception of their scope and functions, he will not be long in acquiring what may be termed the art of delineating character from the living head. Thus we see that practical phrenology includes what may for clearness sake be termed the science and the art of phrenology. The science of the same is systemized knowledge of its teachings and particulars ; the art is the practical application of the said knowledge in every-day life, or professionally.

There are practical phrenologists and practical phrenologists ; that is to say there are those who are more or less worthy of the designation and those who are not. For a man to be thoroughly practical in phrenology he requires to be what is

called an all-round man ; that is to say his own phrenological and temperamental developments need to be symmetrical and well-balanced, for it is open to serious question whether any person can ever learn—that is so as to really know—what he or she is not at the same time qualified to experience. How then can a man speak learnedly, knowingly, or profoundly of what his own organism is deficient ? Again, not only should a practical phrenologist be an all-round man in the sense above intended, but it would be much better if so be that all his faculties were developed so as to be active and prompt at all times to show themselves in his life. The more pursuits a man has turned attention to in the course of life then, so as thereby to have drawn into full activity—or nearly so—all the faculties of the mind, the more of necessity will the said man be in the position of speaking and acting from an innate consciousness as to the legitimate scope or action of the organs of the mind. Intuition is frequently spoken of ; but what it is in some of its phases many would find it difficult to affirm. To me—in one phase of it at any rate—it seems to be the ready action of any faculty when trained to respond to a call made upon it from anything external. Causality when active and intense intuitively reflects and inquires for causes : comparison, under similar circumstances intuitively looks for comparisons, analogies or correspondencies ; what is mostly denominated wit, by some, congruity, when more than ordinarily strong and active, prompts to look for congruity and, with other organs at its beck and call, ridicules the absence of it. But the whole round of the phrenological organs may be dealt with in all fairness after the same fashion. Is not that, therefore, a fair illustration of what may be termed the spontaneousness or the intuitive action of said faculties ? What other name or description would be more appropriate ? Assuming then that every large organ of the brain, when in a state of cultivation, responds intuitively to every demand made upon it, and the possessor of such trained powers is capable, therefore, of entering into the experience analytically or synthetically belonging to the several organs of the mind, or to the whole in combination, does it not follow that anyone so gifted with an all-round cultivated brain, and devoted to the science and art of phrenology, must most nearly approach the ideal of the practical phrenologist ?

Culture, in its highest and broadest sense, should be the aspiration of anyone filled with the idea covered by the Delphic oracle—“ Know Thyself.” There are ins and outs in human nature not by any means fathomed as yet, but who will be bold enough to affirm that they are unfathomable ?

Culture means very much more than many have made of it ; it climbs to heights where many become dizzy and refuse to go ; it stoops to depths where many are unwilling to follow it ; still, culture, in its highest and broadest sense, is an aspiration worthy of the most exalted creature, and the one who dares to climb or stoop for it, is not by any means to be deterred from doing so, or in any way intimidated in his onward march by the sneers or frowns of others who have not such daring or aspiring natures. No doubt there are degrees in practical phrenology yet untouched, and no doubt some of the hard working aspirants for fame and skill, in that direction, will yet find that their arduous labours in that portion of the field, will meet eventually with their full and satisfying reward. In all labour—when judiciously applied—there is profit. But it follows as the night the day, that when either a man or woman reaches a certain pass, where others have contentedly followed them up till then, as certainly as they do not halt likewise as others have done, and decide to stagnate, they are clean cut or dealt with invidiously, or in some painfully marked fashion, by those who refuse to follow. Such are the hard lines all progressionists have of necessity to travel ; and even in practical phrenology, it is not to be for one moment supposed, that human nature will deviate in the least from its innateness. Truth, on advanced lines, must fight its way to the eminence awaiting it ; and it is a great general principle that is involved in the masterful utterance : “ A man’s foes shall be those of his own household.” Medical men have been the most determined opponents to the innovations of medical truth, which they could not themselves at the time recognize, and were nevertheless unable successfully to resist. Such is the law that operates in all cases ; those who are understood to be, and really ought to be, best qualified to judge, from having won a lengthy experience in the subject, are naturally given to crystallise their ideas, and then are bound to interpose to hinder where they are not personally inclined to go themselves.

Such, at any rate, has found its way to the experience of the writer of this article ; and knowing so much about human nature in its varied moods and tendencies, he has expressed himself with quiet assurance accordingly. After an experience of twenty-six years teaching and practising phrenology, with quite an average amount of success, it should not be difficult to give a clear expression to thought based on human nature generally. But this is a slight divergence from the subject of practical phrenology, so a return thereto is called for. A practical phrenologist is pre-eminently cultured, his practice

expects it of him, and he cannot be successful without it. This was the point at which our thought diverged, for it broadened and deepened our subject, and turned us adrift into a wide-spreading field. Truth, as to finality, is yet to be; none but stick-in-the-muds will allow themselves to fondly dream they have it. Phrenology has not come into human history for the feeble purpose alone to which it is now being applied, it is rather now in the very act of coming, along with its many affiliated sciences, in order that it may be in readiness for a future about to dawn upon the world. Men and women are employing it as best they know how at the present moment, and for what? Time alone can tell. It is to serve an immense purpose, when "the powers of the coming age" fructify on the tree of humanity. Our long oppressed, distressed, crushed, and impoverished race, has a brighter and a more glowing future before it, than the most optimistic seer of the present day has yet described. When that age dawns in full force, with all its wondrous innovations and powers, we shall see then with clearness a very sufficient reason for all the affiliated branches of anthropological science dropping—as they have done—into human history in order, to their full unravelment and application. Branches of one great science are being too much individualised and kept asunder from others, for all the good they are capable of rendering to man; and only when the greater co-operative idea is welcomed, and allowed to have its full scope and force for man's benefaction as a whole, shall we be in a position to view things at all happily and easily; and so, therefore, as they ought to be. All the sciences rendering aid towards the solution of the greatest of problems—Know thyself—will for a certainty at no distant date be co-operative, and then there will be no possibility of jealousy or distressful feeling of any kind between co-workers in the great field of science, whatever branch may be by the individual followed, but each and all will equally have place in the great masterful science of anthropology, which will then be accepted as dealing with man as a wonderful and comprehensive whole.

More than half the difficulties of the world would be removed by the exhibition of a good temper.—*Sir Arthur Helps.*

What matters it what is done to me, if I can but give the faintest impulse to what is just, true, and permanent?—*Harriet Martineau.*

If you would have the priestly gift of sympathy, you must be content to pay the price; like Christ you must suffer.—*F. W. Robertson.*

LOMBROSO ON CRIMINAL ANTHROPOLOGY.
 (Continued from page 54.)

MORPHOLOGICAL ANOMALIES.

THE SKELETON — upon this subject C. Lombroso has mentioned some of Mr. Tenchinis' valuable studies made upon 63 skeletons of criminals; he found that in the proportion of 6 out of 100 cases the perforation of the olecranon (the bony prominence at the back of the elbow), which one observes in 36 out of 100 Europeans, and in 34 out of 100 Polynesians. He likewise observed additional ribs and vertebræ in 10 cases out of 100 of them, and also too few in the same proportion, which reminds us of the great variable-ness of these bones in the lower vertebrates. Lately, he has even found in a criminal four sacral vertebræ too few, made up by four supplementary cervical vertebræ.

Among criminal women, Soloalto has made studies altogether new. He has recognised among 130 female thieves the degenerate character, anomalies of the skull and of physiognomy, in a less degree than among men. He has found brachycephaly in 7, oxycephaly in 29, platycephaly in 7, the retreating foreheads in 7, strabisms in 11, protuding ears in 6, the sense of touch was normal in 2 out of 100, the reflexions of the tendons decreasing in 4 out of 100, exaggerated in 12 out of 100.

C. Lombroso says that Dr. Ottolenghi has studied in his laboratory the wrinkles of 200 criminals and 200 normal persons (working men and peasants), and he found that they occur earlier and much more frequently among the criminals; in fact, two to five times more so than among normal persons with predominance of the zygomatic wrinkle (situated in the middle of each cheek), which wrinkle may well be called the wrinkle of vice, and is the characteristic wrinkle of criminals.

In criminal women (80) also, wrinkles have been found more frequent than in normal women, although here the difference is not so marked. One calls to mind at once the wrinkles of the sorcerers. It is enough to look at the bust of the celebrated Sicilian woman-prisoner, preserved in the National Museum of Palermo, and whose face is one heap of wrinkles.

	Under 25 years.		...	Under 25 and 50 years.	
	Normal.	Criminal.		Normal.	Criminal.
	p. 100.			p. 100.	
Wrinkles of the Forehead	7.1	34	...	62	86
Nasolabial Wrinkles ...	22	69	...	62	78
Zygomatic „ ...	0	16	...	18	33

Dr. Ottolenghi studying with C. Lombroso the frequency of cainties (turning grey) and baldness in people, has demonstrated either absence or lateness of the same among criminals, as also among epileptics and among cretius (a class of the deformed and helpless idiots in the valley of the Alps).

Among 280 criminal women, cainties was found more frequently, and baldness less frequently, than in the case of 200 honest working men.

C. Lombroso further mentions a beautiful discovery that we owe to a lawyer, Mr. Aufosso. The tachyanthropometer is an automatic measurer, it gives the most important measurements of the body, which makes the practice of anthropometry very easy, and facilitates the examination of the description of individual criminals the perfection of which will always remain one of the most glorious distinctions of M. Bertillon.

Experiments were made a short time ago by Mr. Rossi, who studied the results of these measurements in 100 criminals (nearly all thieves). He found the breadth of the span of the arms to be greater than the height of the body in 88, and in 11 to be less. In 30 he found the right foot larger; in 54 he found the left foot larger; and in 12 both feet equal. The right arms of 43 per cent., were longer than the left, and the left in 54 per cent., longer than the right. Which confirm to a marvellous degree the gaucherie, maucinism, or structural misproportion, that had before been indicated by a dynamometry and the study of the walk of criminals.

The very frequent recurrence of anatomical misproportion and gaucherie could not be better confirmed, than in these atavistic symptoms, for Rollet has observed in 42 anthropoids, the left humerus to be longer than the right, in the proportion of 60 to 100, while among men, the proportion is only 7 out of 100. (Revere Scientific, 1889.)

This, C. Lombroso says, he has very recently verified with Mr. Ottolenghi, by measurements of the two hands, the middle fingers and the feet—right and left—in 90 normal persons, and in 100 born criminals. With regard to tattooing, C. Lombroso said: "I was under the belief that in this respect nothing more was to be said after the beautiful studies of Messrs. Lacassagne, Marro, and my own. However, the researches made by Messrs. Severi, Lucchini, and Boselli, on 4000 new criminals, have given results of a high importance, and first of

all a proportion eight-fold greater than that of the alienists of the same district (Florence and Lucca)." The prevalency of this practice is enormous; it amounts to 40 in 100 among military criminals, and to 33 in 100 among criminals under age; the women give a proportion of only one-sixth in 100, but this would be increased to 2 in 100 if we included certain kinds of fly-tattooing. What is chiefly astonishing in these researches next to the frequency of the phenomena, is the specific character of the tattooings.

Mr. C——, aged 27 years, convicted at least fifty times for affrays, others assaulting and wounding men and horses, has the history of his crimes literally written on his skin, and in this respect, let us note that the infamous De Rosney, who only lately committed suicide in Lyons had her body covered with tattooing in the form of erotic figures; Q. A——, a labourer, convicted many times for theft, expelled from France and Switzerland, has on his chest two Swiss gendarmes with the words "Long live the Republic." On his right arm he has a heart pierced through and at the side the head of a fish—a mackerel,—to signify that he will poniard a bully, his rival. On the left arm of another thief was seen, a pot with a lemon tree and the initials V.G. which in the strange language of the criminals means, treason, and afterwards, revenge. One sees, therefore, from these few examples that there is among criminals a kind of hieroglyphical writing, but which is not regulated or fixed.

The criminal tattooers of Naples have the habit of making long inscriptions on their bodies, but initials are used instead of words. In Bavaria and in the South of Germany, the pick-pockets who are united together in real alliance recognise each other by the epigraphic tattooing "T and L," Thal and Land. A thief R——, who has on his right arm, a design representing two hands crossed, and the word union surrounded by a garland of flowers, told us that this tattooing is extensively adopted by malefactors in the South of France.

In the *Revista de Antropologia Criminal*, a new Magazine in Madrid, Mr. Sallilas has published an excellent study relative to the tattooing of Spanish criminals. According to him, this is a frequent custom. C. Lombroso has lately had occasion to verify up to what point the impulsion which leads criminals to inflict on themselves this strange operation is atavistic. One of the most incorrigible thieves he has met, who has six brothers tattooed like himself, begged of him, notwithstanding he was half-covered with the most obscene tattooing, to find him a professional tattooer, who should

complete what might well be called the carpeting of his skin. "Where the tattooing is very odd and grotesque, and spreads over the whole body," this miserable object said, "it is for us thieves, what the black dress coat and the decorated vest is to society. The more we are tattooed, the greater is our esteem for one another; the more an individual is tattooed, the more authority has he over his companions. On the other hand, he who is not much tattooed, enjoys no influence whatsoever with us, is not considered a thorough scoundrel, and has not the estimation of his fellows." If all that is not atavism, atavism does not exist in science. C. Lombroso closes his article by saying: "Of this characteristic, of course, as of all the other characteristics of criminals, one may say that it is met with among normal people. But the chief thing here is its proportion, its commonness, and the exaggerated extent to which it is practiced. Among honest people its peculiar complexion and imprudent display of crime are wanting.

"Again, it will probably be objected that this is not psychology, and that only through the latter science can we trace out the picture of the criminal. I could well answer here, that these tattooings are really psychological phenomena; and I may add that M. Ferri, in the introductory part of his work on Homicides, has given us in addition to a real statistical psychology, an analysis of all criminal propensities, and of their extent before and after the crime."

J. A. F.

THE FACULTY OR ORGAN OF DIFFERENTIA, COMMONLY CALLED "WIT."

BY THE LATE SAMUEL EADON, M.A., M.D., LL.D.

WE have now arrived at the third organ of the intellectual group, whose function is to discover the "differences" arising amongst relations and analogies when comparing two or more objects not of the same class.

This organ, called by some, "Differentia" (not Wit), by Dr. Thomas Brown "Contrast," and by others, in fullest power of manifestation, "Genius," occupies a cerebral position in harmony with its high function, by being located on each side of causality, thus completing the group of intellectual organs proper to man as a being of superior intelligence.

The function of this faculty, or organ, in tracing out

analogies amongst the relations of different objects of contemplation, would warrant the position which has been assigned to it.

Since the function of the organ of comparison is to trace out resemblances in the analogies and relations of two or more objects, differentia is the discovery of differences in the analogies of another class of objects. It is easier for man to perceive the relations of resemblance in the comparison of objects, than to trace out differences. The former power being the easier of action is more common to mankind in general ; the latter, when this organ exists in large development, is always a sign of the possession of remarkable genius in some department or other of intellectual or physical science.

"The function of this organ," says Mr. George Combe, "has puzzled the metaphysicians and phrenologists more than any other ;" arising, doubtless, from their confounding the function of "wit," which is the perception of a likeness or contrast in the comparison, or the unusual juxtaposition of two or more objects, or even of ideas, not often associated together, the momentary perception of which calling forth at once a laughable form of expression. This may be "wit ;" but it is not what is meant by the organ, or faculty, termed "differentia," whose lofty function is to trace out and discover the differences in the analogies existing amongst the relations of differences in things, giving rise often to new relations most unexpected and surprising. This power of perceiving differences of analogy amongst the objects of thought, stamps a man a genius of the first order.

These three organs, viz., comparison, causality, and differentia, have been named by the metaphysicians, "reason," or "understanding," or "judgment," each word being the sign of the three phrenological organs together. Certainly, if understood in the sense just pointed out, their use is symbolic of convenience in metaphysical composition.

It seems to be a law of nature that the soul cannot manifest its attributes but by means of some material coarser than itself. In ordinary conditions, and every day manifestation, the soul alone uses its several cerebral organs according to the functions of each ; but, when higher work is called for, such as the conception of the evanescent relationship of differences observed amongst the analogies in the higher realms of mathematical abstraction ; or, in untwisting the subtleties of some metaphysical nodosity that has defied human ingenuity for ages, then, the spirit or pneuma, assists and calls into action its own related organ, which, along with that of soul-work gives rise to new trains of suggestions,

which, when brought out into application tend to advance society to a higher order of development.

The spirit, or pneuma, is of GOD, and when called upon to act through its divinely ordained medium or organ, man is more like a seraph in intellectual and moral power than the being he now shows himself to be. In whatever department of physics or mathematics, resemblances in analogies are found, as many differences in the relations of analogy will be found also, although the latter are not so easily detected as the former. Perhaps the perceptions of resemblance may arise from soul action alone; those of differences from spirit and soul acting in harmonious concert. Whenever the spirit aids the soul in its manifestations, the analogy of differences will be more frequently apprehended, and the discoveries of difference of analogies be brought out in greater numbers. This double spirit form of action is the condition which brings out your Somervilles and your Fawcetts, who, instead of having to paddle in the waters of abstract science, and place the foot on every stone of evidence kindly placed by coaching tutors to bridge over intellectual cripples, fly across, as if with seraph's power, and reach the other side with almost one stretch of wing.

ADVICE TO STUDENTS.

If a man or woman fairly educated goes into competition for academic honours—say a wranglership at Cambridge—with only moderately developed organs of the kind absolutely required, even with much grinding and special culture, under tutors well skilled in imparting the latest improvement in the special branches of knowledge, he may perhaps obtain a place on the list for the solution of arithmetical and algebraical problems; but, if comparison and differentia—not to mention causality—be in minor form, even when posted up by the passive mastery of scores of geometrical deductions such as Bland's "Algebraical Problems," and works of that kind, and under the most noted wrangler tutorage, and with a fair deposition of cineritious matter, natural and acquired, it is to be feared, even in these favourable conditions, the star of academic distinction would shine only with a dim and hazy light.

From the above remarks the inference is obvious that phrenology, soul development through the brain—not money or position—settles the question of academic success: whether any man or woman can attain marked excellence in any department of science, abstract, or applied; or in literature, in the arts, or even in common business life (for there is a

special genius for business, as well as for poetry, or physics, or mathematics), depends on the foundation-stone being of good cerebral granite, and laid broad and deep, otherwise no high and durable structure can be built thereon. Education may make a poorly formed brain do somewhat to enable life's little doings to be passable and decent, and that is about all it can do. Brain tells its own story—what it can do, and what it cannot do. If a man cannot read his own cerebral book, let him go to a scientific phrenologist in large practice, and have it read to him. It is a duty, nay, more, it will be thought a crime not to know the mental capabilities of one's own mind, and those of one's children. The time will come, and it is not far distant, when the results of brain-study will be as generally known as the arts of reading, writing, and arithmetic. "Wait a little longer," as the Hutchinson family, from the "Old Farm," in America, used to sing some forty years ago, as they went from town to town, enchanting large audiences with their lovely American homestead melodies. Yes! "Wait a little longer," and all will see and feel the wondrous change time will bring about.

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(Continued.)

29.—ORDER.

System—sense of physical arrangements—desire to have things in their places.

"ORDER is Heaven's first law." As far as our feeble powers are capable of ascertaining, the whole universe is found to be a perfect system of things. Perfection of arrangement and perfect order characterize every part of it, the most minute details not excepted. In the marshalling of "the Heavenly hosts," and appointing to each its time and place, in limiting the growth of the various kinds of vegetation to different portions of the earth's surface, in the arrangement and structure of the constituent parts of even a flower, in the formation of every portion of the human body, the systematic order displayed is wonderful and perfect. In short throughout the whole kingdom of nature, every thing has assigned to it a particular place, and can be expelled from that place only by doing violence to the system of nature.

Can we suppose, then, that the infinitely wise Architect of the universe would institute such a harmonious and beautiful arrangement without adapting man to it by creating in him an ability both to appreciate and practice it? Indeed we are conscious of possessing, to a great extent, a delight in order, and a desire to practice it.

This, then, brings us to the inquiry whether this class of functions is exercised by a faculty devoted exclusively to this office or not. The obvious answer is that inasmuch as the other classes of the mental functions are each performed by as many separate and innate mental powers, this class is also exercised by a distinct primary faculty.

This faculty has nothing to do with the logical arrangement of ideas (if we except the physical signs employed to express them), the structure of an argument, or the taste displayed in expression; nor does it singly produce taste in dress.

VERY LARGE.—One having order very large will know just where to lay his hand, both in the dark and in the light, upon any article he wishes to use, provided no one has displaced it; when he puts off his clothes, or has done using his things, he lays them away in the particular places assigned to them; in all he does is perfectly systematic and precise, and in the matter of order, instantly notices the least disarrangement, and is annoyed beyond measure, and often rendered perfectly miserable, by confusion, disorder, &c.

One having order very large, with adhes. large, will love the company of his friends sincerely, but be so much disturbed by one thing and another about their person, their furniture, house, &c., and by the disarrangement they cause him, that he will almost dread to visit or receive a visit from them; in the selection of his friends will have a special reference to this quality in them, and be unable to endure the company of the slovenly or the negligent. With combat. and destruct. large will frequently be angry at those who leave things out of their places, and severely reprimand and even scold them, though they may be his best friends; and with ideal. large will be extremely fastidious and over-nice as to cause a great deal of trouble to those around him; and, if a woman, will scrub her finger ends off, and the nail-heads from her floor, worry her servants to death, scour the paint off the ceilings and mouldings, the silver off the door knob and knocker, the brass off the andirons, the tin from her pans, and the hoops from her churn; and will scrub and wash, wash and scrub, till she scrubs the patience out of her husband and washes the threads out of his linen.

LARGE.—One having order large, with local. large, will have a particular place for everything, and everything in its place; instead of leaving his tools, books, and papers where he has been working, he will return them to their respective places; will be systematic in his business; not only precise himself to keep things in place, but particular to have those under him do the same.

One having large order, with large combat. and destruct., will be rendered as impatient and as angry by disorder, as by almost anything else, and thus manifest much more peevishness of disposition, and appear more passionate and harsh than he otherwise would; with ideal. large, will be always cleanly and tidy, and very nice and particular about his person; greatly annoyed by a rent in his garments, or a spot upon them, or by their being soiled, not clean, or their fitting badly; by a long beard, disordered hair, or a dirty or

disordered room ; or by anything irregular, contracted, or broken, even though it may have been repaired, &c., and will often *overdo* to serve this faculty ; and, with ideal. very large, will even be fastidious in these respects, and take many an unnecessary step on this account ; but with ideal. only moderate, though he may be systematic, yet will be neither nice nor particular in his personal appearance ; will perhaps seem to others to have his things in utter confusion, and yet, what will appear disorder to them will be order to him ; with time large, will fill his appointments punctually, and have a time as well as a place for everything.

FULL.—One having order full, will be pleased with arrangement, and, if brought up to habits of system and order, will seem to possess a high endowment of the qualities described under order large, yet much will depend upon his education and his ideal ; will possess enough of this faculty to get along well in business, yet not enough to make him fastidious, or cause him to make any great sacrifices upon this account ; and generally preserve order, partly from an innate love of it, and partly from the necessity and utility of it.

MODERATE.—One having order moderate, though perhaps a little disturbed by disorder, will not possess enough of this faculty to prompt him to much effort in order to keep them properly arranged, will generally leave his things at loose ends ; be less systematic in his business than would be to his advantage ; may preserve something like system and arrangement in his affairs, but will do so more from necessity than the love of them ; with ideal. large, though he will be neat and nice in his person, dress, &c., will leave things where it will trouble him to find them, often forget where they are, and manifest taste and cleanliness without system or arrangement ; with self-e., combat., and destruct. large, will possess enough of this faculty to command others to preserve order, and will even scold them for allowing disorder, but will not keep things in order himself, and perhaps disarrange the things of others as well as his own.

SMALL, AND VERY SMALL.—One having order small will be apt to leave things where he happens to use them ; will operate without system, and, of course, without despatch, and thus consume much time in accomplishing but little ; but notwithstanding, will fail to amend, or to feel troubled with disorder, or to appreciate the importance of order and system ; and, with time only moderate, will seldom apportion his time to specific objects, and generally be behind-hand in fulfilling his engagements, plans, and appointments ; and will be almost insensible to the beauty and utility of systematic arrangement.

LOCATION.—Order is located under the arch of the eyebrow, at the external corner of the eye, and beneath the origin of the superciliary ridge. When it is large the external angle of the lower portion of the forehead appears projecting and full, the eyebrow, at the union of the temporal ridge, arched and elongated, and sometimes sharp ; but when it is small the external portion of the eyebrow will appear straight and shortened. The thickness of the bone at this portion, increased by the temporal ridge, causes an occasional mistake in

deciding upon the size of this organ. It is situated in the second and part of the third frontal convolutions of the brain. This faculty is divided into two parts—the inner division gives Neatness, the outer division gives System.

30.—CALCULATION.

Intuitive perception of the relations of numbers and proportions—ability to reckon figures in the head—numerical computation, numeration, mental arithmetic.

In addition to the other qualities and conditions of things which exist in nature, we naturally attach to them numerical relations, such as are denoted by numbering them with the signs one, two, three, and so on ; adding them together, as four and three make seven ; multiplying them, as four times three are twelve, &c. ; and, for the purpose of facilitating such calculations, mankind has instituted arbitrary signs, by combining which, in various ways, they are enabled to express these numbers with great accuracy and brevity. Since, then, these relations expressed by numbers, actually exist in nature, it is a fair induction to suppose, that the human mind requires a primary faculty, the sole function of which is to comprehend them, and apply them to the practical purposes of life.

That the mental faculty which perceives, comprehends, and applies these numerical principles, is intuitive, and devoted exclusively to this class of functions, is moreover evident from the fact that extraordinary calculating powers are often found to be possessed by individuals whose talents, in other respects, are quite ordinary ; whilst, on the contrary, men of extraordinary reasoning and other faculties, are frequently found to be deficient in their computing powers.

VERY LARGE.—One having calculation very large, will intuitively comprehend, and be able, at once, to solve, almost any arithmetical problem proposed ; go through with difficult and abstruse arithmetical problems with great ease and perfect correctness ; cast up accounts, even though they may consist of several columns of figures, and subtract, divide, and multiply with several figures at a time ; calculate chiefly in his head without a pen or pencil, and even without the aid of rules ; seize, by intuition, and with perfect certainty, upon his conclusions, and be impatient of the errors and dulness of those with only moderate calcu. ; with caus., compar., individ., form, size, and local., large, will be a natural mathematician of the first order, and be unrivalled for his mathematical and astronomical powers ; can solve, in his head, the most abstruse questions even in the higher branches of mathematics, and will be passionately fond of those studies ; can perform, with wonderful ease, both figuring, and the reasoning parts of these studies, and will excel both in the principles and the details of mathematical science ; be great in the demonstrations, and in the principles, involved, and, with marvel, small believe nothing which he cannot see ; with these last named organs only full, may be, like Zera Colburn, unrivalled in his calculating powers, and readily solve all the numerical questions propounded to him ; yet will be unskilled

in those branches of the mathematics which demand the higher powers of reason.

LARGE.—One having *calcu. large*, will be quick to compute figures, and be able to perform numerical and arithmetical calculations, even in his head, with accuracy, and will delight in the study of figures, and be an expert accountant.

One having *calcu. large*, with *caus. and compar. also large*, will be able to seize even the abstract relations of numbers with intuitive ease, and to solve difficult problems in his head, as well as on the slate, and will succeed well in the higher branches of arithmetic and mathematics; be quick to detect errors in the calculations of others, but seldom make them himself, and excel both in reasoning, and the figuring parts of arithmetic, and be able to study with success the higher branches of mathematics; with *large order, individ., event., and imitat., added*, is capable of becoming a good accountant and book-keeper, and of casting up accounts in his head, which others would be obliged to do upon the slate; and, with *local. and construct. added*, will possess all the natural talents requisite for the study of surveying, geometry, algebra, mensuration, navigation, astronomy, &c.; will be deeply interested, and greatly delighted in studies of this description; possess a remarkable talent for prosecuting and practising them; and be a natural mathematician with *caus. only moderate, and individ., local., and form large*, though he may be good in arithmetic, and quick in figures, will be poor in the higher branches of mathematics.

FULL.—One having *full calcu.*, though he may be respectable, will not be extraordinary for his quickness and correctness in performing numerical calculations; and, though practice may make him rather expert in the ordinary routine of calculations, yet he will not succeed remarkably well out of this line; will not be able intuitively to grasp the results of complicated problems; may succeed in the pursuit of arithmetic, but will be obliged to study in order to succeed well; and, with a high degree of culture, may become expert as an arithmetician and accountant.

MODERATE.—One having *calcu. moderate*, from habit and much practice, may, perhaps, become respectable as an accountant, yet will be obliged to perform his calculations with his pen or pencil in his hand, and then make an occasional mistake; with *very large caus. and compar.*, though he may be highly delighted with the demonstrations contained in the mathematics, will be by no means partial to the figuring part, and will make his numerical calculations chiefly by the help of reason, though he can at once see the force and application of the rules, and comprehend the principles of arithmetic and of mathematical science generally, will consider figures rather a drudgery than a delight; with *large individ., form, size, local., imitat., and construct., added*, will be naturally a first rate mathematician, but a poor arithmetician; be passionately fond of the study of geometry, surveying, mensuration, navigation, astronomy, &c., in case his attention be called to them, and capable of excelling

in them, yet, in everything in figures disconnected with reason, his talents will be inferior.

SMALL, AND VERY SMALL.—One having calcu. small, will have a strong aversion to figures, succeed in them but poorly, and do that only with great labour; be slow, and often incorrect in casting up accounts. One having very small calcu. will be unable to perceive numerical relations, or even find it exceedingly difficult to perform simple arithmetical calculations.

LOCATION.—Calcu. is located externally from order, and a little lower, at the external termination of the arch of the eyes. It is situated on the lower frontal convolution. It has two divisions, the inner part gives the power of Figures; the outer part gives the power of making Estimates.

31.—LOCALITY.

Cognizance of the relative position of objects—recollection of looks of places—knowledge of the geographical position of things, the points of the compass, &c.

Location, or relative position, like form and size, enters into the constitution of things. That a material substance should exist without any location, or relative position with respect to other things, is both inconceivable and impossible. Hence the necessity of some faculty, the exclusive function of which is to perceive and apply this property to the objects of the physical world; and the same train of argument which proves that form, size, weight, or any of the other faculties, is a separate power of the mind, likewise proves that local. is also an innate, primary mental faculty.

VERY LARGE.—One having local. very large, with large form, will retain in his mind a distinct and perfect recollection of the appearance of nearly every place he has ever seen, and with large lang, give a lively and correct description of each, and, with event. also large, be excessively fond of reading travels, voyages, &c.; will have a fine taste and talent for pursuing the study of geography, geology, &c., and will be likely to break from every restraint to indulge his roving, strolling desire.

LARGE.—One having local. large, will retain for a long time, a clear and distinct impression of the looks of the places he has seen, and, with imitat., and lang also large, be able to give a correct description of them; can form correct ideas of places which he has not seen, by hearing them described; will seldom lose himself, especially if he has seen the place before, and easily retrace his steps; can calculate with uncommon accuracy, the relative positions and bearings of different places; find his way in the dark with ease; is very fond of travelling, of visiting places, and of viewing natural scenery; and, with acquis. only moderate, and ideal. large, will spend his money very freely for this purpose; but, with acquis. large, and ideal. only full, will still seek to gratify this propensity, though at a cheaper rate; will travel in indifferent, and cheap conveyances, and take up with inferior fare: with self-e., approbat., and ideal. large, and acquis. only

moderate, will be even extravagant in his travelling expenses, and always journey in the best style he is able to reach ; with ideal., imitat., compar., and lang. large, will recollect places, and be able to give a correct and picturesque description of scenery, roads, &c. : with large inhab., will call to mind with vivid and intense feelings of delight, the mountains, hills, dales, fields, groves, streams, etc., which he was wont to gaze upon in his childhood or juvenile days, and have a strong desire to revisit them ; with event. full, will often recollect instances by remembering the place in which they transpired, and also what he has read, by calling to mind its location on the page, and will discover uncommon tact in finding particular passages ; with large individ. and form, will recollect the houses, trees, rocks, and other objects near the road which he has travelled ; with large form, size, and imitat., be able to draw, with great accuracy and skill, maps, sketches of natural scenery, &c.

FULL.—One having local. full, will be able to recollect places with considerable distinctness, yet not be remarkable for this power ; he will not distinctly recollect objects which he may pass, unless, from some cause, they particularly arrest his attention ; may notice and recollect important things, yet be apt to forget little things ; with large individ., will have a strong desire to travel, in order, chiefly, to gratify his strong propensity to examine physical objects, and partly to see places, &c.

MODERATE.—One having moderate local. will not pay particular attention to the location of objects, nor form or retain very distinct notions of the aspects of places, roads, &c., and, consequently, be often at a loss to find such places as he wishes, to go a second time to obscure places, or return by a given road. With very large inhab. and only full ideal., individ., and hope., will seldom go from home unless compelled by urgent business, and will see but little on his journey, and dread the fatigues of travelling, and long to be at his journey's end. With individ. and form only moderate, will have but a very imperfect idea of the places which he has seen, and, if living in a city, frequently pass his own door without knowing it.

SMALL AND VERY SMALL.—One having local. small, will find it very difficult to recollect, or return to places ; often lose his way ; can become familiar with places only by seeing them many times ; consider travelling a burden rather than a pleasure ; have but little curiosity to see different places, &c. One having local. small, with form and individ. small, will seldom notice places, and then not distinctly recollect their appearance ; and fail to remember a road which he may have often travelled ; and also to find his way back, &c. One having local. very small will find it extremely difficult, if not impossible, to form any clear ideas of the relative position of objects, to keep the right road in travelling, and be greatly perplexed to find any particular spot, tree, rock, or other object, even on the second or third visit to it.

LOCATION.—Local. is located directly over size and weight, and nearly above the internal orbit of the eye. It extends diagonally in

the direction of mirth. The frontal sinus sometimes increases the apparent size of this organ ; but this subject will be more duly presented in another portion of the work. It is situated in the superior and middle frontal convolutions of the brain. It has two divisions. The lower part gives a taste for Exploration, the upper part gives a memory of Localities.

32.—EVENTUALITY.

Memory of events—power of calling to mind those circumstances, occurrences, incidents, historical facts, &c., which have previously come to the knowledge of the individual.

It has been shown that to notice the existence of material objects and their various qualities requires a set of faculties whose various functions correspond with those ascribed to individuality, form, size, and the other perceptive powers ; and that this requisition is the imperative demand of nature—which must be answered. But it is not only true that things exist, and possess various properties, but equally so that they act. If, then, the human mind requires faculties whose proper functions are to notice the existence, conditions, and properties of material substances, it follows that it also requires a faculty whose function it is to take cognizance of their various actions. In phrenological language, the faculty that performs this portion of the mental operations, is called eventuality. In order successfully to apply the principle of causation, the antecedent cause and the consequent effect, must necessarily both be before the mind at the same time, otherwise a comparison of them would be impossible. Individuality notices and recollects the physical object that acts, or the procuring cause, and eventuality the consequent action, or phenomena, produced ; and then comparison and causality compare, contrast, analyze and draw deductions from, the materials thus furnished by individuality and eventuality, and this constitutes thinking or reasoning. The same principle applies to the *modus operandi* of individuality and eventuality, with benevolence, adhesiveness, and all the other mental faculties.

VERY LARGE.—One having very large event., will possess a remarkably clear, distinct, and retentive memory of events, and even of all the minute and seemingly unimportant circumstances connected with them ; seldom allow anything to escape his recollection ; be given quite too much to narration, and thus frequently weaken his arguments ; make a short story long by relating all the little particulars ; with caus. and compar. only full, will have a great fund of information, which, however, will not be well digested ; be rather a bookworm than a deep thinker ; attend much more to facts and details than to general principles ; with large individ., will see all that passes around him, and remember all he sees, and thus know a great deal, &c.

LARGE.—One having event. large, will, according to his advantages, possess a mind well stored with historical and scientific facts, and with the news of the day ; will seldom be troubled with forgetfulness

or indistinct recollection of circumstances; will treasure up a rich fund of anecdotes upon such subjects as are interesting to the other stronger faculties; and with large lang. added, in relating them, will not fail to mention all the particulars; and, with large concent., also added, will present them all in their proper order; but, with concent. moderate, will fail to connect the several circumstances which compose a story, so as to give it unity; with individ., lang., and compar. large, will show a marked partiality for reading and study, and have a happy faculty of communicating it to others; with large ideal., individ., form, size, local., compar., and caus., will possess a literal passion for study, reading, the pursuit of chemistry, minerology, geology, geography, botany, natural history, and everything pertaining to the treasuring up of facts; according to his advantages, will be a superior scholar; will allow nothing to divert him from literary and scientific pursuits; will be even enthusiastic, remarkably successful as a student; with full concent. also added, will have a happy talent for compiling and arranging facts for investigating subjects, but with caus. only full will appear to know a great deal, yet, when held down to a close or logical process of reasoning, will betray a deficiency of mental strength and power; with compar. large, will notice, recollect, and be able to compare the operations of his own mind; with lang., very large, will be able to repeat conversations with great accuracy and clearness.

FULL.—One having event. full, will have a respectable memory of incidents, yet will seem to be deficient in his knowledge of those things which have not made a distinct impression; when he has an occasion to adduce facts, will recur to them with tolerable correctness; with caus. and compar. large, will generally be able to command and collect a sufficient amount of facts by which to illustrate his arguments, but will reason rather than narrate; with lang. and imitat. large, will be able to relate anecdotes in a happy style, will recollect the substance and the main features of whatever has passed before his mind, &c., better than the particulars.

MODERATE.—One having event. moderate, will be less distinct and certain in his recollection of incidents and circumstances than one with large event.; with caus. and compar. large, may recollect distinctly the points of an argument and the substance of what he hears or reads, yet will deal mainly in general principles, find considerable difficulty in summing up, and in calling to mind particular incidents, or in going into details.

SMALL, AND VERY SMALL.—One having event. small will often fail to recollect incidents and facts, and consequently to do important things which he wishes to accomplish; will seldom, if ever, enter into the particulars, and have great difficulty and little success in attending to details. One having very small event will forget almost every incident which he has seen, heard or read of, be extremely confused in attempting to call to mind almost any occurrence, and suffer very great inconvenience from a deficiency of this organ.

LOCATION.—Event. is located about the middle of the forehead.

When the surrounding organs are large and event. only full, there will be an apparent depression just above individ., and between the two lobes of local., which will result rather from the size of the surrounding organs than from an absolute deficiency of event. In children the organ is generally large, and gives a full and spherical form to this part of the forehead, while the corresponding depression often observable in men is an evidence of a deficiency of it. The tenacious memories of children, compared with the more obscure memories and palpable forgetfulness of men, furnish both a strong proof of the truth of phrenology, and a happy illustration of the faculty in question. It is situated in the superior frontal convolution. It has two divisions—the upper part gives memory of Association, the lower part gives memory of Actions.

33.—TIME.

Cognizance of succession—that mental power which notices and recollects the lapse of time, and the relative distance of time, and order of succession in which events transpired.

The phenomena of succession, or the lapse of time, compose a part of that system of things to which man is adapted, and enter into that condition in which he is placed on earth. Day and night follow each other in quick succession, and approaching seasons tread upon the heels of their predecessors, and in their turn retire to make room for their successors. Generation after generation pass away and sleep beyond the flood. The present instantly becomes the past; and were it not for this wonderful arrangement there would be but one eternal, monotonous, now (a thing impossible and to us inconceivable) without any change or succession, either of birth or death, or days, seasons, years or ages.

The wisdom which devised this arrangement of chronological succession is too obvious to need comment; and the necessity of some faculty in man by which he is qualified to perceive this state of things, and enabled to adapt himself to it, is equally apparent. In deciding upon this point, however, we are not left to the guidance of any uncertain *a priori* inferences, but, by the unerring evidence of facts, are assured of the existence in the human mind of such a faculty as time.

Many individuals, seemingly without an effort, are able to tell the year, and even the day, of every birth, death, or particular event which has come to their knowledge; how old every person is whose age they have ever learned, what time every house in their neighbourhood or town was erected, and the exact time of the occurrence of nearly all their village affairs and business transactions. There are also hundreds of others who, without consulting the family record, could not tell either their own ages or those of their brothers and sisters, or even those of their own children. Though they might have a distinct recollection of certain occurrences they could never recollect when they took place.

Some persons can waken at any time of night which they may

choose to appoint, and also tell very nearly the hour of the day without the aid of the sun or a time-piece ; and others, again, who are almost unconscious of the flight of time, even when awake. For these effects there must be some cause ; and since this power of observing and recollecting the chronological relation of events, the time occupied by sounds, &c., is found to be proportionate to a certain development of the brain, the induction that time constitutes an innate and primary mental power seems to be perfectly logical.

VERY LARGE.—One having very large time, will possess a wonderfully accurate and precise memory of the time when certain things occurred, of dates, ages, business transactions, &c. ; how long one thing happened before or after another ; the state of the weather upon certain days, or the precise period of historical events.

LARGE.—One having time large, will notice and remember very accurately relations of time, in which certain occurrences stand with each other, or how long one thing happened before or after another, without the aid of a timepiece be able to tell very nearly what time of the day or night it is ; can waken from sleep at such an hour, or perhaps minute as he may wish ; will generally be in season, recollect his appointments, and if possible fulfil them ; set apart certain days or periods for doing particular things, and be likely to perform them at the appointed time ; be regular at his meals, and in all his business operations, &c., and excellent in chronology. One having time large, with large event., will have a distinct recollection, both of particular circumstances, and also of the chronological order in which they have occurred, and with large calcu. added, will have a correct knowledge of the chronology and dates of such events as have come to his knowledge, the ages of persons, &c., ; with large lang., ideal., and compar., will pay particular attention to the rythm and measure of poetry, and be exceedingly annoyed if either is imperfect ; and with only full caus. added, will look more to the drapery of poetry than to the more enduring qualities of sense and substance, if he attempts to compose poetry, may make good rhymes, yet his productions will be ephemeral, and gaudy, rather than substantial and excellent ; but with large caus., added, will excel in sentiment, measure, style, ryhythm, and power of thought ; with time large, will keep the beat in music, and be very fond of dancing ; with imitation also large, will easily learn any particular figure, and keep the step perfectly, &c.

FULL.—One having time full, will have a respectable memory of dates, and yet with event. large, be much more correct and certain in regards to the minute particulars, of the occurrence itself, than of the precise time of the occurrence ; will ordinarily be punctual to his appointments and seldom discover a deficiency of this faculty, and yet seldom manifest this power in a very high degree.

MODERATE.—One having time moderate, though he may remember short intervals of time very well, will forget those that are longer ; forget dates and ages, and be unable to tell with much accuracy the time of the day or month ; with event. large, though he may

remember certain circumstances with perfect accuracy, will not have a positive recollection of the time when they occurred.

SMALL, AND VERY SMALL.—One having time small will find it difficult to remember the ages in his own family, or even his own age, and be frequently obliged to consult family and other records in order to ascertain these and similar points, having only a general and a very incorrect memory of dates ; can seldom tell the time of the day without the sun or a time piece, or even the day of the month or week ; will be punctual when some other faculty quickens the action of time, yet in general will discover a marked deficiency in this respect. One with time very small will seldom, if ever, notice the chronological order of events as they pass.

LOCATION.—Time is located directly above order and colour, below mirthfulness, between locality and tune, on the middle frontal convolution. It has two divisions—the inner part gives sense of the lapse of tune, and the outer part gives sense of measure in music, walking, &c.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., MAY, 1892.

NEW METHOD OF HARDENING BRAIN TISSUE.

We have often had brains hardened in alcohol for the purpose of dissection, but in a recent number of the *Neurolog. Centralbl.* Professor Stieda, of Königsberg, gives a short description of a method of hardening the brain which had already been described by him in an anatomical journal. By this method, dry preparations are obtained, which are extremely useful for purposes of demonstration and study. The specimen is first immersed in a concentrated watery solution of chloride of zinc, so much of the salt being taken as to allow the brain to float. After being twenty-four hours in this, the specimen is removed, and is found to have remained soft, but at the same time to have acquired a certain consistence and toughness, so that the pia mater can be removed without injuring the cortex. The brain is now placed in 96 per cent. alcohol, either as a whole or after separation into parts. To expedite the hardening, it is advisable to renew the alcohol from time to time. In two or three weeks the specimen will be found to be sufficiently hardened. It is then taken out of alcohol, and placed in turpentine, in which it should remain from two to four weeks, according to the condition of dehydration in which it was previously, to being

placed in the turpentine. The process can also be hastened a little by using an incubator, but great care is necessary to prevent shrinking. By means of the turpentine, the specimen again becomes soft, but transparent, and it has acquired a brownish colour, varying in tint with the kind of turpentine used. Finally, the specimen is placed in oil varnish, in which it remains for two weeks. It is then taken out and placed uncovered for a week or two, exposed to the usual temperature of a room, until it is dry and no longer oily to the touch. The final colour is a somewhat pleasing brown; the specimen is but little shrunk, and, as has been said, it is very useful for demonstrations and also for study.

We refer our readers to Lombroso's researches on another page of the Magazine, and draw attention to some further effects of morbid brain development on the body. The most striking features of the "criminal" skull, as seen in American prisons, is the tendency to trachy-cephalism (wideness of head) and not micro-cephaly (smallness of head), and the great frequency of criminal asymmetry. As far as our observations go, they tend to show that a degenerate type of skull is common among criminals, and that the assertion of Lombroso that the deviation of type, as far as the index is concerned, is toward trachy-cephaly, is correct.

A striking feature of the degenerate skull as illustrated by many skulls in the habitual criminal class, is its peculiarly twisted conformation. This form suggests what might result if the skull were taken while soft between the hands and twisted in such a manner that all points of anatomical correspondence are thrown out of their normal relations. The result would naturally be asymmetry in all directions.—*Alienist and Neurologist.*

A case of extraordinary longevity is reported from Vienna. At Dreznica, in the district of Mostar, lives a peasant named Anton Juritch, who, if his documents are to be credited, is at present 130 years old. He still works in his vineyard, and goes to church every Sunday, although the church is "two hours" distant from his home. His eyes are still good, and enable him to see at a distance. His eyebrows meet over the nose and grow so thickly that they have to be cut that they may not obscure his sight. He likes to talk of old times, and tells interesting stories. His mother died aged 120, but his father died young. After this, another case reported by our Paris correspondent must decidedly take a second place. A retired tradeswoman named Wirth, says our Correspondent,

was buried yesterday, having died in Paris at the age of 104. She has always lived in the 11th Arrondissement, which is not thought the healthiest in Paris, and was married during The Hundred days.

Professional men and men of science and letters have, as a rule, larger heads than tradesmen; the size of a man's head being usually in proportion to his intellectual capacity. Such is the conclusion arrived at by M. le Bon, who made extensive inquiries and research into this question, and his opinion was similar to the conclusion arrived at by Dr. Garson, who found that of 100 modern Parisian skulls 28 had a capacity of more than 1,600 cubic centimetres; while of 100 negroes' skulls, only nine exceeded this capacity. Mr. Christy, the well known hat manufacturer, states that the average size of a hat for English adult males is 7, or 22in. in circumference. Germans have round heads, Malays are small, Portuguese average $6\frac{3}{8}$ -7, Spaniards slightly larger. Japanese exceed the English average; men who have to do with horses—coachmen, jockeys, livery servants—have undoubtedly the smallest heads. York has the largest English range, Cambridge next, then Oxford; the professors of the Scotch universities average $7\frac{1}{16}$; Joseph Hume took $8\frac{1}{2}$, Chalmers $7\frac{3}{4}$. Mr. Gladstone's size is $7\frac{1}{8}$, Lord John Russell $7\frac{1}{4}$, John Bright $7\frac{1}{8}$, Lord Selbourne $7\frac{1}{8}$, Prince of Wales, and Lord Beaconsfield each 7.

Fowler Institute.

MEMBERS' NOTES.

*The Childhood shows the Man,
As morning shows the day.*—MILTON.

The adjourned discussion upon "How can Phrenology be best employed in the education of children," was continued at the last monthly meeting, Mr. Piercy in the chair. Mr. Baldwin said, "To conduct education properly it is necessary to know both the physical and mental constitution of the being to be educated, and the world in which he is to be an actor, also to have a thorough knowledge of the faculties, their object, spheres of action, and an acquaintance with the physical constitution. Of all that is valuable on earth the child is the most, for a child can be trained into what a man ought to become. Education rightly considered is bringing up, instructing, training, cultivating the powers, and forming the character. The minds of children need to be fed with suitable food in order to secure the growth and development of their minds, and phrenology is able to point out the

various kinds and proportions that are essential to establish a healthy and vigorous mental constitution. Parents cannot begin too early to train their offspring, for immediately after birth some faculties are brought into action, and habits are being formed. The mind grows and opens like a rosebud. The bud is closed and small, but watch it from day to day, nourish it, put it in the sun, and it will be found to swell, develop and unfold. By and by the outer leaves open a little, then the second course of leaves, and so on, until there is a full blown rose."

Several other members spoke each giving their own views of the practical application of the subject.

The following resolution was then put to the meeting which was unanimously carried, "That this meeting is of opinion that it is of universal public importance that a committee of experts be formed from the Fellows of the Fowler Institute, and that they should be sent as required to aid teachers in large and influential schools, for the object of collecting facts, making measurements, and gathering statistics for scientific purposes, and principally to give advice from a phrenological standpoint."

Mr. Smith and Mr. Samuel were proposed as members of the committee.

Mr. Smith has promised for the next monthly meeting, May 9th, another biographical sketch. "Wordsworth" is his selection.

* *

A treat, which unfortunately is too seldom conferred upon us, has been enjoyed by those who availed themselves of listening to Mr. Brown's very instructive and entertaining lecture on March 30th, upon the "Programme of Phrenology." The thoughts expressed by our worthy Vice-President were a happy combination of the perceptive, intellectual, moral and social regions of his fertile brain, while the 'lightening sketches' greatly assisted in the explanation of the subject. The lecture is to be continued. The first part will appear in our next issue.

* *

The exceptional spectacle of the meeting of two such venerable veteran Phrenologists as our own President and the newly-elected President of the B.P.A., might have been seen at the Institute on the occasion of Mr. Nicholas Morgan's discourse upon "The Evolution of a Mind." It was stated that the object of the paper was to stimulate thought, and it would indeed be difficult for such a subject delivered in such a manner to do otherwise. Mr. Brown proposed, and Mr. Hall seconded a hearty vote of thanks to the lecturer.

* *

On Wednesday, March 23rd, Mr. Tomkins gave us the benefit of his ideas on some "Phrenological Wants," which he considered primarily were: more amalgamation, legalization, and the adoption of one particular mode of examination. His remarks caused some criticism, but the most practical wants have already been put into force, and we now have a book at the Institute in which members are invited to enter

suggestions that would be likely to advance the science we all have at heart.

* * *

Apropos of "wants," I would remind readers of a proposition made in the January number of this Magazine, for the collection of Crania with known histories. This can be best accomplished by bequeathing that portion of our anatomy to the Institute with the necessary instructions to executors. One valuable head has already been lost to us through the neglect of these preparations.

* * *

It is apparent that some are not aware that these Notes are open to members for brief contributions, which they may desire to make public. Among our number, we ought to have many valuable observations worthy of our consideration and also of record.

* * *

Miss E. C. contributes the following account by an American doctor :—

"In a case which occurred within my own experience, the patient, who had been struck on the head several years previously by a stick of wood, so that his skull was fractured, became affected with epileptic convulsions; but he also became a subject of double consciousness. Upon one occasion the attack came upon him just as he was entering a railway train. He proceeded on his journey, and arrived in Washington City, where he took lodgings at an hotel. A few days afterwards he bought a small book shop and started into business as a bookseller and stationer. He conducted himself with perfect propriety, and apparently was in full possession of his intellectual faculties. He passed, however, under a name different from his real one. During all this period his friends had no knowledge of his whereabouts, until one day when several weeks had elapsed he suddenly resumed his natural condition, and to his intense astonishment recognised his changed circumstances. He at once telegraphed to his friends and returned home, having no knowledge of anything that occurred after getting into the railway train until the recovery of his natural mental condition. He has had repeated attacks of a similar character since, and in all of them as a more or less distinct recollection of the events of all like previous seizures, and passes under the same name that he took at first."

G. B. COLEMAN.

Be silent, or say something better than silence.—*Pythagoras*.

The best cure for pessimism is a dose of the last century.—*Herrick Johnson*.

Next to the virtue, the fun in this world is what we least can spare.—*Agnes Strickland*.

To be quiet does not necessarily mean to be forceless, nor to be noisy, forcible.—*Anon*.

Hygienic and Home Department.

SUNNY HUSBANDS.

Very much has been said about the obligation of wives in regard to wearing perpetual smiles, but it seems as if our literary talents have never once thought it worth while for the "man o' the house" occasionally to don a smile when at home in his own family circle.

It certainly is just as essential to domestic happiness for a man to be sunny and good-tempered as it is for the woman.

We often doubt whether the male head of a family really appreciates the opportunity he has for diffusing sunshine at home, or comprehends how much of gloom he can bring into the family circle by entering its sacred precincts with a frown on his countenance. The wife and mother is within four walls from morning till night, with but few exceptions; and must bear the worriment of fretful children, inefficient servants, weak nerves, and many other perplexities; and she must do this, day after day, while the husband goes out from these petty details of home care, has the benefit of the pure, fresh air, meets with friends, has a social, good time, which altogether act as a charm upon the physical man, and if he does as he should, he will come home cheerful and buoyant, and thereby lighten the household life for his wife, and drive dull care and gloom from the care-worn brow. Some men can be all smiles away from home, but at home they are as cross as bears; and yet we hear it said, on every side, "Wives, meet your husbands with a smile."

A BABY BEAVER.

All kinds of animals do wonderful things without ever being taught. Each in its own line inherits an education—an education which in common language goes by the name of instinct.

A college professor in Maine tells, through the *Lewiston Journal*, how he convinced a friend who did not believe that beavers could build dams. He bought a baby beaver of a hunter and sent it to his sceptical friend.

The creature became a great pet in the house, but showed no signs of wanting to build a dam, until one Monday morning a leaky pail full of water was put on the floor of the back kitchen. The beaver was there.

He was only a baby, to be sure; but the moment he saw the water oozing out of a crack in the pail, he scampered into the yard, brought in a chip, and began building his dam.

His owner was called, and watched the little fellow, very much astonished by what he saw. He gave orders to have the pail left where it was, and the industrious beaver kept at his work four weeks, when he had built a solid dam all around the pail.

HARD ON THE CHAIRS.

Among the ancestors of Wendell Phillips were several Puritan Clergymen. Perhaps it was a push of heredity which made him at five years of age a preacher.

His congregation was composed of circles of chairs arranged in his father's parlor, while a taller chair, with a Bible on it, served him for a pulpit. He would harangue these wooden auditors by the hour.

"Wendell," said his father to him one day, "don't you get tired of this?"

"No, papa," wittily replied the boy preacher, "I don't get tired, but it is rather hard on the chairs!"

THE DUTY OF NOT GETTING TIRED.

Are you one of the women who say, "I am perfectly well, only I get tired easily?" If you do you are one of thousands. And yet, little woman, don't you know that getting tired easily is just of itself a disease? It shows a letting down of the vital forces that requires attention and toning up. You need first of all more rest, not necessarily more hours of sleep at nights, but little half hours of rest snatched here and there in your hours of work.

And by rest isn't meant simply the physical rest that comes from lying down. Don't lie down to think over your plans for economy, or for entertaining, or for anything else. When you lie down to rest shut your eyes and stop thinking. Ten minutes of this is better than an hour of the other.

Then you need more food probably. Not more food at meals necessarily, but food taken oftener. Instead of waiting until luncheon take a cup of beef tea during the forenoon.

In the afternoon take a glass of milk and a biscuit if that agrees with you, or an egg lemonade if that suits you better.

And then get a little fresh air every day. Get it any way, if you have to cut short manicuring your nails or saying your prayers to do it. And get it in the exercise of walking if you can.

Housekeepers, home-makers, wives and mothers are fundamental social relations which rest upon woman's characteristics, physical, mental and moral.—*R. Herbert Newton.*

Notes and News of the Month.

SIR GEORGE BUCHANAN, F.R.S., has had conferred upon him the honour of Knighthood by her Majesty, on his retirement from the post of Medical Officer to the Local Government Board.

MR. HUXLEY objects to the title of Dr., although he is M.D. of Breslau, and M.B. of the University of London, and is the possessor of endless doctorates of all sorts. He can stand being called Professor, but draws the line at Dr. Mr. Freeman and Matthew Arnold objected to be called Professor. As the *Lancet* truly says, "Great men have a consciousness of something in them that supersedes all the aid and adornment that titles can give." "When unadorned, adorned the most."

PROFESSOR POLITZER, of Vienna, who is on a visit in England, has been met by all the aural surgeons attached to the general Metropolitan hospitals, on which occasion he gave an interesting demonstration of preparations and suggestions illustrating the normal and pathological anatomy of the ear. Some of his delicate specimens of the membranous labyrinth, prepared from the non-decalcified petrous bone, were greatly admired.

Answers to Correspondents.

MENVILMOT.—(1) It is not very possible to tell the exact size of all the organs from a photo. In the case of a gentleman whose hair is bushy, you want three photos—back, side, and front views. In the case of a lady, she must be photographed with her hair perfectly plain. (2) Cautiousness and Firmness, when large, are more noticeable because of their location in the brain. Looking at the head from its anterior point, Cautiousness appears on the parietal eminence just as the parietal bone curves round to the posterior part of the head. Firmness is situated in the coronal region, and is the last faculty which gives prominence to the top of the head, and when large, shows more distinctly from the frontal region than when Veneration is largely developed. (3) A hollow at the top of nose, between the eyebrows, indicates that a person must have a small development of Individuality. (4) Yes, many persons have had the temperaments well blended, even equally so. Lord Derby and many other examples. (5) To your last question, we have many men and women on record who possessed all the temperaments, large, or very large.

H.G. (Chester).—Thanks for your letter and enclosure referring to the lady whose head I examined in Chester many years ago, and who was the remarkable mother of thirty-three children. I am glad to know that ten of that number are still alive.

J.W.M.G. (Birmingham).—The reason why Vitativeness, Sublimity, Conjugalitv, Human Nature, are each given a letter instead of a number

is simply to show they have been discovered since the former numbering of the Chart.

E.G.—We quite think with your friend that, “All students of human nature, and especially all who make a practice of reading character from photos, will do well to study Graphology.” The more we know of these subjects, the more complete will be the analysis. We also are of opinion that Phrenology and Graphology may be combined with great advantage, and we have studied the latter ourselves with much interest.

MEMORY FROM A PHRENOLOGICAL STANDPOINT.

BY J. F. HUBERT.*

ONE of the grandest teachings of the science of Phrenology is, “That the brain is not the mind, but only the material instrument through which the mind manifests itself,” and that therefore the mind exists as something quite distinct from the brain. There is much evidence in support of this teaching, but that afforded by what we know of memory is very important. Scientists have taught—and we believe rightly so—that the composition of the human body completely changes in the space of about 7 years. Now if the memory of man is only the outcome of molecular movements or changes in the brain, how is it that memory exists long after those atoms in the brain, which are assumed to have produced it, have been destroyed? I know the answer that materialists would give to this question, viz., that the impression which is made on the brain so as to produce memory, is passed on continually to the new brain substance as it is formed, and is thus retained as a permanent mind picture. Experience, however, seems to my mind to disprove this theory, for if every impression were passed on in this way, memory would surely never become weak, but a fact once learned should be as distinct 50 years hence as it is to-day.

Mr. Gladstone and Professor Fowler, two grand old men, could probably tell us of events which transpired in their lives more than three-fourths of a century ago, yet the actual brain substance in the case of these two worthies must have changed ten or twelve times over since these events occurred.

My view of the matter is this: that memory is not a part of the brain substance, nor any condition of its molecules, but is an impression made on the mind through the material organs of memory. In my opinion memory disproves materialism, and points to immortality.

* Extracts from a paper read before the British Phrenological Association.

Memory seems to be dependent on the brain substance for its creation, for where there is lack of development in the phrenological organ of memory, there is corresponding weakness in the faculty; but, once created, there seem very strong grounds for believing memory to be imperishable.

Geo. Combe considered memory to be the highest degree of activity of the faculties. The first degree he called Perception; the second, Conception or Imagination; and the third or highest degree he called Memory.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

M. G. P. (Preston).—The photo of this lady indicates a superior development of brain power. All the mental working of her mind is indicated by great activity. Her mind is one of continual unrest, she wants to see and to know more. She is happy when she is looking at something new, or learning something fresh; she is full of knowledge and facts, and is a good scholar generally. Her thirst for information, and the facility she has of acquiring it must have stored her mind with something of everything. She has plenty of spirit and determination about her; she does not do things by halves, but takes a whole-hearted, thorough interest in whatever she does. She keeps her own promises and desires others to do the same. In disposition she is affectionate and wants the whole love of a person or none at all, and manifests a warmth of feeling and enthusiasm that carries her through all she does. She is sincere, and is attached to and feels the absence or loss of friends. She must guard against feeling the slights of friends. She cannot pretend, put on, or assume the opposite of her feelings. She is strong in her opinions; what she knows, she knows, and from her impressions of persons will take to them or not from the first. She is full of hope and expectancy, and is not easily dissuaded or cast down by seeming disappointment. Her memory is good, especially of faces and localities; she rarely loses her way or anything belonging to her, and her strong sense of order will not allow her to be untidy or misplace things. The gentleman's character is better balanced. He is more

reserved, quiet, cautious, and undemonstrative. Each will be a discipline to the other, but I should like to have seen more harmony between the two.

DONNELL (Battersea).—The photo of this gentleman indicates an energetic mind when he is fairly started in a thing, and his brain power is in fair proportion to his body. He possesses considerable strength of character, and forcibility of expression, along with a tenacious disposition. All his desires are strong and active, and he is very susceptible to surrounding influences. His photo indicates an ambitious mind, and the desire to be and do something above the ordinary, is quite marked. His desire to do everything in the best style and turn everything to the best possible advantage stimulates all his actions. He possesses a lively imagination, is full of thought and originality, and all his ideas glow with the warmth from a vivid conception. He has strong prejudices, and makes nice distinctions, and shows a disposition to be exacting and circumspect. If he errs, it is from a lack of caution. He is candid, outspoken, and generally speaks his mind freely if asked for an opinion, but knows how to say or do an unpleasant thing with the least possible offence. His disposition generally is to thought and analysis. He possesses a critical and investigating mind, and is not satisfied with a cursory glance, but must sift right through a subject, and understand it thoroughly. He illustrates his ideas in an apt manner, and gives pointedness of expression in his conversation that shows a good understanding of what he talks about. He has strong affection and warmth of feeling and is sociable and companionable, but is rather slow in putting himself forward, and prefers another to hold the candle rather than do it himself, to show off his abilities.

J. R. (Lisvane).—The photo of this gentleman indicates a mind that desires to see, know, and be in touch with people and things. He should show considerable judgment, and possess a good practical business talent, with ability to attend to details. He is very quick of perception, and very tenacious and persevering. He is not content to do one thing only, but likes to have plenty on hand, and takes upon himself more than he should or has opportunity to do thoroughly. He likes variety and change, and should show a considerable love for travelling. He is decidedly prudent and cautious, and does not expose himself to unnecessary risk, but is kept back from doing many things that he feels he would like to do. He is ambitious and desires to do well, but considerably under-rates his abilities, and does not put a sufficient value upon them. He has independence of character and values it, but does not assert or push himself forward to the extent his qualifications allow. He is full of hope and cheerfulness, fond of fun and music. He is an intellectual companion, and shows considerable taste, ingenuity and refinement in all his work. He is guided largely by his intuitions and impressions, and generally finds them correct.

W. J. W. (Derby).—The photo of this lady indicates that she has a

mental vital temperament, which should give her a favourable condition of both mind and body. There is every indication that activity, ardour, and enthusiasm, are her chief characteristics. She is quite sincere, and thorough in all that she does, and gives the whole of her mind to her work and doings. She is not easily dissuaded when once her mind is made up, for she possesses strength of will, and a spirit of determination. She is persevering and energetic, and her mind is one that is quite active; and must have something to do, and overcome. She is quite in her element when she can be doing something that needs judgment, and where she can feel her responsibility, and she will carry it through with the spirit that will ensure success. In disposition she is warm-hearted, and makes a true friend and a devoted companion, she becomes strongly attached to people. Her spirit is one of candour and frankness. She has a good memory, and is in touch with most things. She is quick to notice and readily grasps a subject, and has a mind that will adapt itself to almost any station of life she may be placed in. Her memory of faces and persons is very good; she is a critic, and can sift things thoroughly, and if attacked, is quite able to uphold her own in spite of opposition.

FATHER (Brighton).—The drawing of this gentleman indicates a character capable of exerting considerable public influence. His capabilities are such as to serve him in whatever position he may be placed. His brain is large and active, and indicates a mind well balanced, and furnished with facts, thoughts, and principles. He is a general scholar, possessing a superior intellect, and talents of a high order, with power to use them to the best advantage. His whole nature is one of refinement and superiority; and the force of character lies in the intellectual and moral faculties. There is great sensitiveness, combined with firmness of purpose, delicacy with depth and strength of intellect; a fine tone of organization, giving great susceptibility to enjoyment or suffering, and power to generate thought, feeling, and emotion. His mind is broad, and he cannot by any means be narrow or contracted; he takes extensive views of a subject, his large sympathies impel him to consider a subject in the broadest sense possible. He is a man of great scientific research, has a mind stored with a knowledge, and is a sound reasoner, and has ability to see through a thing at once. His powers of penetration and sagacity are strongly developed. He appreciates method and arrangement in work. Is a good speaker, and has ideals and desires of the highest order, with powers to achieve them, that cannot fail to impart the feelings that come from actions that have been well directed, and have secured the return the mind most desired.

M. O. L. (Lincs.).—This lady appears to have a well balanced mind, with the exception that she is over sensitive. Her mind is stronger than bodily powers, hence, she will be apt to overdo. She has always been known for her understanding of, and insight into, things. The upper part of her forehead is well developed, she is decidedly a thinker, and inclines to the theoretical and thoughtful side of things.

She thinks and acts for herself, and should be noted for her soundness of thought, quickness of judgment, and penetration of mind ; she is quite intuitive in her ideas, has strong likes and dislikes, and is easily impressed at first sight. She is ingenious in her work, and full of tact and management ; is precise, and neat, and shews considerable taste and refinement in disposition. She is friendly and sociable, affectionate and constant ; she shews herself to the best advantage to those who know her most. She keeps her own affairs to herself, and is quite capable of looking after her own concerns, and does not expose or express herself so as to run any risk ; is full of caution and prudence, and sets a guard upon all her actions.

E. T. (Sheffield).—This lady possesses a mind intensely active and wide-awake ; is scarcely ever at a loss for something to do. She has an eye to everything, and her mind is always occupied ; she is an observer, and very quick to see and notice things that are going on around her, and has a good memory of active outdoor occurrences. Her love of travel and memory of place is strong ; she is punctual in her appointments, and has a good memory of dates, &c. Is fond of music, and greatly annoyed with imperfection in the rendering of it. She has a quick ear, and is a good judge of harmony. She is critical, thoughtful, ingenious, full of taste and refinement, energetic and thorough in disposition. She becomes strongly attached, and makes a good friend, full of love and sympathy, and has a strong desire to make others happy, and does much to entertain her friends. She is hopeful and sanguine, and does everything with a will and thoroughness, and expects others to do the same.

J. S. (Sheffield).—The photos of this gentleman indicate that he has a favourable development of the mental temperament, and has great susceptibility of mind, and exquisiteness of feeling. He is intensely active and ardent, full of spirit and enthusiasm ; hence his mental manifestations are quick and his sensations lively. He is more of a thinker than anything else ; he wants to completely grasp a subject, to sift it well out, and know all about it. He has sound judgment, and will show great originality of thought and power to adapt means to ends. He will bear sounding, and knows much more than he expresses. He is shrewd and full of argument, and possesses powers of analysis, and can explain his ideas with considerable tact. He is very ingenious, systematic, and precise, and has a keen appreciation of wit, fun, and the ridiculous. He is companionable, a good friend, warm-hearted, and sincere in affection. Is quite thorough in all he undertakes, and is not easily baffled, but has considerable firmness and power of mind to apply himself to his work and will shew much taste and refinement in whatever he undertakes.

“GET a-top of your troubles, and they are half cured.”

THE
Phrenological Magazine.

JUNE, 1892.



ALMA TADEMA, R.A.

THIS gentleman has an uncommon amount of force, energy, push, and spirit. He is well-organized for vigorous work. He is disposed to use strong language, and must be master of his situation. He gathers knowledge and force easily, and sometimes astonishes others by the amount of information he is able to give on a subject. He has the elements of economy, hence, wastes nothing that is of value. He can keep his own secrets. He is shrewd in managing. He generally gains the end he started for—for if he cannot obtain it in one way he will in another. He has great intellectual abilities; is quick of observation;

has good powers of arrangement and system. He is ingenious, and has much versatility of talent. He rapidly acquires knowledge by observation. He possesses considerable musical ability, and with practice could make considerable proficiency in that profession. He does not stop at trifles ; few are better able to manage and gain their point than he. He is not so much known for his moral and spiritual gifts as for those that show out his executiveness and energy, and he is liable to push a matter to an extreme rather than to fail in an attempt. He has none too much caution, especially if the occasion requires force and courage. He would be at the head on a battlefield if he were anywhere about. He has good abilities to systematize, manage, and do things by rule. He is a natural mechanic. He is rather extravagant in his style of presenting his thoughts, and affable and polite in the use of language, sometimes too extravagant. His power of arrangement and system ; ingenuity and versatility of talent, his firmness and tenacity of mind, his capacity to manage and gain his ends without exposing them, are amongst the strongest points of his character. He is liable to put too much powder into his gun. He is capable of being very sarcastic, and saying very sharp things. He has an excellent eye for forms and outlines, and great versatility of talent. His perceptions are all large, but calculation, order, and comparison are noticeably the largest.

L. N. FOWLER.

THE PROGRAMME OF PHRENOLOGY.

BY WM. BROWN, VICE-PRESIDENT OF THE F.I.

Given on March 30th before the Fowler Institute.

OUR subject this evening is the Programme of Phrenology, and for the purposes I have in view, I have divided it into three heads : Its Origin, God ; Its Aim, Humanity ; Its Reward, Happiness.

This evening I shall speak upon the 1st, and as opportunities occur, continue the others in order.

From the first time I had the opportunity of studying phrenology, I have regarded the science as a finger post on the journey of life, and I am convinced the more its principles are known and applied, the more will it become a factor in the physical, intellectual, moral, social, and spiritual regeneration of mankind.

In the great realm of nature you must have noticed how admirable is the adaptation of means to ends. But before

speaking to you on the main question, I want you to bear with me for a few minutes while I endeavour to lead up to it by illustrating it from a creative point of view and sketches on the blackboard.

If you examine the early sedimentary rocks you will find traces of animal life of an indistinct form, but adapted to the early conditions of our earth. Light was then undefined, and no traces of vision is observable. (Sketch on blackboard of geological strata from the Laurentian to recent deposit.) But ascend a little, when "the Spirit of God moved on the face of the waters" light shines forth, and we enter new conditions. Here we find Trilobites, with eyes of a compound structure, adapting them to the altered condition of things. (Sketch of Trilobite.) Ascend still higher, we have the hot seas of the Devonian. Here we find fishes with coats of mail. (Sketch of fishes, of *Cephalaspis Lyelli*.) They were adapted to the conditions under which they had to exist. Still ascend, and you find life adapted to moist, heat, and shade; and plants of a soft bodied structure, in accordance with the atmospheric conditions of the age. (Sketch of coal plants, *Stigmaria Lepidodendron Calamites*.) This fourth period of the earth's history must have been of considerable duration, for during this age was accumulated or stored away by the providence of God the energy which the creative man has turned to such intelligent usefulness. Continue to ascend, and we see the effect of sunshine. Trees have hardened bark outside, and season rings within. The waters were cooler so we find fishes without armour. (Sketch of Permian fish, *Paleoniscus Prieslebeni*.) Then we enter the fifth period, which was a busy one. The atmosphere has cooled; oxygen has taken the place of carbonic acid, and air-breathing animals appear. We now enter an entirely new form of life with its adaptations. Now we have the creeping labyrinthodon, who has left his footprints to harmonize Genesis. (Sketch of labyrinthodon, *Labyrinthodon Pocaygnathus*.)

As we continue we find a higher order of creation in the compsognathus or bird reptile, and the herbivorous dinosaur. (Sketches of each.)

Then we reach the last or sixth period, and find creatures of instinct and intelligence, anthropoid apes (sketch, chimpanzee), beasts of the field, and cattle.

You must have noticed that I have not said anything about flowers. Not till this fair earth of ours was ready for its perfected occupants do flowers appear, and then the first man and woman take possession of their earthly paradise. The

one to express God's wisdom, the other His love. All up till man came possessed instinct to guide them. They lived and died, and fulfilled a purpose in the divine economy of nature. They had a physiology and phrenology in harmony with their surroundings. The Architect worked according to design, and everything we are told was good, but when the top stone was laid it was pronounced very good. It does not say perfect. His physical nature was perfect, and combined in His composition nearly all the elements previously made ; a world in a man.

The spiritual nature of man was a perfected intelligence, and was of much greater value in God's sight than many suppose, so much so that in the work of the six periods God shows us in type His work in this inner world of man by writing it on the broad platform of creation. He gives us an outline of it in the work of the six days or periods. In each there is a work of God upon the earthly creature. In each we are shown what in successive stages represented by days, can be brought by grace out of man. It is a spiritual mirror of all God's work in man. The work was progressive. First came the grass, then the herb, and then the fruit ; so it is in the spiritual kingdom. First the blade, then the ear, and then the full corn in the ear. In six days was creation perfected from evening to morning, from darkness to light, from imperfection to perfection. The first three days was a dividing or preparative time ; the last three days a furnishing or perfecting. If you will carefully study the creation work, you will see how admirably exact it is with good work in the soul of man. Proving that the creature man was in God's thoughts from the very first dawn of creation, and that the various changes, represented by the six days or periods, correspond with the changes of growth in the soul of man.

Now, you must have observed in the study of human nature, that the same principle of adaptation of means to ends has been employed by the Creator, in respect to His finished work, man. In the past you saw that all nature was climbing up to man step by step ; now we shall find that man is step by step climbing up to God. Man has a threefold nature ; he has a body as partaking of earth, a soul, his identity, and a spirit, the element attaching him to his Maker.

Physiology teaches us that every function of the body is manifested by or through a distinct portion of matter. The body then must be a very important factor in this life, and if one class of organs predominate, they give tone or temper to all the rest.

Harmony should be our aim ; it was lost in Eden, and the

only way back is by regaining the knowledge we have lost. The nearer the temperaments are equal the better for the manifestation of the mind, for endurance, and for long life. It is a law of physiology that harmony of function depends upon symmetry of form. (Sketch outline of human figure, in harmonious proportion.) Shape is an index of quantity; men and women differ in bodily form; and you can see at a glance the excess of one function or the deficiency of another. If one organ is too large it takes up more than its proportion of vital energy, and so prevents harmonious action. The diaphragm is a good natural division between the upper and lower bodily organs. Beginning at the lower or abdominal, embracing digestion, the liver, bladder, and kidneys. If this part is too large, the lower part of the brain is most active; it draws away energy from the sentiments, and more nourishment is supplied than is necessary, fat accumulates between the muscles and around the heart, and this overloading impedes the activity of the body.

Next take the organs above the diaphragm which embrace the heart, lungs, circulation, and respiration. Here heat and motion are produced. If this part is too large, the brain receives too much blood, and the sentiments suffer through excess of muscular activity. Then, if this part is too small, the brain is not sufficiently nourished, digestion is affected, and the brain suffers in turn.

One more step higher and we reach the highest part, the seat of the mind. The physical organ is the brain. Here is the great storehouse of sensation. Here the spirit dwells. "God breathed into man's nostrils the breath of life and man became a living soul." The spirit was breathed into man's nostrils by God. Here is cause and effect. The soul then must be the outcome of that action, and represents the faculties of the spirit in this world, and mind must be the result of the soul's operations, and the brain the medium by which we carry on the intelligence.

We have no evidence that the beasts partook of this privilege; man has a higher purpose to serve from all that has gone before. Hence, the Creator has adapted him to the purpose he has to serve here, and an endless hereafter. There is continuity in God's work. There are three main divisions in the creative world: mineral, vegetable, and animal; so there are three in God's last work. The animal, the intellectual, and moral, answering to propensities, faculties, and sentiments. (Sketch of divisions—propensities, faculties, and sentiments.)

PROPENSITIES are natural tendencies or disposition; they

are common to man and the brute creation. They are necessary for this life ; without them there would be no physical determination. From them come impulses, instincts, desires, passions, and desires to act. They are excellent servants, but bad masters. They propel, they do not restrain. They are placed in such a position to be foundations, and yet so placed that they can be controlled by others above them.

FACULTIES.—They are placed well in front ; they are for understanding men and things. They induce us to get knowledge, notice principles, conditions, and combinations. From these we form judgment. All that is necessary for us to know in this world we have faculties for acquiring. What we have not faculties for has been revealed.

SENTIMENTS.—These are thoughts prompted by feelings ; they are only given to man. From feelings come emotions, or the agitation of the mind ; feelings are the mainspring to action. They are the forces which move the will towards a definite course of action. Sentiments take the highest place nearest the Creator. They are so placed that they may sit in judgment and control all others below them. It is here that man shows his superiority ; it is here we differ so much from the brute ; it is here that our responsibility comes in. God has fastened on to us a responsibility we cannot get away from if we would. In the pre-natal condition these are formed last, and the perfectibility of the race depends very much upon the influence brought to bear on the embryo through the parent. Oh that woman did but realise her mission, and the power that she has within her reach, the hidden energy of perfection ! By woman was Eden lost ; by woman can it be regained ! Each of these three great divisions each divided into smaller groups or sub-divisions. (Sketch of 7 sub-divisions.)

In the "Social Group" are manifested those affections which attach men and women to their country home, bind husband and wife, parents and children, friends and companions. Much wisdom has been displayed in their location. Love is at the root of all that is good.

In the group of "Selfish Propensities," we are led to take care of ourselves, provide for our animal wants, get property, and combine for mutual protection and defence. This is a very necessary group, and quite right in its place and use, out of which grows force and power to act. "The Selfish Sentiments," are placed higher ; they fulfil an important part in the character, they give perseverance and independence, and desire for reputation and distinction ; give an aspiring, governing, tone to the mind. Half the failures in life are from deficiency in this region.

“Semi-intellectual” induce to self-improvement, love of the beautiful, and refinement. Progress is a prerogative of the human family; herein lies growth and self-perfectibility.

“Perceptive Faculties”—these enable us to be on the look out, judging of the properties of things, and turn to good use the knowledge obtained, a full development in their region imparts a ready talent for dealing with things, objects, forms, events, and all tangible forces.

The “Reflective Group” is for analysing and classifying the facts obtained by the perception below, by these faculties we get new ideas, construct theories, invent systems.

“Religious Sentiments”—these have the highest office to perform; these are to bring us into relation with God, link man with the Creator. They are intended to influence all the other organs.

In the creation world there were silent forces at work which produced the means to ends, and there are silent forces in the creative man which act from without and within.

The senses are the external forces or organs; they excite the brain by nervous impressions from without, just as the light through the lens produces an impression on the sensitive plate of the camera.

The forces from within are the voluntary and involuntary nerves. The voluntary are under the control of the will, they are the messengers of the mind to action. The involuntary are independent of the will. They affect digestion, circulation, and respiration. They go on from birth to death, and mind cannot act direct upon them; in perfect health we are not conscious of them. Animals have this nervous system, but in man it is much more complex; in man it is a question of degree not of kind. Much is known from physiology about this great nervous system; but how this hidden energy causes the mind to act will in time be better understood.

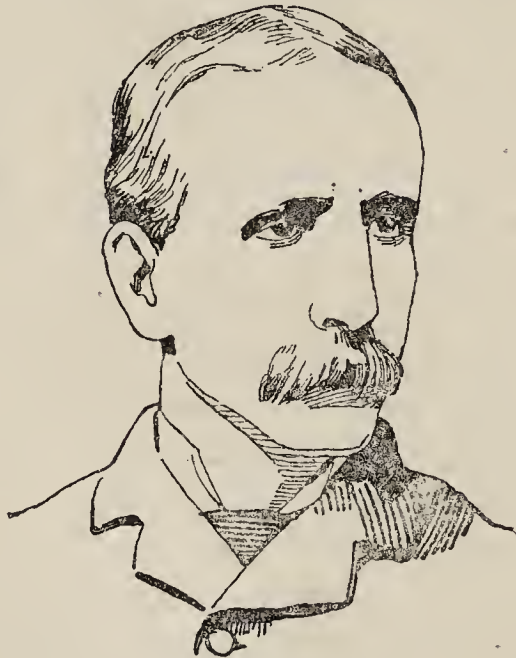
You will notice as we have ascended from the lower to the higher in creation, each creature became more erect from the creeping labyrinthodon till we reach the erect form of man, who alone is erect, and who alone can look up to the God who created him. (Sketch of the creeping things to man—man chimpanzee, herbivorous-dinosaur, *Compsognathus* (*Dinosaur*) *Labyrinthodon*.)

In the next lecture I shall take, “Its Aim, Humanity.”

“I WANT my boys to love Sunday, to find it a peaceful, pleasant day when they can rest from common study and play, yet enjoy quiet pleasures, and learn in simple ways lessons more important than any taught in school.”

MEN AND WOMEN OF OUR TIMES.

BRITON RIVIERE, R.A., is remarkable for his temperament, tone, and quality of organization. He has great brain and nervous power. His physical strength and power of constitution are not equal to his mental. He must have been a great student all his life. His head is remarkably developed in many ways; he has great will power, perseverance, and tenacity of opinion. He has more than ordinary scope of mind; takes large, if not extravagant, views of subjects. He is particularly powerful in the development of his intellectual faculties; he has a penetrating mind, and is a close observer. As a scientist he should be known for being very exact, for he examines all subjects closely. He is particularly analogical and descriptive in his powers.



BRITON RIVIERE.

His causality gives thought, judgment, understanding, and comprehensiveness. His memory for most subjects is specially good, but his faculty for telling stories, anecdotes, and the ordinary things of the day, is not so strong. His imagination is strong; he loves poetry, art, and all that indicates culture, refinement, and mental development. His head is unusually high, which disposes him to exercise his own mind, do his own thinking and promulgate his own thoughts. He is ingenious, can do artistic work, and examine subjects quite minutely. He has abilities as a writer and speaker, and is never wanting in thought or illustration, but is more given to thinking and writing than speaking. He is specially intuitive in his discernment of character and motives, hence he is very sagacious and anxious to probe all subjects of an intellectual and scientific nature. He has the power to keep his own affairs to himself. He is

conservative in his views; does not tell all he knows. He has more mental than physical force; but would not do so well in the battle-field, or in any very executive work. He is naturally a leader of men. He has an available mind, but is liable to despondency at times, for he is apt to overthink and exhaust his brain force. He is quite ingenious; and in some special department of science or art he should be noted for his versatility of talent. He is fond of travelling and seeing new places, and would go to the extreme ends of the earth if he could get an important idea by doing so. He is remarkable for following out his own thoughts. He is inclined to strike out on bold lines, throw off new ideas, and penetrate further into a subject than is common to men. He is almost a wonder to others for his great amount of force, strength, and comprehensiveness of mind in whatever channel or course of life he pursues. He makes a mark of originality all the way through. He accumulates a vast amount of knowledge. He does not waste anything, but is continually accumulating work, and getting more on his hands than he has time to do.



THE COUNTESS OF ABERDEEN.

THE COUNTESS OF ABERDEEN has more than ordinary powers of mind. She has a mind of her own, and does her own thinking; is quite original and capable all through of giving a vast amount of thought and information in her conversation with others. She is quick of observation; has a

great intellectual perception of what is going on ; gathers knowledge easily, and communicates it readily. If her attention were directed to science, she would exhibit more than average talent in that direction. As a writer, she would be rather prolific, and her composition would be full of thought. She has a good conversational talent, and is above the average in her power to entertain and instruct. She has a great desire to travel. She enjoys contact with society, and if she should turn her attention to intellectual pursuits or professional life, she would be superior to most persons in that line. She is quick to discern character and motives. She is decidedly ingenious and versatile in the tone of her mind. She has unusual energy and force of character. Is interested in all that class of life and labour that requires a vigorous mind : hence she takes as much interest in what is being done by her male as her female friends. She must have received a predominant share of qualities from her father, unless her mother was decidedly a strongly-organized woman. She will make her mark in the world wherever she is and whatever she does, for she has force of mind, availability of intellect, and a great amount of interest and desire to be constantly employed. She makes friends and keeps them. She has powerful influence in the circle in which she moves.

ORION.

THE EVOLUTION OF A MIND.

BY NICHOLAS MORGAN.

(*Copyright.*)

Read before the Fowler Institute, April 6th.

MEMORY.—Next to discrimination comes memory. If we could not remember our feelings, actions, and thoughts, we should have no ideal presence of a past sensation with which to compare any actual or real presence. In such a state, we could not say whether a present pain or a pleasure was greater or less than any other previously felt. In truth, we should not know that we had ever been either pleased or pained, or otherwise affected.

Discrimination and memory are the highest attributes of the mind ; and it is to the proportionate endowment of these that we must principally look for data, in order to estimate the relative intellectual capacities of individuals. These two mental faculties people, and colonize, as it were, the inner or subject world. The former analyses, arranges, and classifies ; and the latter registers, and keeps the historical record.

Observe, however, that I am not now treating of individual differences, but simply giving an outline of universal mind or of that which is common to mankind.

SELF-CONSCIOUSNESS.—At this stage a very important question is suggested. How do we know that what has been advanced on the subject under consideration is true? or what means have we of ascertaining whether it is based on fact or on fiction? We have (1) self-consciousness; (2) the outward embodiment, or physical expression of feeling and thought; (3) the external marks that expression leaves on the face and forehead. Besides these there is another class of signs that indicate the relative impressibility of different persons to given influences, and the mental and physical capacity of each; but this is merely noted in passing, and, for the present, must be left without further remark.

First—Self-consciousness is the foundation of mental science; take it away and the whole superstructure would tumble down. This can be put to the test by any person that resolves to do so; for the means are always at hand. A little reflection will show that without consciousness no knowledge of mind and the laws of its operations could be obtained. By introspection and self-examination we know how certain external forces affect us—that one is in some degree pleasurable and the other painful; that one is more or less inspiring and the other depressing; while a third influences us so little as to be hardly discernible; and we learn by observation and experience that those forces respectively affect other people in a similar way, though not to the same degree.

Second—By observing the outward expression of sensation and emotion of our fellows, in similar conditions, we discover considerable individual differences. For instance, were any one to accidentally trample on the toes of two persons with equal pressure, one of them might feel acutely, and give forcible expression to his feeling both by word and gesture, whereas the other might treat the affair with apparent unconcern. Furthermore, a dozen or more tourists might ascend to the top of a mountain, and each express pleasure at the opening of the extensive and sublime prospect; but their expressions respectively would be markedly different in degree, if not in kind; and more so still after the first survey, when the attention of each was directed by taste to special features of the landscape. The first sensation produced by the grandeur of the scene would awaken the emotions common to mankind, and subsequent ones would appeal more directly to particular emotions in accordance with the organization of each individual. All men manifest certain mental properties, though in different

proportions. Some persons are more impressible to one influence or set of influences than to others; some people would pass a fine statue with a bare recognition, but would be delighted with a dog-fight, or some vulgar if less brutal sport, others would be charmed with the former and disgusted by the latter.

At the time Gall began his researches, metaphysicians studied universal mind—that is, the properties that mankind possesses in common; and they reared their philosophies on the basis of self-consciousness alone. They explored the inner world of emotion and thought; and principally engaged themselves with subjective phenomena. They attributed individual differences of manifestation to education, training, and environment.

Gall began at the other end of the line. He concentrated his attention on the object world, and having observed a correspondence between individual differences of talent and cranial form, he accounted for these mental differences as arising from difference of physical organization. The philosophers reasoned from generals to particulars, Gall from particulars to generals. Philosophers considered the mind as an entity, and that it governed the body. Gall thought the mind and body are mutually dependent on each other, which is now a universally admitted fact.

The author of the article on phrenology in the "Encyclopædia Britannica" (New Edition, vol. xiv., p. 877), who is a strong opponent of Gall's system, says, "the theory of the older metaphysicians—that the mind in feeling and reflection makes use of no material instrument—is not now accepted by psychologists. It was advanced by Brougham and (Lord) Jeffrey as against the theory of phrenology, but the doctrine that the brain is the organ of the mind is now universally received." This, from such a source as the "Encyclopædia Britannica," would surely, had Brougham and Jeffrey still lived, have been felt by them as a severe rebuke, especially by Jeffrey, for no writer attacked Spurzheim through the press with more fierceness than he did. There was, however, some excuse for Jeffrey, for, as G. H. Lewes says, "he was wholly ignorant of science," but this cannot be said of Sir William Hamilton, yet he took the same view. He says, "No assistance is afforded to mental philosophy by the examination of the nervous system, and that the doctrine or doctrines which are founded upon the supposed parallelism of brain and mind are, as far as observation extends, wholly groundless." "When such a man," adds Lewes, "not unacquainted with physiology, could teach his pupils this independence of mental phenomena,

we need not wonder that Jeffrey, who was wholly ignorant of science, could, in his attack on phrenology in the *Edinburgh Review*, take up a similar position." ("Mental Philosophy." Ed. IV., vol. xiv., p. 451.)

It may be interesting to the uninitiated in mental science, if not instructive, to glance at the evolution of an infant mind during the first few years after its birth.

The intra-uterine life, that is, life within the womb, of a human being, is of a vegetative nature. Though the germ possesses the property of life, it is by itself, incapable of displaying vitality. It requires help to enable it to put forth living energy, and this it cannot command. It is dependent on the vitalising force of a suitable environment, in a similar way as a grain of wheat, or other seed; but here the parallel ends. The latter cannot make its wants known to the ground in which it is deposited, though if it could, it would get no answer, but the energies of the former vibrate through its environment or the nerves of the visceral sense, and beget a ready response; and in this way it notifies its wants and gets supplies.

The feelings, hunger and thirst, are simply indications of bodily wants; and the foetus being a part of the mother during intra-uterine life, its needs are felt by her in the same way through the visceral sense. Immediately, however, the child enters the outer world, it is a separate and distinct individual being, though for some time it continues to be dependent on maternal care. The intra-uterine relation being severed, the organism of the mother is no longer directly impressed with the state of the foetus, consequently she has to acquire this knowledge through other channels, partly through intuition, but principally through discrimination, experience, and induction, because the child can only use the language of nature to express its feelings, which the mother has to learn to interpret. The symbols of baby language are a variety of muscular movements, that principally occur in the face and limbs, and in the production of certain vocal sounds.

The transition from the womb to the stage of active life arouses to lively activity all the faculties of the child that are, for the time being, essential to its welfare. Its first experience is a plunge into the atmosphere—the sea of air, light, and electricity. Now, how these forces affect the little actor, we can merely infer from his behaviour, or the manner of his acting, and the correctness of our inferences will be proportionate to our knowledge of the language of nature, and of our discriminative capacity.

The child is governed by feeling, and we are dependent on the language of nature for our knowledge of its state, whether it is moved by pleasure or pain, or is in repose ; and this language we have to learn in order to interpret its meaning and understand the infant's wants.

The shock given to the child by the impact of the air upon the surface of the body, and by the inflation of the lungs, brings forth a cry, and we naturally infer that the shock is painful ; and every time baby cries we are led to conclude it is more or less uncomfortable in either body or mind, but whether from want of nourishment, or from injury, or other cause, judgment has to decide, or its guardian has to find out. Hence the necessity for knowledge and experience in the management of infants.

The sensation of hunger awakens another of the preservative feelings, and causes a craving for food, and for which the child instinctively puts forth certain preservative efforts to notify its state ; but if these are either not observed, or not understood, the child gives more marked expression of its feeling, probably by screeching, the only way by which it can occasionally make such wants known.

In order to make these examples more plain and useful, it is necessary to note that, besides the sensory or in-carrying nerves, there is another and important order, which are called motor or out-carrying nerves, which are immediately related to the muscles, and that without them no external movement can occur. In those examples two kinds of feeling are taken to represent the workings of the physical and mental mechanism of man. The first shows that the impression produced by the air on the external surface of the body of the infant and upon its lungs was conveyed inward by the sensory nerves to the cerebro-spinal centre, which awakened conscious sensation, and then the stimulus was reflected outward through the motor nerves, which stimulated the vocal and other muscles to action ; and the workings of these expressed the state of the child's feelings.

The last representative example of conscious sensation and its outward manifestation is of a different order. It did not originate from an external impression, but from an internal cause. The child wanted nourishment, and this by some means caused a molecular change in the nerves and ganglia of the visceral sense, or stimulated them to activity, which produced the sensation called hunger or thirst, or sensations of both, as the case might be. Now, the child would, in accordance with the constitutional law of self-preservation, instinctively indicate its condition in the usual way, by means

of the ordinary signs ; but if these were not attended to, it would perforce of the craving for nourishment display more energy in the expression of its wants.

Although I have used the term conscious sensation in describing the earliest manifestations of infant life, I must not be understood as teaching that the purposive acts of the infant just mentioned originated from actual knowledge of its state, and were directed by its own will ; for this would be contrary to fact and reason. Such acts, at such a time of human life, are purely automatic, and the use of the term in question is perhaps a liberty of language. What I mean by it is simply that the cerebro-spinal centre and its numerous ganglions are endowed with a sensitiveness to certain stimuli, and a liability to be put into certain states of activity, for the preservation of life and the development of the system. Up to the present, then, we have merely observed or considered a few instinctive features of the physical side of human life.

A year afterwards we pay the little actor a visit and find him healthy and thriving ; the preservative organs and functions having rapidly developed ; besides, he now manifests other and higher qualities. He is not simply a living instinctive organism, but a physical and mental being—a compound of mind and body. We learn that Harry is his name and that he knows his name and can discriminate the difference between several things, for instance, distinguish mamma from papa, his brothers from his sisters, the cat from the dog, and the poultry from the pigeons. We also learn he has manifested three prime emotions, viz., fear, anger, love. He has shown fear of strangers and of being in the arms of little ones, &c. He has been angry with pussy for scratching him, and when he did not get what he wanted ; and he has displayed love in various ways in a marked manner.

After another six months have passed, we visit little Harry again, and find his memory is more retentive, that his observant and discriminative faculties are more acute, and that he has manifested the emotion of power, that is to say he has shown great delight with new acquirements of strength that enabled him to gain his objects with greater facility, such as being able to walk and climb.

The next half-yearly visit shows that besides having further improved in development, Harry has displayed the emotion of property—a desire to possess things and a delight with his acquisitions. He shows us his toys and a pretty little rabbit with conscious pride of possession.

Our little actor on life's stage having attained his third birthday, we once more visit him and arrive in time to see him

performing the part of ruffled temper and authority. Nurse wishes to take him out for an airing, but he refuses to go. Enquiring into the cause, and learning that he has a new dress and wants to put it on, we plead his cause and nurse gives way. The next act brings Master Harry out in a new character, which part he plays in good style. Having conquered nurse and feeling proud of his victory, he struts about in a dignified way. Evidently the emotion of pride reigns, his body is erect, his neck stiff, and his head inclines slightly backward. Not for long, however, does he remain in this frame of mind. His body gradually becomes more flexible and his manner more genial, and observing that we admire his new dress, he shows us his nice boots and pretty frock. There now appears little or no pride in his expression, but vanity is prominent in every feature. The colour of his dress and its trimming have called the emotion of beauty into lively activity and thus has evoked the emotion of vanity.

After this we often visit Master Harry and become greatly interested in him and his mental evolution, but shall merely mention a few facts of his development at his fourth birthday. Up to this period he has given indications of the æsthetic emotion, his liking for pictures, books, and the pleasure he takes in them is considerable, and it has enkindled a desire for drawing. Music too gives him much pleasure. He has also manifested the emotions accruing from knowledge and moral sentiment. He takes delight in every advance he makes in learning and in giving examples of his acquisitions. This is probably a compound of the emotions of power, pride, and vanity, as well as the pleasure derived from knowledge, still the latter is sufficiently prominent to be manifestly discernable.

This child had at the age of four years displayed ten distinct emotions, viz., anger, fear, love, power, property, pride, vanity, beauty, knowledge, and moral sentiment, which, save one, viz., plot-interest, make up the whole list of Dr. Bain's classification. As to plot-interest, there are not wanting in the history of the child indications of the budding of this emotion as well. In the game "hide and seek" he displays no little strategetic skill, and pleasure in giving surprises. He also shows adroitness in scheming, and pleasure in his successes. Of these eleven emotions, Dr. Bain specifies only three as apparently being of an ultimate character, viz., love, anger, and fear, and considers the rest are derived and compound. Indeed, he expresses doubt as to whether fear is actually an elementary emotion; but as regards love and anger, he seems convinced that they are so. He says,

“They are the giants of the group and indispensable members of the emotional scheme. Withdraw these, and the whole fabric would collapse to little beyond sensation aggregates.” (“Emotion and Intellect,” Ed. III., p. 173.) Here the author sets forth three emotions as elementary, and, of course, as being irresolvable, which clashes with his statement at page 71, viz., that emotions as such are secondary and compound.

Love, pure and simple, is surely an elementary emotion, having a central origin, but it has many objects and modes of manifestation, and it gains satisfaction and pleasure through a variety of channels, and thus becomes confounded with other emotional and intellectual elements. Hence, we must be careful not to confound its simple state as a source, with its compound manifestations.

Love has several designations in accordance with the special objects of its pursuit, and upon which it centres, such as sexual love, love of children, parental and filial love, and love of knowledge, truth, &c.,

Sexual love springs from an innate source or feeling, which prompts both mankind and animals to propagation. A duly developed and matured human being can no more prevent this feeling from arising than he, or she, can prevent hunger from making itself known. As such, then, sexual love is one of the strongest of the emotions. We know it is otherwise designated and spoken of as an appetite, a propensity, or passion, and the pleasure of its satisfaction is termed sensual. Nevertheless, it is the fundamental principle of love of sex. Moreover, where the feeling is very weak, so is the love for the opposite sex. Of course, other feelings, emotions, and desires, draw the sexes together in a similar way, as they draw individuals of the same sex to companionship, and where these desires are strong, and sexual love is also vigorous, the attraction of the sexes one to the other is more potent, and coherent, besides, it is more charming, refining, and abiding.

THE EMOTION OF ANGER.—As to anger being an ultimate and elementary emotion, as Dr. Bain represents it, there need be no doubt; though, at first sight, there seems to be some reason for doubt, inasmuch as it is liable to be stimulated to activity by several other feelings. Anger is classified as primitive and elementary, because it cannot be divided into anger and something not anger.

Permit me, in a few concluding remarks, to very briefly summarise what has been advanced:—

First—The object of the paper is to refresh your memories of Gall’s fundamental principle of the interdependence of the physical and psychical powers.

Second—The working of the physico-psychic telegraphic system, so to speak, has been exposed to view, with illustrations of its operations, on which the quotations from Luys on the physical side, and Bain on the mental side, have cast additional light.

Third—The critical review of Bain's illustrations of the operations of the simple and complex emotions; and the part these with the intellect play on the examination of a statue will have helped you to see more clearly the phrenological bearing of the subject to which I invite thoughtful attention; and especially would I urge all phrenologists to study the mental science as presented by psychologists.

Fourth—The evolution of the infant mind has cast luminous rays upon the subject, and I hope has done something toward enlightening the understanding of all present

DESCRIPTION OF THE ACADEMIC STRUGGLE
FOR THE SENIOR WRANGLERSHIP AT
CAMBRIDGE, 1890.

BY SAMUEL EADON, M.A., LL.D.

AFTER the analysis given of the intellectual organs or powers to be called into exercise in the study of pure mathematics, the most abstruse of all the abstract sciences, we shall cite two illustrious examples,—ladies, too,—who possessed these faculties in an eminent degree, and manifested their action so as to attract universal attention, and perhaps admiration. We refer to Mrs. Mary Somerville, who proved herself long ago the most distinguished female mathematician that England has produced. Her work on the "Mechanism of the heavens," and that other one on "The physical sciences," not to mention her physical geography in two volumes, with many articles on allied subjects, written in the scientific journals of the day, have given her a first position amongst the savants of this, and of every other age. In honour of her genius, Mrs. Somerville's bust is placed at Cambridge, alongside that of the illustrious Sir Isaac Newton, to surpass whom in analytical power is impossible (so says La Place, the great French scientist and astronomer), since there are no more universes in the vast empire of Jehovah, to which Newton's discovery of gravitation does not extend." The placing then of Mrs. Somerville's bust next to the statue of the immortal

Newton, is the highest honour man could pay to the genius of women.

Miss Phillipa Fawcett, the daughter of the Right Hon. Professor Fawcett, one of Her Majesty's ministers, went up to Cambridge at the age of 22, and entered into competition for the honour of Senior Wranglership with men who had for years been grinding under the ablest and most experienced tutors, in order to attain that distinguished academic position. Born well with cerebral texture, and with careful culture, adding to the gray or cineritious matter (the real thinking part of the brain) which she naturally inherited from both of her highly gifted and cultured parents, and not unconscious, too, of the arduous and daring attempt, Miss Fawcett, with all that calm coolness of self-felt innate power, took her seat at the examination tables to try her skill in dealing with the highest and most abstruse forms of abstract relationships.

Now, in fancy, survey the hall, and the assembled students, all University Graduates in their gowns, with one brave woman only as a competitor. The throb of anxiety is now being felt in every breast. Shortly, the bell rings to intimate that the examination is about to take place; the papers are given out, and the battle of intellect begins. Silence, as of death, sets in. It becomes pin-fall. Now and then the scratching of a pen may be faintly heard, but soon the sound dies away. The time flits swiftly by, as soul-effort, in full vigour and tension, is brought into play. Dead silence reigns around. Not a living being might be in that vast hall; when on a sudden the bell rings; the stillness is broken; the hum of voices takes place; the papers are given in; and the first day's examination is brought to a close.

Time passes on. The dawn of a second day's struggle streaks, with golden tints, the Eastern sky; thought begins to move in little wavelets of anxiety as the college hour approaches. The students, with their pale faces, and wan looks, are seen wending their way to the scene of conflict. Arrived—the business commences; the papers are again given out; and the soul begins once more to use its marvellous instrument, the brain, to manifest its wondrous powers. Soon an awful silence sets in. The depth of its intensity, amid so much humanity, gives it a touch of the sublime. What a sight! With knitted brow on they work, each diving into the arcana of his or her spiritual nature in the hope of turning up some new relation to help to solve the problems just given out. Stillness for a long time again prevails. At length the tinkling of the bell is heard; the time is up. The tearing and crumpling of papers is heard; the examination papers are

collected, and the doom of the second day's examination is irrevocably settled—but with what result time alone can show.

The third and final day of struggle arrives, when the last mental effort has to be made. Hypocrisy and nonchalance have to play their apparent card of indifference, as all must appear joyous and buoyant, whatever the internal feeling of depression may be.

Seats are again taken ; papers are once more given out, the bell tinkles, and the last struggle begins. What at this moment are the feelings of these aspirants to mathematical honours, no onlooker can define. Alas ! in many cases too sad to think of. Hope with some has winged its flight, and black despair stalks rampant through the vacant regions of the soul.

Once more the old stillness comes on. Concentration of thought, a sort of literary hypnotism, is observable between eye and paper and pen of every student. The work goes on, there is no external world of things to them. Their universe is all around and about them, of which, for the time, they are the little gods. At this moment, the horrid bell tinkles for the last time ; the trance of effort is broken ; the papers are given in ; the struggle now belongs to the past ; the result to the future. The shaking of hands takes place ; farewells are given and received : patience calmly waits, as best it may, its trial of endurance, till the day of decision is announced.

At last the day arrives when the successful candidates will be declared in the order of merit. At the time appointed the doors fly open, and in rush with a crash whole phalanxes of graduates and under graduates, till the theatre is filled to overflowing. For a few minutes the license of student life is at its height of frivolity. Hush ! The tread of academic feet is heard ; the door opens, the chancellor, in full academic robes and with a retinue of officials, presents himself to the assembled audience. This is a solemn moment ; the anxiety is intense. The stillness might be felt ; no one seems to breathe. At this juncture the orator rises, and, advancing to the front, amid the academic pomp of that ancient seat of learning, announces, in stately accents, that

MISS PHILLIPA FAWCETT

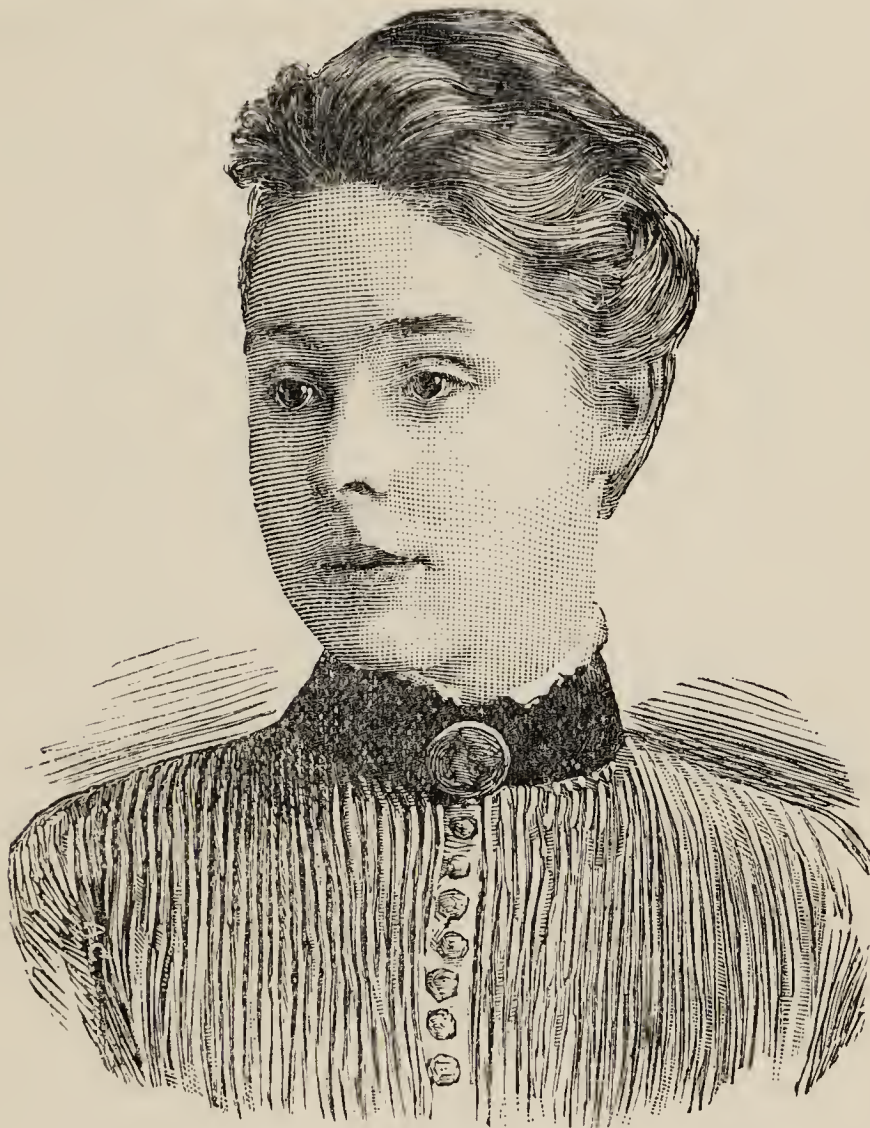
IS

THE SENIOR WRANGLER

OF

1891.

The result of the struggle was received with rounds of applause again and again repeated ; and when a gownsman called out in the language of Virgil : " Dux foemina facti," the applause became hilariously jubilant, and lasted for some time in the full tide of student enthusiasm. This was a proud day for the Fawcett family ; and sad was it to think that her distinguished father could not be present to listen to the



MISS PHILLIPA FAWCETT.

eulogiums pronounced, and to have heard the rounds of applause given in honour of his illustrious and laurelled daughter.

In due time, no doubt, the bust of Miss Phillipa Fawcett, the first and only lady Senior Wrangler of Cambridge, will be placed next to that of Mrs. Somerville, the two being the most illustrious lady mathematicians the world has ever known.

"A kiss from my mother," said Benjamin West, "made me a painter." When a child he had drawn a rude sketch of an infant sleeping in a cradle. His mother was so well pleased with it that she took the young artist in her arms and kissed him. That mark of maternal delight fixed his fate for life.

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(Continued.)

34.—TUNE.

Sense of melody and harmony of sounds—ability to learn tunes and detect discords.

IN another part of this work it has been shown that hearing cannot produce music, any more than seeing can give just conception and judgment of colours; but that a conception of the melody arising from the succession of sounds, must depend upon another distinct faculty of the mind. That those persons who possess an equally perfect auditory and vocal apparatus differ widely in their musical talents, is proved by every votary of harmonious sounds, as well as by every common observer. That this faculty of music is innate and primary, and manifests its power in different individuals in proportion to a particular development of brain, is a fact fully established by the observations of phrenologists. They have examined the heads, busts, or portraits, of Glück, Zumsteg, Dussek, Mozart, Viotti, Rosini, Crescentini, and Catalina, Handel, and Haydn, and of many other celebrated musical performers or singers, and have found an extreme development of the organ of tune in all of them. Many children, even, in which the organ is largely developed, are able to catch and change tunes soon after they begin to talk; and, on the other hand, adults in whom the organ is small, after the most laborious efforts under the most able instructors, are utterly unable to turn a tune, or even distinguish one tune from another.

The natural language of music is universal, or, in other words, sounds that are melodies to one nation, are measurably so to another; which shows not only that the principles of music exist in nature, but that the human mind, in order to adapt itself to these principles, must necessarily possess an innate faculty whose proper function is to perceive and apply them; and hence it is, that what constitutes melody and harmony of sound to the Englishman, is no less so to the Swede, to the wild rover of the desert, and to him who inhabits the islands of the sea. Some nations, however, as well as individuals, are more musical than others, and are distinguished by a larger development of the organ of tune. In this respect, the Italians and Germans excel the Spaniards, Frenchmen, and Englishmen; and this organ is generally very large in negroes, which exactly corresponds with their wonderful musical propensity and talent.

These remarks will show the utter folly, not to say absurdity, of that modern fashionable prejudice which demands that music shall be taught young ladies indiscriminately, and without the least regard to the individual's natural talent.

VERY LARGE.—One having tune very large, will be able to learn tunes, by hearing them once or twice repeated, and will never forget them; is filled with ecstasy, or completely carried away, with good

music, but cannot endure a discord, or an awkward or artificial singer or player ; produces a powerful impression upon the feelings of those who listen to his performances, and literally charms them, &c.

One having tune very large, with large adhes., ideal., ven., hope, imitat., time, lang., individ., weight, and compar., will be a natural musician of the first order ; be pre-eminent for his musical taste and talent ; pour forth his whole soul in the most melting and voluptuous strains of melody and harmony, so as to often overcome the hearer ; learn, as it were by intuition, to play upon any musical instrument ; perform to admiration all kinds of music, particularly sentimental pieces, Irish airs, Scotch melodies, and other pieces of kindred sympathy and pathos, and the soul of melody.

LARGE.—One having large tune, will be able easily to catch tunes, and to strike correctly their key note ; has a correct musical ear, and with a good voice, can easily become a good singer, or a good performer upon musical instruments ; delights to listen to good music, and can easily detect a discord, &c., one having large tune, with large ideal., will not only be extremely fond of good music, but will impart a richness, and pathos, and melody to his musical performances which are calculated to move the heart ; with large time added, will be a melodious singer, and add new charms to his music by keeping the beat correctly ; but with time small, will have an excellent musical ear, accompanied with much melody and good taste, yet will fail greatly in time, and when singing in company generally sings too slowly ; with combat., and destruct., large, will delight greatly in martial music, and be highly excited by the stirring notes of the fife, the drum, the bugle, &c. : with adhes., and ideal., large will be very fond of songs ; with large time, and hope added, will be highly delighted with dancing tunes, and in dancing, precisely keep the step : with hope small, and ven., conscient., and adhes., large will prefer plaintive airs, minor moods, solemn devotional music ; and with hope large even will still prefer solemn tunes, yet select those of a cheerful, lively air ; with large lang., can easily associate tunes with the words set to them, and thus readily commit songs, hymns, &c., so as to sing them by rote. In learning tunes, and in singing them with words, the organ of lang., renders very important assistance. The same is also true of imitat., which gives the proper expression to a musical performance, enables the performer to imitate different kinds of style, &c.

FULL.—One having tune full will be able with considerable practice to learn tunes both by note and also by the ear, may be called a good and even superior singer, yet, for any musical talent he may possess, will be indebted as much to art and science as to nature ; with the aid of notes, and a good knowledge of the principles may be able to read music correctly, and even sing at first sight, almost any music presented to him, yet his musical performances will be characterised more by accuracy than melody and pathos. One having tune full with large ideal., will be highly delighted with good music, and have a correct musical ear, and impart a peculiar softness to his singing,

and impart this feeling to his musical displays : with lang., moderate, will receive in learning tunes very little aid from lang., and fail somewhat in applying words to musical sounds ; with compar., large, will readily decide between what tunes and words a harmony of sentiment exists ; and, with large ven., added, when a hymn is given out, will be able to select the most appropriate tune, and, with imitat., also large, will sing it in such a manner as to convey the sentiments and feelings expressed in the words.

MODERATE.—One having tune moderate, will be obliged to labour hard to read music readily ; be obliged to hear tunes many times repeated before he can learn them by rote, and will forget them unless he sings them frequently ; may perhaps be a respectable singer, but will be indebted for this talent much more to science and application than to nature.

One having tune moderate with ideal. large, will listen with rapture to good music, yet none will please him except music of the first order ; will be very unpleasantly affected by discord, and perhaps be a good judge of music, yet will not be a good or great performer himself.

SMALL AND VERY SMALL.—One having tune small, or very small, with much effort may learn to sing and play tunes, yet will be only an automatic and mechanical musician, and will be unable to make melody, or learn tunes by the ear ; with large ideal., will listen with delight to good music, and generally be insensible to the higher charms of excellent music. One having tune very small, will be unable to strike a note correctly, or even to distinguish one tune or note from another.

LOCATION.—Tune is located in adults, about three-quarters of an inch above the organ of calcu., and within the arch of the superciliary ridge, in the lower lateral or angular part of forehead. The location of tune is so much affected by the size of the surrounding organs, and its external appearance, by the temporal muscle which passes over it, that, except in the case of children, it is difficult to decide correctly upon its size. It may also be added that a good voice adds greatly to good music, and is frequently mistaken for a musical ear or talent. Others, again, in whom the organ is only moderate, are tolerable singers, but are indebted for this talent chiefly to science and practice ; hence many correct decisions upon tune are considered erroneous.

35.—LANGUAGE.

Power of communicating ideas by means of particular signs—memory of words—recollection of arbitrary signs as expressive of ideas.

In the plenitude of His wisdom and goodness, the Great Author of our being has seen fit, in various ways, to distinguish man from “the beasts that perish” ; and one of these distinguishing characteristics is most strikingly displayed in the powers of speech. Without a faculty by means of which to communicate to his fellow-men his thoughts, man would be incapable of any considerable degree of refinement, and of carrying on those vast schemes and projects by

which the face of the earth is subdued and cultivated, and the beasts of the field brought under subjection to him—by which science and art flourish, commerce springs into life, and cities, kingdoms, and republic burst forth in all their magnificence and glory.

The signs of language are of two kinds, natural and artificial. The natural signs are common both to man and the lower order of animals by the operations of the instinctive principles of its nature. In brutes, these natural signs are employed, for example, in the bleating of the lamb, the neighing of a horse, and the chirping of a bird; and in man, in that expression of voice and feature which he uses in sighing, groaning, laughing, crying, and in the use of all that class of semi-articulate sounds called interjections. But the grand distinction between the faculty of language in man, and the same faculty in the brute creation, consists in the ability of the former to make use of distinct, articulate sounds, which we call speech, as signs of his ideas; whereas the ability of the latter is confined to the use of inarticulate sounds. That the power of speech in man is primitive, and depends upon a distinct faculty of the mind, is evident from the fact that it greatly differs in different individuals, and cannot therefore be the result of education alone, but must originally be possessed by them in various degrees of strength. Were it not so, each individual would display this power in proportion to his cultivation of the faculty; but such is by no means the case. Some children who have received little or no instruction, learn the use and application of words with a facility and accuracy altogether wonderful; and others again, upon whom a superabundant amount of instruction has been bestowed, remain extremely deficient in this respect, and find great difficulty in commanding words enough to express their ideas with even common propriety.

We see persons, also, who have studied many languages, received all the advantages of instruction from the greatest linguists, and wasted long nights over the midnight lamp, and yet, when they come to express themselves in their mother tongue, often display a style marked with barrenness, stiffness, and impropriety; whereas others, who have enjoyed no such advantages, are able to speak and write in a style both copious and eloquent.

Some people are able to repeat a page verbatim after having read it but two or three times over; whilst others again cannot repeat it after having read it as many hundred times.

VERY LARGE.—One having language very large will possess remarkable copiousness of speech and a great flow of words; talk with perfect ease and the greatest delight; and, with secret., only moderate, and approbat., large, among his acquaintances will be, perhaps, an incessant, not to say intolerable, talker; with concent., full, will be able and much inclined to throw out the same idea in a great many different forms of expression, frequently amounting to tautology, and not infrequently bury up his ideas in a multitude of words; with individ., form, and local., large, will be able to commit to

memory page after page, even at a second reading ; will be excessively fond of reading, and of hearing and relating anecdotes ; after listening to an interesting speech, oration, or sermon, will be able to repeat it nearly verbatim ; with large ideal., and imitat., and only full caus., added, will make a great display of eloquence and splendour in his language, and yet be destitute of real power of thought ; will be loquacious, flippant, and verbose, yet embody but little sense or argument in what he says ; with very large compar., caus., individ., event., ideal., and combat., will be able to engross the whole attention of the hearer, and by the clearness of his reasoning, combined with the superior elegance of his diction, and the frequent and well sustained bursts of his overpowering eloquence, enchain him for hours to the subject ; will be rich, copious, flowing, vehement, and energetic in his style and manner, but a much better extempore speaker than writer, because in writing he will be apt to employ too many words for his thoughts.

LARGE.—One having language large, will find it easy and natural to learn and remember words, possess in a high degree, freedom, fluency, and power of expression, will fill out his sentences well, will be able to write with ease and facility, and give a copiousness to his style, and have a great desire to talk and read, as well as to hear others do so. One having lang., large, with large individ., form., local., and event., can learn verbatim with great rapidity and very little effort, will make very rapid advances as a scholar, far outstrip those who have lang., event., and individ., only moderate, and appear to understand his lessons much better than he really does, and thus gain great credit for his recitations ; with only moderate caus., added, will talk much upon subjects without instructing the hearer, or presenting many new ideas, or profound observations ; with large ideal., and compar., and full concent., added to this combination, is capable of becoming quite interesting, and even eloquent as a speaker, will be chaste and finished, if not polished and graceful, in his language and expressions, and with imitat., also large, decidedly popular as an extempore speaker ; will be appropriate and easily understood, possess extraordinary facility of expression, and, whenever he becomes animated in speaking, will quote poetry with ease and correctness, yet will have a better command of words than of ideas ; with individ., large, will use many adjectives and qualifying phrases, and yet employ words with considerable definiteness and precision ; with large secret., cautious., approbat., conscient., and ven., may be taciturn and reserved before strangers or partial acquaintances, yet, when amongst his equals will talk very freely ; and with caut., also large, frequently hesitate in speaking, but this will arise from fear of committing himself, or of saying what he does not intend to say, rather than from a want of words ; but, with secret., large individ., combat., and destruct., will have a great command of severe epithets, and, when excited, be extremely pointed and sarcastic in his expressions, and with compar., also large, can pour out a torrent of abusive words ; with adhes., and benev., large, will have a great command of words

expressive of sympathy, affection, endearment, tenderness of feeling, and with imitat., also large, will accompany his verbal communications with appropriate gesticulation, and speak through his action, the expression of his countenance, as well as by his words ; with compar., large, will have a critical knowledge of the precise meaning of words, of philology, synonyms, and be prone closely to criticise both his own expressions and those of others, and with large individ., and event., added, is capable of becoming a first-rate linguist ; with large caus., and compar., and only full ideal., will be bold, original, and powerful in his expressions, but not finished, elegant, or polished, and if large combat., destruct., and small secret., be added, will speak out his ideas in a plain, strong, blunt, and frequently uncouth style, will despise the flowers of rhetoric, and finely turned periods, and present the facts and the arguments of his subject without embellishment ; with a good education, be capable of becoming an accomplished and powerful public speaker.

FULL.—One having language full, will have a respectable command of words, yet, in order to become fluent, will require considerable excitement ; will not be barren in style or expressions, nor yet employ many new coined or redundant words, with some effort may commit to memory, yet, unless individ., form., and local., are very large, will not be eminent for this talent. One having lang., full, with compar., and caus., large, will have a rich fund of important ideas, but they will lose some of their force when expressed, in consequence of their calling more loudly for words than can be answered by the speaker, who, unless considerably excited, will hesitate for words ; will be brief and compact in his style ; with large ideal., added, will be clear, elegant, and forcible as a writer, but, though he may get on tolerably well as a speaker, will not be very fluent, and will employ no more words than the sense demands.

MODERATE.—One having lang., moderate will be sometimes at a loss for words to express his ideas, and particularly so for happy and appropriate words ; one having lang., moderate, with very large compar., will be very critical in the use of words, and seldom employ one which is not fully expressive of the meaning intended to be conveyed ; with large ideal., and individ., added, may be a first-rate linguist, and a clear and elegant writer, but will not be a fluent speaker—may command words enough for the use of the pen, but not for the use of the tongue, will adopt a style more clear than copious.

SMALL, AND VERY SMALL.—One having small lang., in expressing his thoughts will employ but few words, and those of everyday use ; in speaking, will frequently hesitate for words, and possess very little variety, find extreme difficulty in calling to mind the particular words required to express his meaning ; consider talking as rather a burden than a pleasure, and consequently will say but little, and find it very difficult to commit to memory ; with combat., large, or with a nervous temperament, may speak in a rapid, though somewhat incoherent manner. With very large caus., and compar., will have many more thoughts than words, and make every word express some important

idea ; can think much better than communicate ; say a great deal in a few words. One having lang., very small will find the utmost difficulty in recollecting the arbitrary signs used to express the simplest and most common ideas ; from actual poverty of lang., will be obliged to employ words in a sense widely different from their common and legitimate signification ; cannot commit to memory, or learn to read with anything like tolerable facility, and will be scarcely able to understand others, or express himself so that they can understand him.

LOCATION.—Lang., is located upon the supraorbital plate, in the third frontal convolution, and the lower surface of the anterior lobe. When large, it presses down the upper orbit of the eye, and pushes the eye outward and downwards, giving a fullness to it, and a swollen appearance to the under eyelid. When the organ is small, the eyes will appear small and sunken, and the under eyelid small. If you draw a line from the root of the nose for an inch and a half backward to the centre of the brain it will reach the projection called the sella tercica or Turkish Saddle. On each side of this point, where the optic nerves enter the orbit of the eye, a convolution lies, which runs from that point transversely in front of the middle lobe, until it reaches the convolutions, which constitute the organs of order and number, and in its way it blends itself with the posterior portion of the convolution of which the organs of the other perceptive faculties are composed.

Dr. A. Flint says : “ It seems certain that in the great majority of persons, the organ, or part presiding over the faculty of articulate language is situated at or near the third frontal convolution and the Island of Reil, in the left anterior lobē of the cerebrum, and mainly in the part nourished by the middle artery. In some cases the organ seems to be located in the corresponding part of the right side.” See Combe’s “ System of Phrenology,” “ Ferrier’s Cerebral Diseases,” page 93 ; Dr. Spurzheim, in his “ Physiognomical System,” page 453. It has two divisions, verbal memory throws the eye towards the nose and gives memory of words, and verbal expression throws the eye outward, and gives ability to talk and select appropriate language.

GENUS II.—REFLECTIVE OR REASONING FACULTIES.

These faculties impart to the human mind an intellectual power of a higher order than that given by the perceptive and semi-perceptive faculties. They enable man to invent, to think and reason, to ascertain those abstract relations and bearings of things which neither observation, nor any other mental power can reach. Most of the other intellectual faculties are possessed in a greater or less degree, by some species of the lower order of animals, and some of them to a far greater extent than by man. Yet, none of these animals can invent, or to any considerable extent adapt means to ends. Neither can they improve upon their mere animal instincts for they are manifestly destitute of what, in man, is called contrivance. From generation to generation they grovel in the same beaten track, and as far as improvement is concerned, remain stationary ; whilst soaring, reasoning man is always advancing, and improving upon the discoveries and

inventions of his predecessors. At the present day, the sparrow builds its nest, and the beaver its hut and dam, in precisely the same manner that their progenitors did four thousand years ago, but when we compare the ten thousand improvements in manufactures, agriculture, commerce, science, and the arts, of the present English and American race, with the rude huts and implements of their Saxon fore-fathers, we behold the striking and wonderful effects of cultivated reason.

This subject also enables us to advance understandingly to another important characteristic of man, by showing us how it is that he becomes, not only a rational, but, likewise, a moral and accountable, being. Unaided by the reasoning faculties, conscience would be lame and blind ; but, with their assistance it is enabled to lay hold of the first principles of right and justice, and to point out to man the path of rectitude and moral duty. Unaided by the reasoning faculties, the other moral faculties would also wander in obscure twilight, and often stumble upon the dark mountains of error ; but, with their help, veneration is enabled successfully to study divine character, and the moral relations that exist between man and his Maker, as well as between man and his fellow-men.

Philosophers of all ages have been agreed upon the fact that man is the only animal endowed with the moral and reasoning faculties ; but it has been left to phrenologists, to observe and point out the fact, that man is also the only animal that possesses a high and broad forehead, and an elevated coronal portion of the head—in which the organs of these faculties are located. And yet, without fully comprehending, or duly appreciating the importance of the fact, mankind have always been aware, as all history amply proves, that a high, bold and prominent forehead is necessary to a great and profound reasoner. That there really exists a reciprocal relation between the reasoning powers and the expansion of the upper portion of the forehead, will be made fully manifest by comparing the heads of any deep thinkers and strong and bold reasoners, with those of individuals who possess these intellectual qualities in a lower degree—by comparing, for example, the foreheads of Franklin, Washington, Cardinal Manning, Gall, and Melancthon, with those of the New Zealander, Indian, Carib, idiot, &c., and the heads of criminals in the cuts upon the chart. Now, such coincidences as these are too striking to be the result of mere chance, and must, therefore, be produced by design ; and if by design, they constitute a page in the book of nature, worthy the perusal of every student of nature.

THINGS USEFUL TO KNOW.—A new, soft paint-brush is a good thing to dust carved furniture with, as the bristles will penetrate the deepest crevices. Undressed kid gloves may be cleansed by washing them in naphtha. Wash on the hands and hang them out in the air to dry. To rid one's self of a mole, try to remove it by tying around it white silk thread. It is claimed that the mole will drop off in a few days.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., JUNE, 1892.

DEEMING.

DR. LYLE, of Melbourne, declares Deeming to belong to the order of instinctive criminals, and is as much wanting in the moral sense as a blind man is in the sense of sight, since killing is as much a part of his nature as eating. Dr. Lyle says his head measurement is six and a quarter inches, which he explains is exceedingly small in comparison with his height. We regret that the doctor has not given more particulars respecting this measurement, and also that he has not given us other measurements of Deeming's head. We have sent for further details of this notorious character, and hope to be able to place them before our readers in some future number, as the case is one of great scientific interest. The portraits that have as yet reached us are so contradictory that we hesitate to reproduce any until a more authoritative one is to hand. We are further informed that Deeming's whole character is one of extreme stupidity, and the jokes he makes are coarse and pointless. We cannot be so sure of his perfectly stupid mind, else he could not possibly have perpetrated such atrocities. There must have been method in his madness and sanity in his insanity, to have enabled him to use his mind as he did, although Dr. Lyle considers his escape hitherto has been due to accident rather than cunning. When his brain is finally examined, certain topographical centres in the base, where the propensities are situated, will probably be found to be congested or abnormally developed. The excitement of his animal centres must have caused the impulse to use or gratify those organs, especially as the restraining and moral faculties appear to be wanting. We have no doubt that his moral sense has become atrophied, and that a distinct organic lesion of the convolutions in the moral group will be found.

MEDIÆVAL SKULLS.

DR. BEDDOE, the author of the first Rhind Lecture published in the *Scottish Reviews*, complains that the anthropologist in this country suffers from a serious grievance. It is fortunately peculiar to him, for it is the difficulty of obtaining facilities for measuring mediæval skulls. Popular, and even

clerical, prejudices on the subject are a serious obstacle, but Dr. Beddoe has taken advantage of any such opportunities, and he has been struck with "the fine frontal development" of some Monkish skulls, while those of persons supposed to have belonged to the mediæval chivalry were often small and poorly developed. This accords with the observations of Mr. Galton, who is of opinion that the slackening or positive arrest of intellectual progress during the middle ages, was due in some measure to the fact that, men who had more brain than muscle naturally gravitated toward the monasteries, and being there shut up, and prohibited from marriage, did not reproduce their kind, while the sturdy blockheads who remained outside the convent-walls did do so.

Dr. Beddoe has, he thinks, made a curious discovery, namely that there is a direct relation between men's pursuits and the colour of their hair. Thus we are told that an unusual proportion of men with dark straight hair enter the ministry (like Canons Wilberforce, Farrar, Fleming, the late Dr. Allon, Rev. Newman Hall, while we must make exception to Dr. Parker and J. W. Dawson). That the red-whiskered men are apt to be given to sporting and horse-flesh (Mr. Burdett Coutts is an exception); and that tall, vigorous, blonde, long-headed men, still furnish a large contingent to our travellers and emigrants. That, it is observed, was the physical type of the Germans who took part in the overthrow of the Roman Empire, and it would seem to have been that of the leaders, at least of the Gauls, who colonized Galatia and brought home the treasures of Greece and Italy to Toulouse; though it has at present more representatives among the Scandinavians and ourselves than among other people. What is more singularly stated as a possibility is that ere long we may have the faculty (?) of altering the colour of our hair by radical methods. The thought is also expressed by Dr. Beddoe that the plumage of canaries and some other singing birds can be considerably altered in the direction of red or orange, by feeding them with spicy, stimulating food—red pepper and the like. And the same authority thinks it quite possible that the production of the pigment in the hair might be increased by a diet that mildly stimulated the organs that produce it.

WOMAN'S BRAIN.

By the side of the agitation for Woman's Suffrage comes the weighty evidence of a man of powerful scientific knowledge and experience, Sir James Crichton Brown, M.D., LL.D., F.R.S., who, on the 118th Anniversary of the Medical Society

of London, delivered a lecture on the subject of "Sex in Education." He maintained (on truly physiological and phrenological grounds) that the intellectual differences between the sexes were real and deeply founded in structure. He said "that an extra ounce of brain matter within the cranium might involve an enormous mental difference. It would do this were it generally and equally distributed, and it would do so in a still more striking manner were it localized in a certain region of the cerebrum; and there are grounds for believing that there is a difference in the balance of parts in the male and female brains respectively: and this difference I adduce as the second sexual distinction between them" (the first being that of weight and size). He recognized with intense pleasure the importance attached to the fact that "localization in a certain region of the brain or the cerebrum has a respective influence," and that there is a difference in the balance of parts in the male and female brains, a fact which we have often pointed out in these columns from anatomical, physiological, and phrenological standpoints.

If there is a difference of parts, then localization of faculties must to a certain degree be admitted, and that degree appears to be broadening, for in the next sentence of the lecture we read, "Broca, no mean authority, has declared that the occipital lobes are more voluminous in the female than in the male," and my own observations published in "Brain," 1880, confirm, as far as they go, his conclusion and show that while the frontal lobes are equally developed in both sexes, the parietal lobes corresponding roughly with the motor area of Ferrier, are larger in the male than in the female, and the occipital lobes, certainly sensory in their functions, are larger in the female than in the male.

Is this not the scientific basis that Dr. Gall promulgated? Most certainly it is; and Dr. Ferrier and Sir James Crichton Browne have done much towards increasing my belief in Dr. Gall's writings.

Sir James C. Browne, besides proving that the female brain is lighter than that of the male, also shows that "the blood supply is less, and contains 4,500,000 corpuscles of the cubic millimetre, instead of 5,000,000 in the case of the male, and that it is directed in the latter more towards the portions which are concerned in volition, cognition, and ideo-motor processes; while in the female it is directed towards portions which are mainly concerned in the discharge of sensory functions."

This in the first place would seem to prove that with less brain weight there is less need for an equal supply of blood

from the internal carotid and vertebral arteries to the female brain. But the same authority states that when the difference in weight of the male and female brain is taken into account it is found that in proportion to brain weight the diameter of the above-named arteries is greater in the female than in the male, and so it appears that upon the whole the female brain receives a larger supply of blood to its mass than does the male brain, but of course we are reminded by the fact of the fewer corpuscles in the blood going to the female brain to the cubic millimetres that the blood is poorer.

Many of this learned authority's remarks on the careful cultivation of the female brain rather than to give it over-pressure we thoroughly coincide with, and not until women are taught to study themselves organically will they appreciate in what lies their power.

Fowler Institute.

MEMBERS' NOTES.

"Poetry reveals to us the loveliness of Nature, brings back the freshness of youthful feeling, revives the relish of simple pleasures, keeps unquenched the enthusiasm which warmed the spring-time of our being, refines youthful love, strengthens our interest in human nature by vivid delineation of its tenderest and softest feelings, and, through the brightness of its prophetic visions, helps faith to lay hold on the future life."—CHANNING.

At the May monthly meeting Mr. Smith read a paper upon "Wordsworth." He commenced by defending poetry from the attacks of those who could neither appreciate nor understand it, and said that poetry had nothing to fear from such people, because it was the natural product of some of the primary faculties of the human mind. Unless man was robbed of one of his finest capacities, and cast into a far more material mould, poetry would live for ever. Indeed, so far from it ceasing to exist, its vitality would increase; and, as the human race went on evolving, it would recognise the folly of viewing everything from a material point of view, and appreciate poetry more and more. A short sketch of Wordsworth's life then followed, but most of the paper was devoted to the consideration of his poetical works, which, like the plays of Shakespeare, might be called a library in themselves. Wordsworth's first productions met with severe criticism, but the tide of public opinion gradually changed, and before his death the ambition of his life was fulfilled. Wordsworth was a great teacher. The following are some of the lessons that might be learnt by those who read his poetry—the duty of pleasure, the necessity of communion with nature, the right use of the imagination, the desirability of exercising the social faculties, the advantages of travel, and the claims of duty. He has been

called the "priest of nature"; he was also the "poet of humanity," and the "champion of liberty." See his blameless life; he taught the dignity of man, and in his writings he sang the praises of woman. We have heard a great deal about Nature's gentleman—Wordsworth wrote about Nature's lady and gave an account of her education. In one of his finest poems he has shown that his admiration for the fair sex was as great as was that of his disciple Ruskin.

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ON Wednesday, May 4th, an interesting lecturette was given by Emmet Densmore, M.D., on "The Natural Food of Man." He said, if it be borne in mind that dates, figs, raisins, prunes, and like fruits are largely carbonaceous, and contain much the same elements that are found in bread and cereals, it will not be difficult to intelligently decide upon a suitable fruit diet. From 65 to 75 per cent. of whole wheat meal is composed of starch; dried figs are said to contain 68 per cent. of glucose. The starch of bread cannot be utilised by the system until it is converted into glucose, which requires a protracted digestion; whereas this element in figs is ready for assimilation when first eaten. To those with whom milk agrees, two meals a day can be profitably made from dates and milk, or figs and milk. For sedentary people, a half-pint of milk and four to six ounces of dates at a meal are adequate. Those engaged in manual labour will need a pint of milk or more at each meal, and double the amount of fruit. Those who cannot use milk, but with whom milk cheese agrees, about three ounces of this very nutritious food may be used instead of the half-pint of milk, or one or two eggs in lieu of both cheese and milk. Vegetarians may use eggs by themselves, or in the form of omelettes, custards, or like preparations; or they may use milk or cheese. No hard and fast rules as to quantities or foods to be selected can be laid down, because of the varying condition and needs of different people. The main thing to remember is that coarse bread and grains irritate and inflame; whereas fruits, while subserving the same purpose in keeping up the heat of the body and in nourishment that is performed by bread and cereals, has in addition a specific acid which is chemically aperient and blood purifying, and which, even by this fact alone, is proved to be the natural food of man.

IDEALS.

"Ideals constitute the soul of life."

Extract of lecture given by Miss S. Maxwell, at the Fowler Institute.

HOWEVER low in the scale of civilization there is in every soul an ideal, and from the rudest savage to the greatest philosopher, scientist, or poet, from the distant ages of the past to the present day, the standard of perfection it erects in the mind has been and still is the greatest possible incentive to human improvement and all advancement in civilization, art, science, and religion. Man must love the highest when he

sees it, and, loving it, is impelled by an irresistible fascination to strive after it. Our ideal may be high and complete, or low and insufficient, yet it is better than the actual, and the activity which the effort to reach it promotes in the mind gradually moulds it into its own image and clothes it with its own beauty and loveliness ; for it is a law of influence that we become like what we habitually admire. Imagine a life without an ideal—being devoid of the sense of a higher or more perfect state of existence, it would be content with its present imperfect condition—progression would be impossible. It would be a life without a history and destitute of significance. It may be described in one word—stagnation. Henry Drummond in the “*Changed Life*” says, “All the real joy and progress in humanity depends on finding something to reverence something higher than ourselves, an ideal.”

The principle of following or copying excellent models, adopting for imitation the most perfect ideals, underlies all work. What painter, ambitious to excel, that has not studied Rubens, Titian, Turner, and others, who rank amongst the world’s greatest painters ? What sculptor, desirous of perfecting statuary, has not studied the famous Florentine artist, Michael Angelo ? He who would excel in music, oratory, science, philosophy, medicine, or mechanics, must study the special powers in each department. Cicero tells us that he always had a standard of greatness before him which was unmeasured, infinite. He determined to stand by the side of Demosthenes. He laboured, he toiled, he achieved the victory, and stands perhaps as high up the hill of fame as his master.

As there are no two persons alike, so the ideal of no two persons is alike, and this difference is accounted for by phrenologists. First, by the size and activity of the organ of ideality. Second, by the relative size of the other organs of the brain. Third, by the quality and temperament of the individual.

Our ideals become higher and more expansive with the evolution of our mind, and alas for us if God and the universe were not immeasurably grander than mankind’s most majestic conception of them ; but the principle which underlies one and all is always the same. It presents a higher truth to the mind than the one already possessed, and acts in greater or less degree upon every faculty of the mind ; it is the continual exercise of a firmly noble choice between the larger truth and the lesser ; between that which is perfectly just and that which falls a little short of justice, &c., which constitutes an ideal life ; and it is by this choice that we approach slowly, though surely, the highest attainable ideal of human life—perfection of character.

Descriptions of an ideal poet and critic, by O. W. Holmes, an ideal cook by Ruskin, an ideal education by H. Spencer, an ideal church by John Page Hopps, and an ideal of God, brought the paper to a conclusion.

* * *

THE Institute authorities are evidently anxious the social region of our brains should not be neglected, for Mr. Fowler and family have kindly invited us to hold the June monthly meeting at their residence at

Grove Park. This will take place on Saturday, the 11th. Judging from similar occasions in previous years, this is likely to prove a most enjoyable change.

TRAINS leave Charing Cross at 2.52, 4.5, and 5 p.m. ; Cannon Street, 2.30, 2.53, 3.0, 4.13, 5.11 p.m. ; London Bridge, a few minutes later. The Committee are endeavouring to arrange that the July monthly meeting should take the form of an outing to some rural spot within easy access of London ; full particulars of which will appear in the July number.

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MR. FOWLER would like to thank members who have so kindly responded to his appeal of co-operative help towards a fund to be forwarded to Mr. Craig.

G. B. COLEMAN.

Hygienic and Home Department.

IN a family of children there is a chance for every sort and variety of natures, and for natures whose modes of feeling are as foreign to each other as those of the English and the French. It needs a common interpreter, who understands every dialect of the soul, thus to translate differences of individuality into the common language of love.—*H. B. Stowe.*

SYDNEY DOBELL tells us that his idea of true womanhood is a wife and mother content with simply trying to live out Christian ladyhood to its fairest and noblest possibility.—*Alexander Smith.*

IF a woman is not fit to manage the internal matters of a house, she is fit for nothing, and should never be put in a house or over a house, any way. Good housekeeping lies at the root of all the real ease and satisfaction in existence.—*Harriet Prescott Spofford.*

THE eternal and ineradicable distinction of sex is one principal reason why women in a representative government should be directly represented. If lawyers alone cannot safely be trusted to make laws for mechanics, if merchants alone cannot legislate for farmers, if every well-defined class in society is entitled to its own authoritative expression through the ballot, surely women, who are the wives and sisters and mothers of men, should give expression to the domestic interests from the feminine point of view. If a blacksmith cannot fairly represent a physician, how much less can a man represent a woman !—*Henry B. Blackwell.*

HAVE YOU LEARNED

THE value of sunshine ?

To change a house into a home ?

The great uplifting power of music ?

To think and judge without prejudice ?

- To look up, then reach up and grasp the best ?
 That some uncomfortable words may be overcome ?
 How much environment has to do with what you are ?
 What a little thing will sometimes make a child happy ?
 That an outside door, or even the glass in it may tell secrets ?
 To distribute good cheer, sweet thoughts, tender remembrances ?
 That a clear, bright light conduces to social, friendly chat at tea time ?
 That there are two kinds of wealth, and one is of the heart and mind ?
 That the paper and pictures on the walls, the carpets and curtains may affect the mood of a sensitive person ?
 That a tidy is out of place when it becomes more important than the object which it is supposed to protect ?
 From experience, that discouragements are to be found on all sides, but that encouragements are dealt out sparingly by prudent hands ?

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope, and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

HERR COHEN occupied the chair, when L. N. Fowler lectured on Wednesday, April 20th, on "The Selfish Propensities." At the close Mr. Fowler gave a delineation of a lady's head.

DR. DENSMORE, editor of *Natural Food*, gave a most concise lecture on his "New System of Diet," on April 4th. Dr. Densmore was accompanied by his wife, Dr. Helen Densmore, who is a constant and clever contributor to *Natural Food*.

MISS MAXWELL gave a highly interesting lecture on "Ideals," on April 27th. See remarks in another column.

MISS J. A. FOWLER has been recently lecturing on Phrenology and Physiology at York (twice), New Swindon, Lewisham Bridge, Bromley (Kent), Oxford, at Mansfield College ; Polytechnic Institute, Woolwich.

MR. T. REES DAVIES, of Hipwin, has removed to larger and more commodious premises at Halkyn, where he hopes to spread the science of phrenology. He has been most successful in some of his consultations in guiding young men into their right profession.

THE genial and respected phrenologist, Mr. Stooke, of Bristol, was the principal actor at St. Matthew's Church, of that City, on the 9th

March, when Miss E. M. Elkins, who also played a prominent part in the proceedings, relinquished her name for that of the above-mentioned gentleman.

CONGREGATIONAL LITERARY CLASS, MELTON MOWBRAY.—Under the auspices of this class, a lecture, entitled “Selections from the Correspondence of a Professional Graphologist,” was recently given in the Congregational Schoolroom, by Mr. Eugene Gorrie. Dr. Tibbles occupied the chair; and there was a good attendance. Mr. Gorrie succeeded in highly interesting his audience, who were not slow to show their appreciation of his entertaining lecture.—*Grantham Journal*.

PHRENOLOGY.—Nobody thinks for a moment now of denying a very prominent position to the science of Phrenology, and we have in Professor J. Millott Severn, who is paying his fourth annual visit to Nottingham, not only an enthusiastic phrenologist, but a careful delineator. That the science is thought a great deal more of than it used to be is proved by the fact that capable phrenologists are largely consulted by all classes of society. There are sceptics, of course, but to every disbelieving enquirer there are ten who consult proper phrenologists intelligently, knowing what they go for. By far the greatest number of those who consult this gentleman at his rooms in Clumber-street do so from personal recommendation—the best of all recommendations.—*Nottingham Daily Express*.

METHODIST NEW CONNEXION MUTUAL IMPROVEMENT SOCIETY, OLDHAM.—This session of the above society has been favoured with two lectures by Mr. J. F. Brierley, of Oldham. The first one was on “Noses.” During the delivering of the lecture sketches were given of the various types of noses on the blackboard. Remarks were made on the uses of tobacco, snuff, alcohol, and other irritants, &c. At the close questions were asked and answered in a very convincing manner, which shewed that organic disease of the body was indicated in the nose as well as character. The second lecture was upon “Man—Past, Present, and Future.” The various sciences of man were explained; the different forms of skulls and nationalities were pointed out. Several students were present, and highly appreciated the lecture, and the way in which it was illustrated.

MR. and MRS. THOMPSON, of Scarborough, commenced a series of popular lectures in the Assembly Hall, Sunderland. There was a large audience, and the subject chosen for the evening’s discourse, “How to read Character,” delivered by Mr. Thompson, was one which was most instructive to those interested in the subject. The lecturer, who received a hearty greeting, opened by a concise history of the science, and then explained the various differences in the shapes, &c., of faces, the neck, chin, jaws, mouth, and cheeks, throughout displaying a complete mastery of his subject, which he, in addition, presents in a clear, interesting, and at times highly amusing style. Afterwards

several persons ascended the platform, and had their characters delineated, much to the amusement of the audience. The lecturer, who illustrates his addresses by numerous models and a comprehensive collection of paintings of celebrated personages, will to-night further continue his subject, treating on the different characteristics of the nose, voice, walk, &c.—*The Herald and Daily Post*.

ON Tuesday, May 3rd, Mr. H. C. Donovan, C.E., gave a lecture before the British Phrenological Association, at 63, Chancery Lane, W.C., on "The late Dr. Donovan's System of Manipulation." The lecture was illustrated by numerous lantern-slides, and the audience listened with great interest to the subject, which was afterwards very warmly discussed.

ST. MARK'S INDUSTRIAL AND ART EXHIBITION, BATTERSEA RISE, S.W.—No better proof of the success achieved by Mr. James Baldwin, F.F.I., at this Exhibition, held on May 4th, 5th, 6th, in the large Hall adjoining St. Mark's Church, can be adduced than that, each of the three days the Exhibition remained open, many eager persons waited around the phrenological tent and watched with keen interest the turning of the "engaged" ticket, for their opportunity to be examined. Great satisfaction was given and many clever delineations were remarked upon.—Signed, C. W. Cornish, member of Committee.

Mr. Ashley, F.F.I., recently conducted the phrenological examinations at the Epsom Bazaar with marked success, when he certainly showed he had the matter at his fingers' ends.—*Epsom Gazette*.

Notes and News of the Month.

IN the article on "Phrenology Proved" the organ of language is described. *Apropos* of that, a word or two on the conversation of celebrated men will not be inappropriate. Those who have listened to the wonderful conversation of Carlyle know well its impressiveness and its charm; the sympathetic voice now softening to the very gentlest, tenderest tone, as it searched far into some sad life, little known or regarded, or perhaps evil spoken of, and found there traits to be admired, or signs of nobleness—then rising through all melodies in rehearsing the deeds of heroes; anon breaking out with illumined thunders against some special business or falsehood, till one trembled before the Sinai smoke and flame, and seemed to hear the Tables break once more in his heart—all these, accompanied by the mounting, fading fires in his cheek, the light of the eye, now serene as heaven's blue, now flashing with wrath, or presently suffused with laughter, made the outer symbols of a genius so unique that to me it had been unimaginable had I not known its presence and power. His conversation was a spell.—*Moncure Conway*.

CHAUCER, as he himself informs us, was not a fluent talker. He shone much more in his tales than in speech. The Countess of Pembroke used to tell him that his silence pleased her infinitely better than his conversation.

GAINSBOROUGH once took part in a lawsuit, and, when in the witness-box, he happened to speak of the "painter's eye" in a professional sense, the counsel for the other side, wanting to confuse him, said, "And pray what do you mean by the painter's eye?" "Why," answered Gainsborough, "it is to an artist what a lawyer's tongue is to him."

NO TWO THUMBS ALIKE.—The Chinese have long been aware that the impressions of no two thumbs, even of the same individual, are alike; and impressions of every criminal's thumbs are taken by the police and numbered for reference. He may disguise himself as he will; make up as he can; but a comparison of the impressions of his thumbs with that in the police archives settles the identity of an old offender, beyond doubt.—*Chambers' Journal*.

SINCE the days of Cruikshank it has been rare to see a reference to temperance in an art exhibition. An instance occurred in the Royal Institute of painters at Piccadilly, where Mr. S. T. Dadd had a picture of a bulldog wearing a badge of blue, and looking proud of it. He was at the doorway of a hall, where a Local Option meeting was being held, as announced on a bill which he was guarding, and on which were the names of Sir Wilfrid Lawson, Mr. John Hinton, the Rev. Dr. Burns, and Mr. H. J. Gill. The title of the picture was, "The Latest Convert." We understand that the picture sold as soon as the exhibition opened.

DR. W. B. RICHARDSON says:—"As to that favourite remedy for a chill, a glass of hot brandy and water, the doctrine is that when it warms a cold man the credit belongs to the hot water, while any discredit that may follow may safely be attributed to the brandy."

WE beg to call attention to our readers who are not able to attend for consultations during the hours of 10 to 5, that the office is open in the evening from 7.15 to 9.15; Saturdays, 3 to 8 p.m.

MY attention having been called to the destitute condition of our old and esteemed friend and co-worker, Mr. E. T. Craig, I therefore made an appeal among the Institute members on his behalf, who have kindly responded. The fund has now reached £6 16s., which is being given Mr. Craig in weekly donations. Should any of our readers desire to contribute a small donation it will be gratefully received.

It is important that all supporters of phrenology should be on the alert, to inform persons who are ignorant of the usefulness of the subject, and dissipate prejudices, especially when statements are made

against the science unsupported by facts. Dr. Jones, in Northampton, has recently thought proper to make the following statements before the Natural History Society of that town in a lecture, and on "Men—big, little, and odd." "That Phrenology has been proved beyond doubt to be utterly false, and that the surface of the skull was no criterion as to shape and development of brain, and that mapping out the faculties of the mind as phrenologists do was utterly erroneous, as such a thing was impossible." All communications in reply to the above, if sent to the office of the *Phrenological Magazine*, will be forwarded to the press.

Correspondence.

DEAR EDITOR,—The magazine came to hand on Saturday. I have shown the young lady the sketch, and she believes it to be correct—so do I. With regard to her abilities as a scholar, I may mention she has been most successful in passing her examinations, and succeeded in working up the different classes, which were under her care, almost to perfection. Accept our thanks for the sketch, with best wishes for the success of your work.

Preston, May, 1892.

Yours, &c.,
W. H. A.

DEAR SIR,—I beg to send you particulars of the funeral of the late Mr. Barker, of Brighton, phrenologist, which took place on the 12th April. By aid of applied phrenology, and great self-sacrifice, Mr. Barker was, to my knowledge, successful in placing numbers of young men and women upon their right track. Personally, I had great respect for him, and have deep sympathy with his bereaved family.

I am, Sir,

499, Harrow Road, London, W.
April 14th, 1892.

Yours sincerely,
EDWD. CROTHALL.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

J. P. (Tullyannon).—The photo of this gentleman, indicates an active and wide-awake mind; all the mental manifestations are intense and lively, if anything the mind is over active, and he injures himself by doing too much. His photo indicates that he is perpetually finding fault

with his work and doings ; he should shew considerable taste and execution in whatever he does. The sense of having everything at best, and nothing short of it is strongly marked; he should be noted for his taste and ability to turn off work with best possible style, his attention to details assists him materially ; he does not overlook anything, but all partake of his scrutiny and attention. He is very determined in what he undertakes to do ; is disposed to carry it through at all costs, and he does not readily give up. He is decidedly ambitious and desirous of making a name for himself ; he is fond of variety, and is most pleased where the tasks set him are such as to enable him to shew his versatility of mind. He is quick to perceive and understand, easily takes on with anything new, and is quick to grasp the whole of a subject when explained ; he shews considerable ingenuity in his work, is quick to contrive ways and means, and should shew considerable dexterity and skill in whatever he does. In disposition he is reserved, but is best known when understood ; he does not give himself away at once, but makes sure of his ground first. He is warm-hearted and social ; is rather sensitive, dignified, and can shew an independent spirit. Is quite cautious, and generally prudent—shews considerable self-possession, coolness, and ability to cope with whatever presents itself to him.

“EARL” (Worthing). The photo of this lady indicates a well balanced temperament, favouring the motive-mental. In disposition she is quite sympathetic, emotional, and tender-hearted. Her feelings are broad, and extend to all with whom she comes in contact ; she should be known for her thoughtfulness and consideration of others. She feels she must interest herself in those kinds of works where the most good can be done. She is friendly and warm-hearted, and shows a strong affectionate nature ; she is quite enthusiastic, and takes extended views of things. She is of a hopeful and confiding nature. Her photo indicates that she is neat, systematic, capable of planning and arranging for herself and others, and should shew considerable ingenuity in whatever she does. She has considerable forethought, and a good judgment, but needs all her caution to avoid exhaustion, as there are evidences that the mind is doing more work than it should, and is liable to be overstrained.

A. J. (Ambleside).—The photo of this gentleman indicates a superior development of brain power and an active mind. The upper portion of the forehead is well developed; hence he is a thinker. He should be known for his ability to grasp a subject, and to understand it thoroughly. He is a critic, and is not content to dwell upon the surface, but penetrates right down to the centre. He shews good judgment and powers of criticism. He is original, full of plans, and accustomed to systematise and arrange everything he has to do. He is neat and precise, and lays great stress upon the way things are to be done. His photo indicates great constructive ability. He should shew considerable ingenuity and dexterity in his contrivance. He possesses a versatility of talent and power to carry through whatever he undertakes. He has more than the average energy, and is not disposed to give up his beliefs and

opinions. He is circumspect and conscientious. He shews a marked taste and appreciation of beauty and art, and has a strong desire to perfect everything; is dissatisfied with the second-rate or inferior. He is very sympathetic and shews a liberality of mind that is seen in his consideration for others. He is friendly, highly social, and makes an agreeable companion.

SNATH, C. Y.—The photo of this gentleman indicates a favourable development of mind. His characteristics are strongly marked. His mind is an active one. He is quite impressible, and susceptible to thought and feelings. He is an observer, and has a thirst for information. He is an enquirer, and anxious to know something of everything. He is not satisfied with bare information, but is desirous of having a thorough knowledge. He shews considerable patience or ability to stick to what he undertakes. He is not disposed to half do a thing, but generally completes what he undertakes. He has considerable energy and shews strong feelings. He can be quite active and passionate. He shews considerable independence of character and dignity of mind. He does not stoop to mean things, but shews a superior pride in himself, and his doings. He makes a good friend, and forms strong attachments. He is social and companionable, but is more of a student than anything else. He has a will of his own, and holds to his opinions. He is impulsive and apt to do things without regard to the consequences, and is not afraid of danger; he is thoroughly disposed to act for himself, and shews considerable character, and intends to make a place for himself in the world.

C. F. B. RHAYADER.—The gentleman's head is well-proportioned, and fairly balanced; his physiognomy is strongly marked and indicates strength of character; the mind is both active and energetic, and capable of sustaining considerable exertion for some length of time. He gives his whole mind to what he is doing, and he likes to study the whole of a subject and be in touch with all connected with it; hence his knowledge is extensive and thorough in those things to which he has applied himself. He is quick of perception and has a thirst for general information. His knowledge is extensive and varied, he is in touch with his surroundings and quite alive to all that is going on around him. He is original and comprehensive; he takes extensive views of subjects. Is quick to contrive ways and means; he shews considerable ingenuity and is quite able to lay hold and carry through complicated work well. His affections are strong; he is warm-hearted, makes lasting friendships, and is attached to home. He is ambitious and shews independence of mind. He is thoroughly conscientious in all his doings. He has large sympathies, is highly social, and would make a good entertainer.

J. W. R. (Fourstones-on-Tyne).—Your photo indicates that you possess sufficient energy and perseverance to command success (if circumstances are favourable) in whatever you undertake. You are quite thorough in all you do and can be relied upon to fulfil whatever is required of you. You are not by any means changeable,

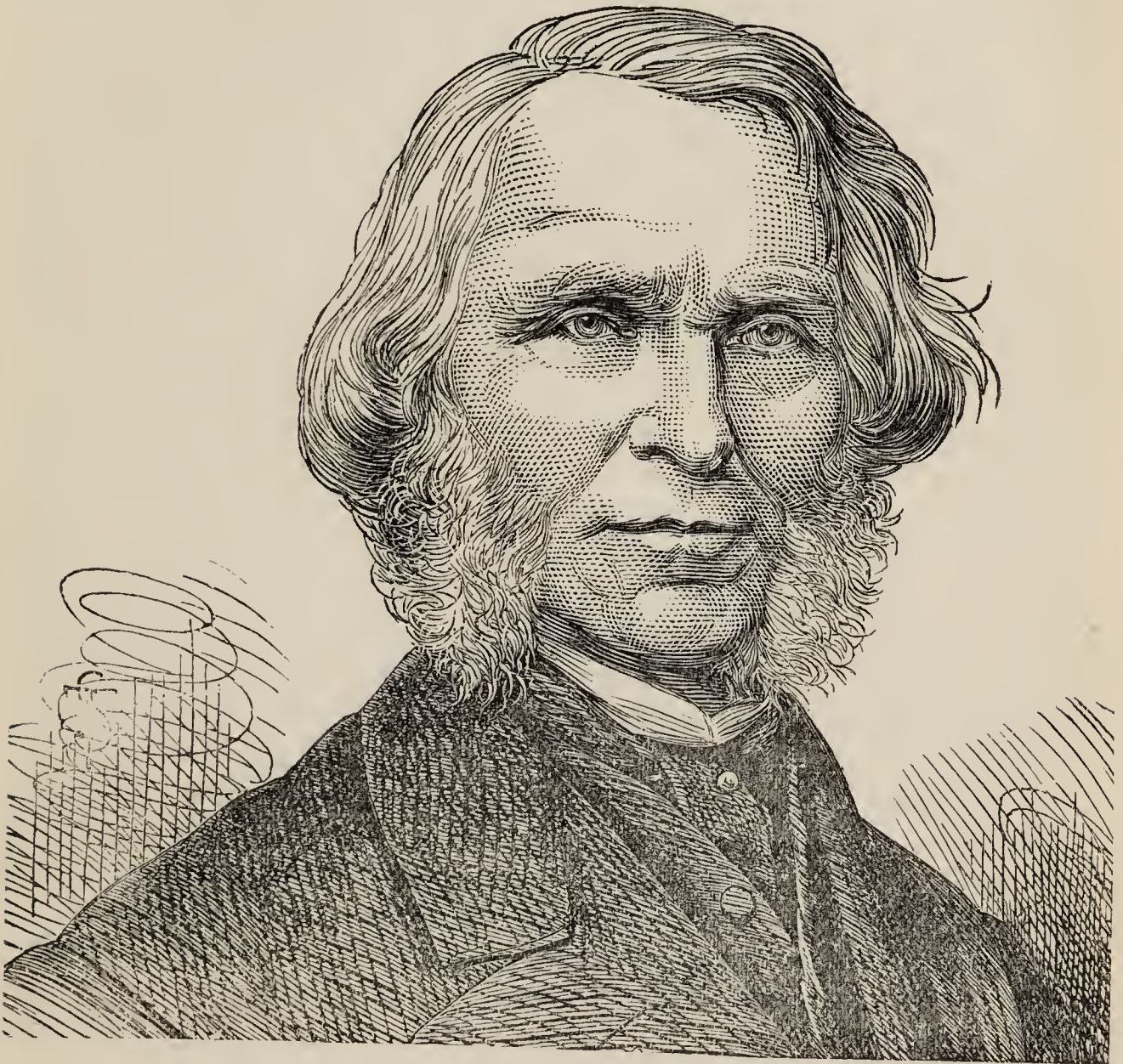
but should be known for your patience and plodding disposition. You finish what you have to do, and do not do it by halves. You are prudent and saving, and can economise and make a little go a long way. You shew considerable ingenuity in your work ; you like to work for yourself, and know how to do things right off hand without assistance. Your social nature is strong. You make friends and keep them. You are attracted to your home, and are warm-hearted and social generally. You shew considerable forethought and judgment. Your experience of life shews and reveals to you that you are most sure in that you know most about ; keep to what you are doing.

EDIE (Brighton.)—This lady's photo indicates a superior development of mind, and above the average sized brain. The head is fully developed, and should indicate a well-formed character. She has an aspiring mind, is quite anxious to excel, and is desirous of gaining distinction. She is sensitive and easily stimulated by praise. She has an independent cast of mind, and dislikes to be under obligations to anyone. She is reserved, and does not reveal herself at once. She is prudent and cautious, and therefore is disposed to hesitate ; thinks well before she acts, and thoroughly tests before she places her faith in anything. She is economical and careful, and uses most things to the best advantage. She possesses an enquiring mind, and likes to be conversant with all that she comes into contact with. She has a general knowledge of most things ; her memory is good, and her mind is retentive generally. She has constructive ability, and shews considerable taste and judgment in her works. She likes everything done in the best possible style ; she is neat and systematic, her mind is active, and she is original and sound in her opinions. She has considerable foresight, and is strong in her likes and dislikes. She has strong sympathies, and to those who know her most she is seen at her best.

REV. B. D.—Has a strong cast of mind. He is remarkable for great versatility of thought, can excel in most anything he takes hold of. He is quite original. He has extravagant imagination, and is liberal in all his views. He is a little too prolific ; has too many ideas, and finds it difficult to stop when he gets started. He is quite juvenile, youthful, playful, and bland. He is also original, throws off a great many ideas peculiar to the workings of his mind. He is not so practical and scientific, as he is philosophical and emotional. He has a strong moral brain ; is very spiritually inclined, and has a special gift to embellish his ideas. Few persons can develop so much of the spiritual in a speech as he can ; in fact he is rather too sentimental emotional, and pathetic. He cannot do as ordinary people do and plod along ; he wants to do everything on a high key, and throw as much pathos and feeling into what he says as possible. His greatest fault is that he is not sufficiently practical, and allows his imagination rather too much scope. He shows more than ordinary oratorical power. He is quite skilful in reasoning, and if necessary, can be very entertaining and mirthful. He is specially social, friendly, and very ready in exchanging thoughts and feelings in a social and sympathetic direction.

THE
Phrenological Magazine.

JULY, 1892.



HON. NEAL DOW.

THE organization of Gen. Neal Dow is most marked, giving him a very clear and distinct character. All his powers are concentrated and condensed, consequently, most available. He is the personification of industry, activity, and intensity of thought and feeling. He could not contentedly live an idle life. He is healthy, tough, and for a man of his size, is strong and enduring, but his activity of mind and locomotive power are greater than his vital powers, hence he is liable to overdo, and will probably die with his harness on. His brain is of the most

vigorous type ; he generates thought and feeling readily, and is not easily exhausted mentally, and by living a temperate life, and keeping his conscience void of offence, he is able to do more work, and throw off more nervous energy than most men.

His phrenological organization indicates a distinct social and domestic nature. He is susceptible of strong affections and a high regard for women ; is distinctly fond of children, and is much attached to home and place, and if he travels, it is at the expense of home feelings. He clasps his friends' hands in both of his own, and gives them a cordial welcome, and he makes friends everywhere, and exerts a strong social influence. Combativeness and destructiveness are large, and give him unusual spirit, force, energy, and resolution, making him spicy, pithy, and sarcastic, as well as forcible. He is plucky to the core, and has both moral and physical courage. His appetite is not large, but large enough to be in harmony with his digestive power. He has the elements of industry, and is anxious to acquire property, but has none too much economy and disposition to sum up, for he is frank, open-hearted and free to divide and share with others. Cautiousness, however, being large, has a restraining influence both in the spending of money and guarding himself against dangers and accidents. His ambition is strong, but is not a controlling power, while his self-respect, pride of character, and independence of feeling and self-government are still stronger, and enable him to exert a distinct influence over others, for he has the qualities to be the master and leader. He has a positive character, great independence of spirit, and takes strong ground. He is not so much subject to the influence of others as they to him. He cannot be bought and will not easily surrender, for the largest organ in his head is firmness, which, combined with his mental temperament and active brain and body, will dispose him to defend his position to the last. Danger and difficulty only press his determination and presence of mind. Conscientiousness is a marked development of his moral brain, and disposes him to be very strict in adhering to what he thinks is just. He belongs to the old Puritan stock in this respect. He will follow duty and justice and take the consequences ; there is danger of his being too rigid and strict in matters of justice. Benevolence is also large, which gives him a great interest in the welfare of others and brings out that spirit of philanthropy, for which he is so much known. Hope is large, which to him is a powerful stimulus to action and makes him continually look ahead instead of back, and live for the future instead of the present. Veneration and spirituality have an average influence.

Ideality and sublimity are large, giving scope to his mind, and great freedom, if not extravagance to his conceptions. He is versatile in talent, and ingenious in contrivance, having a full development of constructiveness joined to full imitation. His perceptive faculties are fairly developed, while his reasoning organs are still larger, comparison and intuition especially so; they give him a practical pointed way of presenting a subject with an analogical mode of reasoning. He is very quick to see the point of an argument, the spirit of a joke, or the state of mind of those with whom he is brought in contact. Order is large, and disposes him to do everything according to some rule, plan, or method; hence he is systematic and seldom fails in his undertakings. Language is full and active, but not so large as to render him verbose or much given to conversation unless he has something special to say; and as a speaker he would have no excess of language, but would be forcible and speak to the point, saying just what he meant in just so many words. Few individuals have so condensed, compact, wiry, vigorous an organization as he has, and in his prime of life he must have been most positive and executive. With his large mirthfulness he could be both witty and sarcastic when combativeness and conscientiousness were aroused. His organization indicates great courage, justice, humaneness of feeling, power of will, availability of intellect, direct and terse mode of reasoning, and a most apt mode of bringing truth home to the consciousness of men.

General Neal Dow has become familiarly known to the civilized world, not because he tried to be distinguished himself, but simply because he had the good will of mankind at heart, and saw that many of them were like children, having no control over their appetites. Neal Dow found that nearly all in the poor house, in the prison, and insane asylum, were there from intemperance in drink, and they were men and women who could not control their appetite. Having come to this conclusion by indisputable facts, he adhered to his opinions, and when he came into power made laws which put the temptation to drink beyond reach. Of course, he has been persecuted and threatened, but he remained firm, realizing that he was good rather than evil; and his example was followed by many men in other states and other cities than his own, and his fame has gone abroad into every land.

L. N. FOWLER.

The above character sketch was written in 1872, when General Neal Dow and L. N. Fowler were in Sunderland.

Mr. Fowler adds that at present his photo indicates that he still possesses the same power of organization; the same intensity of thought; the same vigour of intellect (in a modified degree), though twenty years older, and he holds on to the even tenor of his way, as of old, with wonderful tenacity.

THE ENCYCLOPÆDIA BRITANNICA ON PHRENOLOGY.

MOST people are to-day so much occupied with their professional pursuits in consequence of the fierce struggle for existence, that, when they desire any information on a subject not connected with their business, they do not look for a text-book, but consult one of the numerous cyclopædias, vast store-houses of knowledge accessible to all at any time. What can be of more importance, then, to the scientist, than a "full and fair" treatment of his branch of knowledge in these works. The "Encyclopædia Britannica" being the leading cyclopædia of all, we may well inquire what its authors may have to say on the subject of phrenology, a subject in which most readers of this Magazine are probably interested.

Both on the scores of fulness and fairness we have no cause to complain. Indeed, it is a pleasure to read such a calm criticism, and though the author of the article on "Phrenology" is not a phrenologist, he is no opponent either. He by no means exaggerates what he considers its defects, but treats the subject with an earnestness and sincerity, betraying that he is conscious of its practical importance.

Twenty-four columns of printed matter are devoted to the article on "Phrenology," which the author designates a science which professes to be a philosophy of the human mind founded on the physiology of the human brain. It has met, he says, with strenuous support and determined opposition, and "its claims as an established science are still *sub judice*."

Phrenology, in his opinion, claims preference over all other systems as a professedly practical science of mind. Starting from its fundamental principle, that the brain is the essential organ of the mental powers, phrenology shows in what respects, and by what methods, the mental nature of man can be developed, and his material and moral welfare advanced. In other words, it systematically applies our knowledge of the

anatomy, physiology, and pathology of the brain to education, legislation, religion, morals, the fine arts, and the science and art of medicine.

The article contains a long exposition of the principles of phrenology, with all the leading arguments in their favour. The state of knowledge with reference to "mind" and the "brain," when Gall first attempted to allocate portions of the hemispheres to special faculties, is shown, and it is said that phrenologists are completely justified in their conclusion, "that the presumptions are all in favour of a plurality of mental faculties manifesting themselves by a plurality of organs." He takes note, however, that modern physiologists have objected to this doctrine, but he also shows, that they have only done so, when carried away by their animosity against the science, for elsewhere they have expressed other and sounder views on this point. Dr. Carpenter, Sir Henry Holland, and Mr. Herbert Spencer are quoted in favour of the fundamental principles of the science.

While admitting the correctness of localizing those operations of the mind which are intellectual in their nature, the author thinks that the organology with reference to the propensities and instincts is somewhat doubtful, and that when the phrenologist takes a larger grasp of this part of his system, and brings more comprehensive methods of psychological analysis, and of physiological research to bear upon it, he will be better able to reconcile what in the opinion of the author are conflicting facts and conclusions.

In the following paragraph on the dynamics of phrenology, it is again demonstrated that while physiologists have strenuously opposed the principle and treated it with derision, that size is *cæteris paribus*, a measurement of power, they have only done so when speaking of phrenology, and adopt it themselves when they wish to demonstrate the functions of other portions of the encephalon.

No passage shows clearer the mind of this critic than the one in which he speaks of the arrangements of the faculties, which have been prematurely completed. Imperfect, though the conclusions of phrenologists may be, "they are worthy of respect, as being well tried deductions from observations on many fields of research by numerous observers." Few people are really aware how large at one time the collections of phrenological crania, casts and drawings were. We may wonder how they have disappeared. Gall's Paris Collection contained 354 skulls, casts of skulls and brains illustrating phrenology, besides 258 other anatomical preparations. The Edinburgh Museum contained 463 skulls, 280 busts, and 100

masks of eminent or notorious individuals. Mr. Deville, at his death in 1846, left 5450 pieces, including 2450 crania and other illustrations of phrenology. Mr. Deville was a practical observer, and took 1500 casts of heads from persons while living. Dr. Vimont had 2500 crania of animals illustrating the truth of Gall's doctrine. Dr. S. G. Morton's collection in 1841 contained above 1000 crania, of which more than 500 were human skulls.

Other paragraphs are on "The Conditions affecting the Manifestation of the Faculties," "The Natural Language of the Faculties," "The Combination of the Faculties," "Regional Phrenology," "Ethnographical Phrenology," and "Comparative Phrenology."

Of special interest is the chapter on the "Applications of Phrenological Doctrines." It is divided into two parts. One is entitled "Applications of Phrenology to Philosophy and Mental Science," and is taken almost in its entirety from G. H. Lewes' criticism of Gall's doctrine in the "History of Philosophy." The other treats of "Phrenology as an Art."

Phrenology, the writer in the cyclopædia admits, has founded a new theory and classification of the faculties. With this new classification a new but imperfect craniology was constructed, the terms of which have penetrated into the literature and language of the present day. As a system of practical philosophy, or of practical mental science, phrenology teaches those laws by which man exists and acts as a rational being, and maintains that he can only be governed and educated in accordance with those laws. It professes to discover the varying capabilities of races of men for civilization; or, in other words, their innate capacity for instruction and development, and thereby indicates the general principles of government as applicable to races. It maintains that men must be educated with reference to the connate predominance or defect of this or that organ or faculty. External circumstances of parents or of offspring involving the health, or a long persistence in the exercise of some or one of the faculties, will lead to the disturbance of this balance. These circumstances must be anticipated and obviated by society; and when individuals are plainly governed by an over-mastering faculty—such as ministers to theft, for instance—and thus led into crime, they must be restrained by society, and put into such circumstances that they may be enabled to exercise a self-control. In other words, an enlightened prison discipline can only be based safely on phrenological doctrines. Healthy action of the organs is necessary to healthy manifestation of the faculties. Hence the laws of hygiene, deduced from an

accurate physiology and the facts of experience, must be applied to man's corporeal well-being, if we would elevate him as a thinking and moral agent. For this reason our critic acknowledges that the phrenologists are amongst the most strenuous advocates for such an education of the people as shall put every man in the position to know and apply the laws of healthy existence to the well-being of himself and his offsprings. "Such culture, they also argue (and on the most irrefragable ground), is as essential to the welfare of a nation as the well-being of individuals." Without it, civilisation can never advance beyond a limit, which it is not impossible to trace out; with it, to fix a limit to man's progressive development, would be difficult. The application of phrenology to theology, the arts, medicine, and domestic life, is also mentioned. The general principles of the science are said to be based upon an admitted science of human physiology—on the common-sense of mankind; while the physiognomy that is used, is of that regional character which few intelligent men question. Indeed, it is mainly in the conflicts of phrenology with dogmatic theology and speculative philosophy, that doubts have been raised as to the soundness of its general principles, and of its practical applications.

On the practice of phrenology, our author expresses himself less favorably. He thinks that, apart from the follies and frauds of ignorant charlatans, the phrenological art of reading character, however useful, is, and always must be, a conjectural art. At every step of the process there are sources of uncertainty.

Phrenology, as a physiognomical science and art, originated in the strong desire, which Gall had to read by external signs the characters of those about him. Many of his disciples—the large majority perhaps—have been attracted to his doctrines, with the hope of gratifying a similar desire. It is not surprising then, as the author admits, to find that what has been termed practical phrenology, or the art of reading character, has been the main object of culture and research since Gall, and has become, in the eyes of public and of literary men, the principal department of phrenology—nay, phrenology itself. Now it cannot be doubted that, amongst those persons thus attracted to phrenology, there is a large proportion who have a natural bias to physiognomical observation and research, and who therefore are endowed with those faculties which are necessary to constitute a successful physiognomist. Thus endowed, it is not surprising that they can practise the art of reading character, with results for the

most part so striking, as to impress both themselves and others with a strong conviction of the truth of the principles upon which the art is founded, and of the value of the methods by which it is practised. Their instinctive powers of perception, naturally great, are developed by exercise, and their conclusions corrected by the cranioscopical experience of those who have preceded them. Besides, they do not neglect, when practising their art, those other physiognomical characteristics by means of which persons, not phrenologists, can often discover with surprising accuracy the character and leading motives of those about them. While examining the configuration of the skull, the phrenologist also observes the habit of body, gait, gestures, features, tones of voice, and facial expression of the subject of his enquiry; and it is from the results of all these observations that he determines the character. Thus the elements of a successful art of physiognomy—not necessarily phrenological—are numerous, and a higher value is placed upon phrenological physiognomy as an art, than can be fairly conceded to it if estimated independently of the skill of the artist, and of the collateral aids he uses to help his conclusions.

Such is the reasoning of the author of “phrenology.” Not all persons are capable of applying this science practically, and evidently the writer in the cyclopædia has found some difficulty in applying that which he knew theoretically to be true. For this reason, while granting its uses, he hesitated to practise seriously the art of reading character, and feels indisposed to place more confidence in the professors of it than he feels in himself.

With his other source of objection, most followers of Gall will have profound sympathy and regret. It is not an easy matter to stamp those out who disgrace phrenology by their want of culture, knowledge, and refinement. But, because there are such persons who practise phrenology, men of learning should not be deterred by it from propagating the truth of Gall’s doctrine, and applying it wherever they can. It distresses our author to see persons without any education in physiology and pathology, or with little more than scraps of information gathered at random, profess, without hesitation, their capability to solve the most important practical questions in mental science. To the intelligent and instructed, he says, they are but mere charlatans, whose ignorance and pretensions would curse, with fatal blight, any science or art, however well established or noble. Phrenology, as Combe frankly acknowledged, is an estimative art only—such, in fact, as is applied medicine

itself. Every accomplished physician finds, as his knowledge and experience increases with his years, that his youthful confidence in the certainty of medicine was not well-founded ; he becomes more and more convinced of its conjectural character as a science ; more cautious and prudent, therefore, in the application of its principles, and more reliant on a learned experience. If then, doubt, or at least a hesitating caution, be a duty of the physician as to the art of medicine, based on the experience of ages, how much more, argues the writer, is it justifiable as to an art confessedly imperfect in important details, and hardly a century old. It is not difficult to understand from these considerations, in the opinion of our critic, why the young and enthusiastic followers of Gall and Spurzheim cool in their estimate of phrenology as they get older, and even pass over to the ranks of its opponents. Thus, by not a few, medical science and art are treated ; and so *à fortiori* must phrenology be, since “it is only a department of the great science of medicine, resting, as medicine itself rests, upon the great but imperfect science of life.”

BERNARD HOLLANDER.

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(Continued.)

36.—CAUSALITY.

Power of perceiving and applying the principles of causation—ability to discover, and trace out, the connection and relations existing between causes and effects ; to plan, invent, and adapt means to ends ; to draw conclusions from given premises ; to reason—disposition to investigate, and ask, why?—key-stone of common sense.

IT is an axiom in philosophy, that “every effect must have a cause ;” and also, “every cause must produce an effect ;” and, again, that “under similar circumstances like causes produce like effects ;” and further, that “all the phenomena throughout universal nature proceed upon the principle of cause and effect, or antecedent and consequent.”

But let us enquire from what source it is that philosophers gather these maxims. That they are not the product of the observing faculties is evident from the fact that these faculties are possessed, more or less by the brute creation, and yet, we know that brutes do not reason—that they are not capable of comprehending the relations of cause and effect—at any rate, beyond the narrow limits of their experience, and this can scarcely be considered as reaching the

principle of causation. Hence, we infer, that man is endowed with some faculty of the mind, of which the lower order of animals is destitute, by which he is enabled to reach this principle.

That the faculty in man which regards every phenomenon or result in nature as the product of some antecedent cause is innate, and its operation, intuitive, may, moreover, be justly inferred from the fact that he is naturally prone to demand a reason for everything—to ask why it is so; and that this disposition in man is more or less strong in proportion to a certain part of the brain (causality, see cuts) is largely or otherwise developed, is equally proved by the observations of phrenologists, as well as of mankind generally: for here is one point in phrenology in which mankind, in all ages, have believed.

That this faculty in man is innate is still further evident from the fact that this cause-seeking disposition is strikingly evinced in children. Almost as soon as they begin to make observations, they also begin to enquire why things are so,—to investigate the causes, reasons, and uses of things.

VERY LARGE.—One having caus., very large, with a large head and an active temperament, in addition to the manifestations described under caus., large, will be pre-eminent for the correctness of his judgment; the clearness, originality, and importance of his ideas; the extent of his understanding, and the power of his intellect; be distinguished for taking new views even of the most ordinary subjects, and for presenting them in a striking light; for discovering new methods of affecting certain objects; be able to calculate with certainty what effects will be produced by the application of particular means, and also the most judicious method of applying these means; clearly perceive the full force of argument; be able to explain or “clear up” abstruse points and difficult subjects; to carry the conviction to the mind by his irresistible arguments, and always to present them in a manner perfectly intelligible; will grasp as it were with a giant intellect those great and fundamental principles which enter into nature and the constitution of things; and possess extraordinary greatness of mind and vastness of comprehension.

One having caus., very large, with compar., large., will be extremely delighted with metaphysical and abstract studies; attempt to pry into nature and the first principles of everything; will speculate and theorize, and, with large conscien., added, will excel as a metaphysician, and especially as a moral and intellectual philosopher; with large individ., added, will not only display extraordinary depth and power of thought, but also be able to express and illustrate his ideas in a manner so simple and intelligible as to make himself easily and thoroughly understood even by feeble minds; if he fails in any part of his project will readily supply the deficiency by a resort to the most happy expedients, and thus generally succeed in his undertakings; never be at a loss for resources, and be wonderfully ingenious in calling them up and applying them; and possess extraordinary intellectual power and acumen.

LARGE.—One having caus. large, will be able intuitively to perceive and readily to apply the principles of causation ; to lay good plans, and successfully reach desired ends by the application of appropriate means ; will have a strong desire to ascertain the why and the wherefore of things ; to investigate their nature and relations, and ascertain their origin, uses, and procuring causes ; will consider facts and phenomena only as connected with their principles and causes ; perceive self-evident truths, and draw inferences from them ; possess an inquiring, investigating turn of mind ; with proper culture of this faculty, be able to originate good ideas, and reason correctly upon the data furnished by the other faculties ; by the intuitive application of the principle that like causes will always produce like effects, be able to predict what will be, from what has been ; to tell wherein one result will differ from another, and, also, what will be the effect of given measures ; will intuitively perceive the various bearings and the abstract relations of things ; naturally possess a large endowment of sagacity, penetration, good sense, judgment, and originality ; and be disposed to give and enquire, not only a reason for everything, but also a satisfactory explanation of all its phenomena.

One having caus., large, with the perceptive organs full or large, will be quick to perceive the first truths of natural philosophy, to draw inferences from them, and to apply them whenever occasion demands ; with compar., and conscien., large, to perceive the force of moral truths and inferences, and to admit moral axioms, and be able to reason clearly and correctly from them ; with the selfish faculties strong, will be able to provide for his selfish wants, and secure selfish ends ; with acquis., full, to lay excellent plans for accumulating wealth ; with the perceptive organs only moderate will be more delighted in the principles and the philosophy of natural science, than with the mere facts, and seldom contemplate facts apart from the laws concerned in their production ; with individ., and event, only moderate, will be guided much more by the reason of things, and by general principles, than by experience ; but, with individ., and event., large or very large, will be influenced both by experiments and facts, and also by the principles involved in them ; have a superior talent, not only for collecting facts, but also for drawing correct deductions from them ; devise and execute with surprising sagacity and tact, and possess an excellent talent for turning things to his own advantage—for seeing just what ought to be done in order most successfully to obtain the desired end, and will possess a very large share of practical sense and sound judgment : with large compar., and only moderate perceptive faculties, will deal much more in that which is abstract and metaphysical than in facts and details, and possess much more intellect than he appears to have ; be too abstract and think too deeply, to be properly appreciated, especially by those who have large perceptive, and only full reasoning, faculties ; will have an excellent memory of thoughts and first principles, but forget circumstances and particulars ; have a distinct recollection of inferences, yet be apt to forget the premises

from which they were drawn ; be able to think and reason clearly and strongly, yet in presenting his ideas, will fail to do them justice, or give them the force necessary to produce the conviction to which they are justly entitled ; with the selfish faculties generally large, and the moral only moderate, will make his reason subservient to the mandates of his selfish, not to say vicious and depraved, animal desires and gratifications ; with the moral and selfish organs large, will have a vigorous intellect propelled by energetic selfish passions, and modified by a strong current of moral feeling ; yet his moral and religious opinions and practices will be strongly tinged with his animal feelings—his religious garments often defaced with spots and patches of selfishness and sin ; and his reason turned to a good or bad account, according as his education, external circumstances, &c., excite more powerfully either one or the other class of faculties ; with the moral organs large, the propensities full, but less than the moral and reasoning organs, and the perceptive full, will possess great intellectual power and superior talents, which will be called into energetic action, and urged forward by strong feelings, and directed by high tone, moral principle, to the advancement of some noble and important object ; and have enough of the propensities to impart efficiency to his intellectual and moral faculties, which, however, will maintain the ascendancy ; with combat., large, will warmly defend and advocate his opinions and engage in debate with spirit and delight, &c.

FULL.—One having caus., full, will have a strong desire to ascertain the reason of things, and to investigate their nature and procuring causes, yet his views of the relations of cause and effect will be less clear, and his inductions from a given amount of data less correct, than they would be if caus., were large ; with proper culture will be respectable as a reasoner, yet the cast of his mind will not be strikingly original or logical, nor his judgment first-rate ; with large perceptive faculties, may be qualified to do a fair business, yet will not excel in planning, or in conducting a great business, nor be distinguished for employing the best means to effect desired ends ; with large imitat., individ., and approbat., and moderate self-e., added, will lack independence and originality of thought and character, adopt the views and opinions of those with whom he most associates, and thus have no marked character or plans of his own, and, with ven., and concient., large, will not desire or hardly dare, especially in religious matters, to think or act for himself ; may pass for a man of considerable talent and intellect, yet much of his knowledge will be borrowed, and his disposition and ability to apply his mind closely to an argument or process of thought, will be weak and limited, and his judgment not very profound ; with compar., individ., and event., large, will not be distinguished for the superiority of his judgment, nor yet for the weakness of it ; will possess considerable practical talent, and understand himself well, yet be somewhat superficial, and manifest more discrimination and tact than originality and depth, and fail to present arguments in a clear, cogent, and convincing man-

ner, as well as to appreciate the full force of the reasonings of others.

MODERATE.—One having caus., moderate will not be very clear or correct in apprehending the principles of causation, nor reason clearly or closely ; with individ., event., and lang., large., and compar., full, may pass through the ordinary routine of life with tolerable success, yet when called upon to think or plan, or call up resources to devise means, or originate anything, will manifest weakness and inability ; may learn well, and with imitat., also large, do what he sees others do, and gain something from experience ; yet will be unwilling to apply his mind to any subject which requires close investigation and research, and will not be able to reason strongly or deeply, or to appreciate the arguments of those who do ; and will not be at all distinguished for quickness of comprehension or depth of understanding ; with the selfish faculties strong will be swayed chiefly by his animal propensities, and yet be shrewd in many things, although his shrewdness will result more from instinct than reason ; with secret., large. and conscien., only full, by art and intrigue may succeed well for a while, yet it will not be difficult to penetrate his designs, and discover his intentions, and, consequently, to defeat his purposes.

SMALL AND VERY SMALL.—One having caus., small will be decidedly deficient in discernment and understanding ; fail to comprehend the reasons, principles, causes, and the general bearing of things, as well as the force of logical arguments ; be injudicious in planning, and unable to see the end from the beginning, or comprehend the result of certain measures ; be unable to think, and dull in comprehending a subject, even when clearly and fully explained to him ; slow to draw inferences, and unskilful in adapting means to the accomplishment of desired ends ; with very large individ., may have an extensive knowledge of matters and things in general, yet will not be able to invent or improve upon the inventions of others, to devise “ways and means,” and create resources. One having caus., very small will utterly fail to appreciate or apply the principles of causation, or to comprehend the relation of cause and effect ; be unable to reason or to understand the arguments or explanations of others, be they ever so clever and simple, and will be apparently destitute of the qualities ascribed to caus., large.

Of all the human faculties caus. is undoubtedly one of the most useful and important, as it gives that depth and strength and solidity to the mind so necessary to the proper guidance and direction of the other faculties, and without which man could scarcely be accounted a rational being. It is, in fact, that faculty which, above all others, so pre-eminently distinguishes man from the brute, and enables him to stand forth in majestic dignity as the lord of this lower creation. With this faculty largely developed (and aided by compar.,) man is capable of thinking, reasoning, rising, soaring,—of looking with an intelligent eye into the works of the Deity, and of penetrating the mighty mysteries of His divine government. Without it what would

be man?—a helpless, unintelligent creature—a feeble, grovelling thing scarcely elevated above the meanest reptile.

LOCATION.—Caus., is located in the upper and lateral portions of the forehead, externally from compar., and gives height and breadth to the forehead, proportionate to the size of the organ. This faculty has two divisions ; the outward part gives power to plan, the inner part gives power to reason.

37.—COMPARISON.

Disposition and ability to compare various things for the purpose of ascertaining their points of resemblance and of difference—power of classification—perception and application of the principles of analogy—ability to discover truths that are unknown, by discerning the resemblance to those that are already ascertained, and also error from its incongruity with truth—power of illustration—critical acumen.

On account of the resemblance which one thing, or one set of things, bears to another, most of the phenomena of the natural world are capable of being grouped into classes. The causes of these phenomena, or their relations of cause and effect, as has been observed, are sought out by causality ; their resemblances and analogies, and their dissimilarities, are recognised by comparison. Form may compare different shapes, tune different notes, and colour contrast different shades ; but comparison can compare a colour and a shape, a note, an idea, and a substance, which cannot be done by these other faculties alone : and thus it is that comparison embraces within the legitimate sphere of its function the whole range of nature. It sometimes discerns resemblances between things apparently the most distant and unlike, and often traces out analogies between the qualities of mind and matter ; and is the grand agent in producing similes, metaphors, and allegories, parables, and fables.

As was predicted of causality, that, when furnished with correct data, it would always draw just conclusions, and teach us what is true, so may it be of comparison, that inasmuch as it is primarily adapted to take cognizance of certain resemblances and arrangements in nature, it also, when furnished with proper data, will give us the truth concerning these arrangements. In other words, the legitimate conclusions drawn by comparison in accordance with the principles of analogy, may be relied upon with as much certainty as those drawn by causality or experience. For example, there is a resemblance more or less striking in the anatomical structure of all the various orders, genera, and species of animals, and also in the structure of different individuals of the same species. Hence, comparison has a right to infer that, as far as this anatomical analogy extends, these different animals are governed by similar physiological laws. In other words, as far as analogy actually exists between any two things, we have a right to conclude that what is true of the one is equally so of the other. If, for instance, we discover an animal whose species is unknown to us, we immediately compare it with some animal of a known species which it most resembles ; and, as far as

this resemblance holds good, we at once, and justly, conclude the animals are alike in their nature and habits. If the strange animal is furnished with the organs which we know belong to herbivorous animals, we conclude that it is herbivorous ; if with the organs of the carnivorous or granivorous animals, we infer that it is carnivorous or granivorous as the case may be ; if the animal is furnished with legs and feet, we conclude that its nature is to walk or run on land ; if with wings, we say it flies in the air ; if with fins, we judge it swims in the water, and so on ; and we naturally rely upon the justness of these conclusions, though drawn entirely from analogy, as confidently as we do the truths taught by the most rigid induction. Indeed, the human mind is so constituted that it cannot avoid making comparisons, and then relying upon their result.

That the principles of analogy really exist in nature is demonstrated by every day's observation and experience, and hence we infer the necessity of a primary power of the mind whose proper function it is to perceive these principles, and by their application to discover truth and detect error ; and hence we may also infer that arguments which are based upon correct analogies are strictly true. This being the case, then, the only reason why arguments drawn from analogy are so often unsound is that the comparisons upon which they are predicted, are not in all respects just ; for if the resemblance upon which the argument is founded holds good in ninety-nine points in a hundred, and differs in one, this difference, provided the analogy from which the conclusion is drawn, reaches this point, will destroy the whole force of the analogy, or as far, at least, as the argument is concerned, and, of course, render the conclusion false ; but conclusions drawn from any points in which the analogy holds good, are correct, and may be relied upon. Here, then, we have arrived at the source of that great flood of sophistry and false reasoning which sweeps through the popular discourses and discussions of the day.

VERY LARGE.—One having compar., very large, will be able readily to compare, and perfectly analyse, almost any subject which may be presented to his mind ; will instantly and intuitively detect the fallacy of analogical arguments, and the misapplication of words or facts ; present his ideas in a manner so perfectly clear and simple, and accompanied with illustrations so copious and appropriate, that they can be fully and easily understood ; with lang., and individ., large, will pour out a superabundant flood of figurative expressions ; be strongly inclined to criticise everything he sees, hears, or reads ; and, with moderate conscien., will be likely, by his wonderful power and copiousness and seeming appropriateness of comparison and illustration, to make the better side appear the worse, and the worse the better—to employ sophistry, put false constructions upon things and make wrong applications of them, and thus knowingly mislead the common mind, &c.

The influence of compar., very large, acting in continuation with the other organs, has been described under the other organs respectively. It may also be added, that the combinations and descriptions

given as applicable to compar., large, modified by an increase of the influence of compar., will apply to this organ very large.

LARGE.—One having compar., large, will readily discover analogies, resemblances, differences, &c., and be able and disposed to classify those thoughts, phenomena, and things of which the other faculties have taken cognizance, possess a happy talent for generalizing, illustrating, and reasoning from similar cases; frequently employ figurative expressions; readily discover the point and the application of arguments; make nice discriminations; possess a criticising, comparing turn of mind, and readily detect fallacies in arguments, and inaccuracies, and improprieties in the use of words, &c. The objects compared by this faculty are determined, in part, by its combinations. For example, one having compar., large, with full event., and individ., will have a happy talent, and a passionate fondness for comparing different phenomena, and classes of phenomena in the natural world, as well as various historical accounts, scientific facts, and experiments, &c., and be quick to discern those resemblances and differences which obtain between them, and also between the various sciences themselves; with a view to make himself easily understood, will be strongly prone to illustrate his ideas by a reference to some fact or phenomenon with which the auditor is supposed to be familiar; with form, size, and local., added, will be very skilful in comparing those things which come under the cognizance of these faculties respectively, as well as drawing illustrations from them; with ven., and conscien., large, will draw religious instruction from natural objects, and apply the principles and phenomena of natural science, and of the physical world generally, to the investigation of moral and religious subjects; compare spiritual things with temporal, and temporal with spiritual, and be predisposed to receive and convey religious instruction by means of parables, allegories, &c., and in reasoning upon moral subjects, make a great many nice distinctions, &c.; with ideal., and individ., large, will make many elegant and elevated comparisons, employ many metaphors, similes, and other figures which will glow with the fervour, and be enlivened by the brilliancy of a lively imagination, and serve the purpose of argument and ornament united; yet with only full caus., added, there will be very little reason or sound logic in his metaphors and illustrations; with caus., large, in investigating causes will be greatly assisted and often led to his conclusions, by the light of comparison; in thinking and reasoning upon subjects, and especially in deciding upon the force of arguments, will employ his caus., as much as his compar., and probably more, yet, in communicating his ideas, will manifest more compar., than caus., and illustrate them copiously and forcibly; with concent. moderate, will frequently employ mixed metaphors, and seldom sustain, or carry out his comparisons; with ideal., only moderate, will still employ metaphors, similes, and copious illustrations, but they will be argumentative, rather than ornamental; and, though they may be clear and in point, they will not be glowing or elevated in character, nor always in good taste; with secret., small, and lang. and combat.,

full, will be so much inclined to criticise the expressions of others, as often to get their ill-will, yet, to exercise his critical acumen, will be so natural to him, that he will find it difficult to avoid it ; with ideal., imitat., form, size, colour, order, local., event., and lang., large, and caus., only full, will have a popular and decidedly practical talent, which will appear to be much greater than it really is, but his judgment will be much more the result of experience and observation, than of reflection ; will have a superior natural tact and talent for doing business, and getting along well in the world ; acquire knowledge very easily, retain it for a long time, and also apply it to a very good advantage ; speak, and, perhaps, write well upon subjects which require no depth of thought ; be likely to pass for a person of superior mental powers, yet he will not often bear sounding, or reason closely or profoundly, nor take original or comprehensive views of subjects ; but with caus., large, will be able to combine uncommon theoretical with extraordinary practical talents ; according to his advantage, both in reasoning and in accomplishing his purpose ; will be naturally both learned and profound, and capable of excelling in the natural, metaphysical, and demonstrative sciences ; be pre-eminently talented, and calculated both to devise and execute, and thus to conduct a great business ; and, with combat., firm., hope., and self-e., large, be abundantly able to rise far above the common level of mankind, and to turn his hand successfully to almost any undertaking ; and will add to superior natural talents, great energy and perseverance.

FULL.—One having full compar., will be respected for his discrimination, and ability to compare, analyze, and illustrate things, yet will not be particularly distinguished for this power ; frequently resort to illustrations, yet they will not manifest the quality of versatility, nor be always in point ; not at once discover whether a comparison is just and appropriate, and, though he may be able to trace out plain and striking analogies, will not so readily discover the more obscure and subtle resemblances, analogies, differences, &c., with caus., large, will have good ideas, but they will often be less applicable to the subject, and more imperfectly illustrated than is desirable ; with the perceptive faculties generally strong, will not discover any marked deficit in this particular, nor any peculiar talent for comparison, &c.

MODERATE.—One having compar., moderate, may be able to discern the plainer and more obvious resemblances and differences which exist in the phenomena of nature, but will fail to discover the more obscure points, and nicer shades of resemblance and difference ; may perceive the force of comparisons and illustrations presented by others, yet will not be happy in discovering them himself, nor readily perceive the application of arguments, nor give point to his own. With full caus., will make many sensible remarks, yet they will frequently lack point, and be inapplicable to the subject in hand : with lang., full will talk much, but not be able to write with perspicuity, nor to use words with propriety and accuracy : with individ., and event., large, will have an excellent memory of facts, but instead

of arranging and classifying same, he will be likely to present them in a confused state, and, as it were, *en masse*: will not make nice distinctions between the various passions and other mental operations, and fail to make critical discriminations in matters and things generally, or to adduce many appropriate illustrations.

SMALL AND VERY SMALL.—One having compar., small, will be dull and slow in perceiving the force of comparisons and analogies, and possess but little discernment or discrimination, and be unable successfully to compare, classify, arrange, illustrate, or generalize; be almost destitute of critical acumen; and fail to perceive analogies and differences, even when they are pointed out to him.

LOCATION.—Compar., is located in the middle and upper portion of the forehead, between the two lobes of caus., with event., below, and human nature above it. Its shape resembles an inverted cone. It is situated in the brain in the superior frontal convolutions under the frontal bone.

D.—HUMAN NATURE. *Definition and Location.*

Discernment of Character; perception of motives; intuition; sagacity; reading men instinctively from their looks, conversation, manners, walk, and other kindred signs of character. The power to discern motives, character, and qualities; also to predict and foresee, and to say and do the right thing at the right time and in the right way; suspicion; keen criticism of character.

The great rise of Shakespeare's forehead, from human n., up to the hair, shews how enormously this organ was developed in his head. Accordingly, few men on earth ever possessed the power it confers in a more remarkable degree. Man was made both to manifest his own mentality, and also to take cognizance of the character of others. But for such manifestations and cognizance, no mental operations could ever have been expressed, or interchange of ideas effected; nor could have anyone known the least thing of any of his fellow-men. This manifestation is affected in part by language, yet without natural language, verbal language could never have been devised; natural lang., being the tool with which verbal lang., was built. An intimate relation exists between the mentality, the physiology, and especially the physiognomy, by which we look angry, pleased, benignant, and whatever else we feel. Nor can we help it. To this natural language spoken by all human beings in all ages, and even by brutes, this faculty of human nature is adapted. The latter reads the former, and thus gains a vast amount of much needed information concerning our fellow-men, even when they are only casually seen, and which can be obtained from no other quarter. Indeed this manifestation of character by mankind and the institution of this faculty of human n., in man, actually compel us to form some idea of the characters of all we meet, and, if duly cultivated, would enable us to read our fellow-men as plainly and completely as we read print, so as infallibly to detect the cunning and the unsafe; discover talents and their various kinds, as well as goodness, and all the other characteristics of our fellow-men.

Natural language, moreover, like everything else, has its science, and therefore embodies as much certainty as mathematics. Its grand basis is that universal law that shape is an organization, and organization as character. The walk, gesticulation, manners, dance, laugh, tones of all men, all they say and do, are full of character. These indices of the mentality human nature discerns, and from them forms its opinions of the character and talents. We little realize how much concerning our fellow men this faculty is perpetually telling, and how, almost infinitely more, it is capable of disclosing if duly cultivated and assisted by the other faculties. All human beings carry charts of their mentality and character at their mast heads, legible, even in detail, by all who know how to read them, which, however, few more than begin to do. Nor is any other species of knowledge more delightful or profitable, because it teaches human nature that highest department of nature. Nor is any other science equally vast or complex, because man is the epitome of creation, and performs most of the functions of universal nature. Nor can any other be turned to as good a practical account, because it tells us whom to trust and distrust, and reveals mental and moral beauties and excellence surpassing all other forms of terrestrial beauty. Nor will any teach us more Divinity, because in studying "The image of God," we, of course, study God himself. In short to know human nature is the climax of all knowledge; all of which it is the province of this faculty, combined with individuality and comparison, to teach. Hence the incalculable importance of its cultivation. No element of our nature should be more assiduously improved, because none confers a capability more useful and delightful. To effect this culture, note all that everyone you meet says it does. Nor notice merely, but also scan. Trace every word, every manifestation of character, up to that fountain from which it gushed. Ask yourself what prompted this motion, that expression, and yonder move on the checker board of life? look through conduct to motive. Ferret out disposition and character wherever you go. Form your judgment of men, and then enquire of yourself from what in them you deduced your conclusions? Note and spell out all the little things said and acted. Here especially, "Straws show which way the wind blows." Little things will often put you on the track of the entire character, and tell the hidden story effectually, because done unconsciously, whereas more important acts are guarded.

VERY LARGE.—One having human n., very large, delights in studying character, and comparing the shades of difference, which are perceptible in mankind. It is a storehouse for impressions made, relating to the workings of the mind. Other faculties collect interesting information bearing upon the beauty of the landscape, architecture, or engineering works, but this faculty takes full cognizance of the beauty of character, and the various manifestations of mind. Some men are noted for their judgment of materials and others for their criticism.

Human n., when very large, forms a correct judgment as to the character of all it meets and especially of the opposite sex, at the first glance, and as if by intuition, may always trust first impressions; is a natural physiognomist; and with agreeableness large, knows just when and how to take men; and with large secretiveness and moderate conscientiousness, is oily and palavering, and flatters his victim; with comparison and organic quality large, dearly loves the study of human nature, practically and theoretically, and therefore of mental philosophy and phrenology. When very large leads to suspiciousness.

LARGE.—Reads men intuitively from their looks, conversation, and other kindred signs of character; with individuality and comparison large, notices all the little things they do, and forms a correct estimate from them, and should follow first impressions respecting persons; with full secretiveness added, knows just how to take men and possesses much power over mind; with mirthfulness and ideality large, sees all the faults of people, and makes much fun over them; with comparison large, has a talent for metaphysics, &c.

FULL.—Reads character quite well from the face and external signs, yet is sometimes mistaken; may generally follow first impressions safely; loves to study character; with ideality and adhesiveness large, appreciates the excellencies of friends, and with parental love large, of children; with combativeness and conscientiousness very large, sees all the faults of people; and with only average adhesiveness, forms new friendships, in consequence of detecting so many blemishes in character, &c.

MODERATE.—A person with moderate, has fair talents for reading character, yet not extra and should cultivate it.

SMALL.—Fails somewhat in reading character; occasionally form wrong conclusions concerning people; should be more suspicious, watch people closely, especially those minor signs of character; makes ill-timed remarks and modes of addressing people, and often says and does things which have a different effect from that intended.

VERY SMALL.—Is easily imposed upon by others; with large conscientiousness and small secretiveness, thinks everybody tells the truth; are too confiding, and fails sadly in knowing where and how to take things; knows almost nothing about human nature, and must scan closely all the actions of men, with a view to ascertain their motives and mainsprings of action; look with a sharp eye at man, woman, and child, as if it were possible to read them through; note particularly the expression of the eye, and imbibe what it signifies; drink in the general looks, attitude, natural language, and manifestation of the man, and yield yourself naturally to the impressions made on you, that is, study human nature both as a philosophy and as a sentiment, or as if being impressed thereby. Especially study phrenology, for no study of human nature at all compares with it; and be more suspicious, and avoid placing indiscriminate confidence in appearances.

LOCATION.—This faculty has two divisions. The lower portion gives

Intuition ; the upper portion gives Foresight. It is located between comparison and benev., about where the hair generally begins to appear. It extends upward as if a part of comparison. In the brain, it is situated in the superior frontal convolution under the frontal bone.

MEN OF OUR TIMES.

MR. J. HUTTON, L.C.C.—This gentleman has apparently a high degree of mental power ; is from a long lived ancestry, and bids fair to live to old age himself. He has great strength of feeling ; is very decided when he takes his position, and he cannot easily be moved from it, especially by force. His head is quite high in the centre, and all the faculties appear to be prominently developed from the root of the nose upwards over the head. He must be a man of extensive



MR. J. HUTTON, L.C.C.

(From a photograph by Messrs. Russell and Sons, Baker Street).

observation, easily acquiring knowledge. He is able to carry much business in his mind ; he is particularly apt in his powers of association, and ability to compare one thing with another. He is specially intuitive in his perception of character, and in his general judgment. He is quite ready and off hand ; he acts promptly, and perhaps at times without sufficient prudence and forethought, for his executive brain is large while the restraining faculty of cautiousness, and the conservative powers are not specially large, so that he is naturally more prompt, positive, determined in his character than prudent, discreet, and uniform in the action of his mind in all his relations with society and business. He appears to have great will power and promptness for action. He is self-reliant, quite independent, and disposed to act according to the

dictates of his own mind without reference to fashion or pleasing others. He has an eye to business ; is a good judge of property, of men, and of things. He is prepared to take circumstances into account, and can make nice distinctions between what is best and what is not. He has a favourable development of order, system, and method, consequently his work is done methodically. He knows what he is going to do before he does it. He is not known so much for his originating power, and for starting new ideas, as he is for being quick to take a hint, and to see the bearings of a subject. In times of excitement he is liable to load his gun and fire rather too quickly, and his success frequently depends upon his good hits rather than his cool deliberate judgment.

MR. SAMUEL ROSS, Newcastle, N.S.W.—This gentleman is well built ; has a favourable organization ; is well balanced, and understands himself well. He is self-possessed ; in times of danger he manages to keep comparatively cool, and possesses presence of mind, while others are easily thrown off their balance. He seldom fails in his undertakings ; success or failure does not warp his judgment much ; opposition rather aids him than otherwise. He is equal to a great variety of business, but his planning, thinking brain, rather predominates. His intellectual powers, as a whole, are very influential. Such a man would succeed, whether he was educated for his work, or whether it was the inspiration of the moment that helped him ; but the thinking, philosophising brain joined to the moral sentiments give him his main excellence, and cause his success. He is not in such a hurry as to make mistakes, but sees his way very clearly before he fairly commits himself. He will generally be successful, simply because he can afford to wait until he finds out the best way to operate. He has not so much force and propelling power as to make him in a great hurry, but he has energy to carry his plans straight through, though there may be many impediments in the way. He is not a man of bluster and pretence ; he does not make much noise about what he does, but if there is any noise to be made, it is after the thing is over. He has great power to regulate other men, to command their respect, to quell a mob, and to regulate excitement. He is known more for the judgment and the moral feeling he can bring to bear at the time than he is for mere enthusiasm or disposition to do it for the sake of popularity. If a speaker, he would be quite calm and deliberate in giving off his ideas, but what he says takes hold of the minds of others, and is not easily forgotten. Causality joined to his moral brain disposes him to be regulated by principle rather than by selfish motives. When others are

the most put out and excited, he is most cool and self-possessed.

BARON HIRSCH.—The photograph of this gentleman indicates uncommon force and energy of mind. He has also a mind that acts with great freedom as well as coolness. He has a bold, courageous spirit, and acts without fear. His head tapers up where cautiousness ought to be, so that he is not much restrained in his mental operations. His plans are of the available, practical, and individual kind, so that he knows what he is about, and his first thoughts are



BARON HIRSCH.

(From a photograph by B. Wagner Carlsbad).

generally his best; and he is not afraid to put them into practice. The base of his brain is large, favouring an uncommon amount of force, spirit, and resolution, which, together with his large perceptive faculties and high head, leads him to do whatever he does in a most marked and masterly manner. His common sense and available talents are such that he sees the way he is going, and measures his steps so as to make his efforts a success; but were it not for his specially good perceptive intellect and intuitive powers, he would put too

much powder into his gun, and do damage where he intended to do good ; as it is, he has his eyes all about him, and acts with reference to general results. The speciality of his mind is in his being clear, quick, and prompt ; also he is able to do many things with equal success. His forte appears to be in his energy, intuitive power, strength of will, and coolness of mind ; though not enough cautiousness to give prudence or undue restraint or fear. He manages to strike while the iron is hot, and he knows beforehand what shape he wants to give his hot iron. Few men have so much force and practical judgment joined to a clear brain as he has ; besides, his self-esteem gives him confidence in himself, and disposes him to take all the responsibilities of success in all his efforts.

ORION.

Hygienic and Home Department.

THE CHILD.

EDUCATION has received many different definitions.

Webster tells us that to educate "is to cultivate and discipline the various powers of the mind."

We may make it broader than that, and say it is growth or development, so we may have different kinds or degrees of education. We find growth in all life. In plant life we find a forest full of natural plants ; they have received no training or pruning of any kind ; they are massed together, each crowding the other. In a hot-house we find a forced growth, the tender plants flourish and bloom profusely for a time, but soon fade if exposed to the world outside of the hot-house.

In a well-kept garden we find a natural, cultivated, well-developed growth ; the wise gardener prunes when necessary, and guides and trains, while he supplies all the conditions for such a growth.

And so we have different methods of educating our children. We find little waifs on the street, who are receiving their education there ; they are growing, like the plants in the forest, as they will, each one elbowing the other. They have not received guidance of any sort, unless it be in ways that are sinful. We find little ones in some of our homes who are growing much in the same manner. "He is too little to mind," is often heard ; "when he is older and can better understand, then I will train him and make him mind."

Can we begin too soon to guide in the right way ?

Then, again, in some of our homes we find the hot-house, or forced growth. The little one must be on exhibition at all times, for company to gaze upon and comment about. He must sing and speak for every one who comes, and in all ways is made to be "smart." His intellectual nature is cultivated to the exclusion of all else.

We may, however, find the healthy, natural, symmetrical growth or education, where the mother is a wise one, and trains and prunes when necessary, and does it in a wise, judicious manner.

The child nature may be studied from three standpoints: the natural, or inner conditions of growth; the needs, or outer conditions of growth; and the methods of supplying these needs.

The child naturally must develop physically, intellectually, and morally, and this threefold nature needs to be very carefully considered, that one part, or nature, may not be developed more rapidly than the others.

Taking the physical nature first, we find the little one to be helpless in infancy; we also find him healthy and active. His intellectual nature develops by perceptions made through the senses.

Morally, the natural child is innocent, affectionate and trustful. The affection and trust he feels for his mother, if carefully fostered, will lead to a higher trust and affection for an Infinite Being.

These are the inner or natural conditions of the child as he is given into our keeping. He also has outer needs, or certain conditions, to be met for his proper development. Physically he needs proper care and attention to his wants. He needs the right kind of clothing that he may be wholly comfortable, as far as that is concerned; he requires proper food for his nourishment. Pure air and plenty of sunshine are as essential for the human plant as for the vegetable. Play is needed that he may gain strength, and this play is very important to the child; it is his life, and through play he gains his exercise; later, as he gains in strength, and is older, it represents to him all there is in life. This play should be guided, and even the first little movements of the limbs may be guided, to be of more benefit to the little one.

Intellectually the young child may develop by having proper pictures to look at; not bright daubs, but pictures that are refining, and from which he may gain right impressions.

Every child should have a pet of some kind—some animal that is his to love and care for as he gets older. He should also have at least one flower that is not mamma's, but his very own.

The intellectual nature may be aided in its development by the use of the kindergarten gifts, and, a little later, the occupations that are suited to his age.

Dolls and doll furniture aid in the development not only of the wee girl, but the small boy as well ; it develops an affection and love that nothing else seems to.

The boy is not the less manly for being gentle and loving. Do not give a doll to too young a child, else he will simply abuse it, and the seed for cruelty and rough dealing be sown.

Give it to him as something to love and care for, even as mother cares for and loves her baby ; and, mother, do not sew on the clothing so the child cannot dress and undress at pleasure. I know it often litters up the sitting-room you would like to keep so tidy and in such proper order, but you have something else to care for now, and the sitting-room is secondary.

It has been often said that one may judge of the mother by the way the child treats the doll. This is so in many ways. Do not let the little one abuse his doll any more than you would abuse him, but teach him it is to be cared for.

With the use of the small furniture, many impressions of housekeeping will be received that will be lasting. Morally, the child develops by having the greatest of blessings—wise parents ; parents who feel some of the responsibilities placed upon them ; who feel that this little being, given to them, is something more than a small animal, which simply needs food and clothes. Many parents think that when they have supplied food and clothing for their children, they have done all that is necessary for their welfare.

Children will develop, morally, by having proper playmates. A very young child is interested in other small children ; they get tired of big folks ; they are beyond their powers of understanding, and they crave young playmates.

I wonder if we would not be dreadfully tired if we had to stay with very small children, and not be able to do anything but sit and look at them all the time. A child who is kept by himself is more apt to form selfish habits than one who plays with others. Plants, and caring for them, will aid the moral development ; it creates a love for the beautiful, and flowers have a refining influence. Pets will aid in the moral as well as the intellectual growth, and the child will learn to care for them, and to be gentle with them. It is not at all necessary that the young child should pull about his kitten or dog, he will just as readily treat them with kindness and gentleness if he only receives a little gentle guidance. The little one who is cruel to his early pets, and takes delight in killing flies, is

the one who will be cruel to his horse later in life, and will have no care for the comfort of those persons who should be dear to him.

Rythmic games are useful in the moral development ; a young child can be quieted with a rythmic jingle, when the finest selection from a gifted composer would have no charms for him. It is necessary that the child be kept as happy as possible for his best moral development, not that he is to be humoured in all his little whims, for that would develop selfishness and wilfulness. But do not antagonize where it is not necessary.

It is for us to supply these needs, or rather to furnish the methods of supplying them. The child comes to us, helpless, affectionate, innocent and trustful, and if he be a normal child, he is healthy and active ; it rests with us as to what degree he retains this health, and how long he remains innocent and trustful.

It is necessary for the mother, or nurse, to be genial ; it is just as necessary that the sunshine of love surrounds the little one, as is the pure sunshine of the heavens.

Baby likes to look into a happy, sunny face, and not one drawn with frowns. It is also essential that the mother be loving and sympathetic, have a true sympathy for all the little ills that befall the wee one ; he appreciates this sympathy, and if it be of the proper kind, it will not harm in the least. If we keep in sympathy with our children, we will not so soon lose their confidence, which is so sweet to every true mother, and necessary for the best interests of the child. A mother should be motherly. All mothers are not motherly.

The true mother should be firm, not harsh ; but be sure you are doing what is best for your little one, and then show a kind firmness. It does not take long for a child to learn whether he can tease or not, and he generally feels that after all mother knows best.

The little tot of three years knew what was meant by yes or a firm no, when she told a wee playmate, "Mamma said no, and there is no need to ask her any more."

In her firmness the wise mother is always consistent, and this is one of the hardest things to be—our lives are so filled with inconsistencies.

A PROPRIETOR of a large establishment employs a woman as head book-keeper. On being asked recently if the reason was because she would work cheaper than a man, he replied : "No ; we pay her as much as we would a man, and she is much more reliable, and her work is much better done. When it comes eleven o'clock she does not get a drink,

as some book-keepers have to do ; she never comes to the office worn out by an all-night's spree and jumbles up the business of the day. This is why I prefer a lady."

GLEANINGS OF CRIMINAL ANTHROPOLOGY

BY PHILIP G. TOVEY, F.F.I.

Notes of a Lecture given on Wednesday Evening, May 25th.

ANTHROPOLOGY, which was dealt with under this title, drew together a good audience on May 25th. The lecturer claimed that with the same consideration that we should study a diseased portion of our own anatomy should we attend to the diseased condition of brain and body, to the abnormalities and deficiencies of organization, of those who have been styled as belonging to the criminal class. As students of phrenology we cannot afford to pass this subject. In the determining of character we are so intimately associated with it, we trench so often upon its domains, that some knowledge of the subject is absolutely essential to us. We notice as a matter of everyday practice the analogy between the ill-shaped or asymmetrical skull, and the ill-balanced and inefficient mind. And so the mis-shapen brain generally announces in its possessor, to some extent, a mis-shapen body. Dr. G. Wilson says that "the cranial deficiency is associated with real physical deterioration," and Flesch, who studied the brains of fifty criminals, found that every one presented some anomaly. The physiognomy of a certain class of criminals, the prognathous jaw, voluminous ear, intense pallor of the skin—said to be related to habitual cerebral congestion—the precocity and abundance of wrinkles, scanty beard, &c., were mentioned, while the pages of the "Criminal" were several times laid under contribution for interesting extracts on these points.

That there is something more than a mere accidental connection between criminality and insanity will be conceded at once ; while the fact, as shewn by statistics taken in Germany, that 72 per cent. of insane persons charged with crime are punished simply as ordinary criminals, goes far to prove that this connection is not recognised as it should be. Maudsley tells us that "criminals often do come of families, in which insanity, or some other neurosis exists, and instances are met with, in which one member of a family becomes insane, and another reckless, dissipated, and perhaps even criminal." Thus as a factor in the production of the

criminal, it is impossible to ignore the mighty influence which heredity exerts. As soon as you get away from the mere cataloguing of the physical anomalies, and seek for some adequate cause for all this degradation and atavism, the facts of heredity stand prepared, with a kind of mocking cynicism, to assist in unravelling the mystery. It appeals directly to us ; it enforces the moral ; we hold the future in our own hands ; we "have no more criminals than we deserve." Therefore, taking into account the strong influences outside of the man which have so much to do towards moulding his character, there seems to be, derived from the study of this science, a great plea for a truer justice, for a more right dealing with crime.

We want a new symbol for Justice. The old bandage should be torn away, for blindness is incompatible with true knowledge, and the vengeance dealing sword be sheathed, for punishment is remedial, not vindictive. It is evident that crime itself should not be the sole standard of punishment ; but the responsibility or irresponsibility of the offender should be gauged as accurately as possible ; and although perhaps the recognition of irresponsibility would not lessen the number of persons detained in custody, yet the method of their treatment would undoubtedly be greatly altered. In his concluding remarks, the lecturer said :—I hold the firm opinion that, as phrenological students, our duty does not stop at the mere examination of a head, or the dispensing of a chart ; that as students of man's nature we are interested, and immediately interested in all the phases of his being ; and if, as I am fully persuaded, the basis of all sin is Ignorance—ignorance of the moral, intellectual and physical blessings that follow in the train of more perfected knowledge—then it becomes our duty to scatter these blessings, by the dissemination of knowledge, and by the influence of example—undertaking all in a great spirit of sympathy ; and then by the study of our race on our own lines, we may hope in a few short years that phrenologists will be able to shed more, and perhaps a truer, light on these great subjects of Criminal Anthropology and Sociology.

RUSKIN says : "The home lives of all great men and women are simple."

IF you want true inspiration keep within your own silence.

THOSE who have the least of heaven want the most of earth.

WHEN the invisible ceases to act, the visible ceases to grow.

WHEN Divine Laws are obeyed man-made laws are not needed.

AS long as man worships the external he must live in the shadow.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., JULY, 1892.

SIGNS OF EVOLUTION IN A BABY'S FOOTPRINT.

IN the *Nineteenth Century* for May, there was an interesting article on "The meaning of a baby's footprint," by Louis Robinson, in which article he draws attention to certain anatomical characteristics which indicate that "the foot is historically a climbing organ," adapted by the pressure of changed environment for locomotion upon the ground. We are clearly given to understand that, in the light of our present knowledge, no part of the human mechanism seems to indicate more clearly the truth of the Darwinian theory of human descent than the foot, and to show that the foot was primarily designed for other uses than those to which it is now put. The skeletal parts show the firm arch, the closely-bound metatarsal bones, and the parallel position of the great toe, which indicate a fitness to bear weight from above. But it is the muscles and tendons that the arborealists base their arguments, for upon no other reason can these be explained as having been developed for the purposes of terrestrial locomotion. We seem, however, to have degenerated from our inherited need to clutch hold with our lower fingers in this progressive age, for nature makes nothing in vain, and actual need is the origin of all organic beings. It is possible that the need may long ago have ceased to exist, and yet the organ may remain in evidence, and be known as a vestigial structure; as such it proves of inestimable value to the biologist as an historic record of ancestral habits of life. In the study of feet Mr. Robinson marks out broadly two classes. In one the foot is used almost solely for locomotion, and the structure is, as a rule, correspondingly simple, because of the narrow limits of the duties required. The other class includes those feet which have several accessory functions and corresponding machinery, as, for instance, those of the feline tribe and others, armed with elaborate claws. The extremities of all apes and other animals, with a well-developed grasping power would have an even stronger claim to be put into the same category, owing to the extraordinary number and importance of the muscles which regenerate the the varied movements. The use of delicate and quickly-acting muscles, such as the lumbricales, is necessary to carry

out multitudinous movements ; each separate movement requiring the employment of a distinct muscle or group of muscles. On dissection we may expect to find that the tree-climbing animals which depend upon the prehensile capabilities of their extremities to facilitate rapid movement from place to place among the hinder branches, have an extremely elaborate muscular system connected with the fingers and toes ; and conversely, whenever complex mechanism adapted for such purposes is found to exist in these parts, arboreal habits, either past or present, are to be predicated with absolute certainty, if there is any truth whatever in the laws of evolutionary development.

It is, therefore, more than probable that the marvellous range and versatility of movement in the human hand such as excites our wondering admiration in the pianist, and conjurer, and in the adepts in many other professions requiring manual quickness and dexterity, is traceable to the thousand and one emergencies which our ancestors managed to meet. Of the human foot Mr. Robinson says, as far as its duties are concerned, the civilized foot is a foot and nought else. Among certain savage tribes, and some others, such as the Hindoos and Malays, the grasping power of the toes is utilized to some extent to pick up objects from the ground, and for other simple purposes. The more civilized a man becomes the more does he depend on his hands to assist him in the arts, and use his feet as means of locomotion only. It is interesting to note how the habits of civilization have taught man to imitate artificially nature's method among other purely terrestrial animals, of protecting his feet with a stout covering. The shoemaker has impiously contrived to control the foot so completely in a leather case that it is impossible to move the phalanges which were constructed with such flexibility. Like the human hand it has an extraordinary number of muscles which indicate a great range and variety of digital movements, and which at one time it is thought must have been of the greatest importance in the struggle for existence. A very interesting account of the anatomy of the foot is given showing the different potential movements of the toes. The correspondence of the muscular systems, of the upper and lower extremities, is so extraordinary that the fact can only be accounted for on evolutionary grounds by the supposition that at one time both hands and feet had similar duties to perform. In the latest works on anatomy, only one manual muscle is found in the upper limbs that fails to find a fellow in the lower members. The argument naturally follows, can the same work be accomplished

by the feet as the hands, and was it their fore-ordained mission to carry out the same office. One has heard of persons who have excelled in writing, painting, sewing, by means of the toes, but it is hardly likely that nature would provide these muscles simply to meet the needs of these abnormal human curiosities, or armless phenomena ; and the extraordinary capacity in their feet for being educated—to perform acts that are a severe test of manual dexterity—strengthens the theory that the already existing muscles were like those in the hand, developed by the ever-varying needs, consequent on an arboreal existence.

In the November number of the *Nineteenth Century* for 1891, Mr. Robinson drew attention to some characteristics of infants, which appeared to show that the human subject, shortly after birth, presents certain points of resemblance to the arboreal quadrumana, which are not so noticeable in after life. Since then he has been struck with some external peculiarities in the feet of very young children, which appear to be traceable to no other cause than that the feet were essentially prehensile organs among our ancestors. First, the toes of infants are much more mobile than those of adults. The great toe is shorter than the second and third, and is often separated from the second by a considerable interval. The four outer toes can be, and frequently are, bent downwards, so as to show a distinct knuckle on the upper aspect of the foot at the metatarso-phalangeal joint, and when at the same time the great toe is flexed and turned inwards across the sole, the front part of the foot makes a very respectable fist. The great and little toes are often made to approach one another beneath the rest, and one child could almost make them touch, and who habitually endeavoured to make the great toe oppose the others when any graspable object was brought into contact with the front part of the sole. On closer examination it has been found that the foot of a newly-born infant reveals the fact that the sole is covered with lines of a character exactly similar to those on the hand, and when the toes are bent downwards these become deep creases, showing that they are like the palmar lines, the natural folding places of the integument to facilitate the action of grasping. Mr. Robinson first used photography to aid him in comparing the lines of the feet of a large number of children, but he has found after a good deal of experimenting that the print of the children's feet on paper would answer much better. The following methods of taking impressions he found the best, and we quote them that many parents may send to the Institute the imprints of their darling

infants. First cover the foot by means of a soft stencil brush with a composition of lamp-black, soap, syrup, and blue-black ink, wipe it gently from heel to toe with a smoothly-folded silk handkerchief to remove the superfluous pigment, and then apply a moderately flexible paper supported on a soft pad direct to the foot. The act of wiping the foot has the effect of causing the grasping muscles to contract, and thus the creases are deepened and the ink retained in them. If the foot is placed flat upon the paper, the lines leave a distinct impression. The comparison of some thousands of these footprints point to the fact that the chief lines are present in all instances. In taking the prints of older children who had commenced to walk, he found that usually the lines were obliterated at fourteen months old. The evolutionary interpretation of the strange inscriptions on this newly-discovered and most ancient historic document, the infantile sole, is apparent when looking at the internal anatomy of the foot, for we have the palmar rather than the plantar surface before us. The general hand-like appearance is explicable on no other ground than that the organ was among our remote progenitors to all intents and purposes a hand; since its hand-like character can be of no possible advantage, but rather the reverse, to an ordinary modern biped, whether savage or civilized. Mr. Robinson thinks it well to explain that certain distinctive attributes of early life are traceable solely to infantile requirements, and are, therefore, not atavistic. That under discussion cannot be considered one of these, since there is no possible advantage accruing to a modern babe in being able to shut its foot up like a fist or to grip any object with its toes. No analogous case of the hand-like lines appearing at birth on the feet, but disappearing in after life, can be found among other animals. Mr. Robinson has also tried to take the prints of apes' feet similar to those he has given in his present article of "Footprints of Human Evolution;" but, although he has had some success, it is very difficult to distinguish the various lines by this method. We must not forget that monkeys object to experimental physiological research, and then it is found that the different families differ greatly from one another in the arrangement of the palmar and plantar lines. So far the investigations go to prove that the higher the ape the more do the palmar lines resemble the vestigial creases on the infant's foot. In the chimpanzee the resemblance is very close. In the orang it is less so, owing to the small size and unimportant functions of the hallus. No gorilla is now within reach, but Mr. Robinson has obtained evidence that in the case of this anthropoid, the extremities of which

so remarkably resemble our own in internal structure, the lines on the soles are almost identical with those shown in the prints illustrating this article. Mr. Robinson closes his remarks by saying, "the cumulative weight of such facts as the presence in the human foot of muscles of the class of the lumbricales, which could not have been produced by terrestrial requirements, and which can have been of no essential service to savage man, and are all but useless to the civilized, and the persistence in the foot during infancy of many hand-like characters and even of the net work of lines on the sole, characteristic of a prehensile organ impress on us the truth that, whatever our predilections may be, it is no longer possible to treat man as an exception in nature's great evolutionary scheme."

The article is written in a popular scientific style, and will well repay anyone who will give more than a cursory glance at this imperfect quotation from its pages.

BRAINS AND INCHES.

IN the *Gentleman's Magazine* there is an interesting and amusing article on "Brains and Inches." Balzac says that "the little fellows are the fellows for work," and Mr. Kent has gathered together a number of practical illustrations of the proverb that "the best goods are packed in the smallest bundles." Of the men who have helped to make the world, the majority have been descendents of Zacchæus, and the rule appears to hold good in all callings and professions. The best generals and the greatest conquerors have been of short stature, as, for instance, Alexander the Great, Napoleon Bonaparte and the Duke of Wellington, also Admiral Keppel, or the "Little Keppel," and "the beardless boy," as he was called; Timour the Tartar, "the terror of the world;" Condé; Titus, one of the best and smallest Roman Emperors; and Frederick the Great. Among men of letters the same holds true, we are reminded of a remark made to the writer by a grandson of Jerrold's that "most of us scribblers look best on paper," and so far as physical eloquence or comeliness goes, that seems the case. Bocchoris, one of the wisest and most able of Egyptian kings, was a dwarf. Æsop is represented as a mis-shapen hop-o'-my-thumb. Horace was a sleek, fat, little man. Confucius, the great Chinese sage, only reached middle height. Shakespeare, he says, was seemingly never measured, or if he were, his height has not been handed down. Milton was rather short. Dryden, "Poet Squab," was dumpy,

as was also Lord Macaulay. Mrs. Carlyle speaks of "poor little Dickens;" his rival, Thackeray, boasting of a larger allowance of inches, though not of brain power. Moore was only five feet, and when it was known that he and "Thomas Little" were the same writer, a wag remarked that "Moore is Little, and Little is Moore;" Cowper barely reached middle height; Pope was a pigmy of four feet six, and Voltaire and Scarron were mere Liliputians; while Swift's giant intellect was lodged in the brain of a rather stout ungainly man of just five feet eight. Lord Lytton was about five feet six; Anthony Trollope about five feet ten; and John Stuart Mill five feet eight. Among lawyers and statesmen we have Lord Somers, Lord Shaftesbury, Lord Camden, Sir Alexander Cockburn (five feet six). Thiers is described as "soft and sausage-like on the whole, five feet three at most, and ends neatly in fat little hands and feet." Lord John Russell was also a little man; Mr. Gladstone is wittily spoken of as running to length more in his speeches than in his inches, being about five feet eight; whilst Lord Beaconsfield was five feet nine. Among the artists Michael Angelo was of small stature; Sir C. Wren, Turner, and David Garrick, or "Little Dave," were very small men. Among theologians Calvin was a little man, Martin Luther medium height, while Melancthon and Erasmus were "mere mites of men." The writer does not forget to add a word of consolation for the six-footers, giving Scott as an example. In our wide experience we have found that the stocky, well built, thick set, medium sized men with medium sized brains of good quality, are the men who give to the world the best work, the best thoughts, the best plans, the best inspirations.

THE LIMIT OF DAILY MENTAL WORK.

As to the ability of the human brain to stand continuous work, it is curious to note the opinion of various authorities, as they differ as to the limit of daily mental work in adults. Dr. Bain, of Aberdeen, says that in that city there are hard heads and as hard workers as in any other part of Great Britain, but that four hours steady mental labour are as much as is good for them. Cuvier was usually engaged for seven hours daily in his scientific researches, but they were not of a nature to require continuous thought. Sir Walter Scott declared that he worked for three hours with pleasure, but beyond about four hours he worked with pain. Dr. Dally, of Paris, says that a man twenty years old cannot do

intellectual work with profit beyond eight hours daily. Beyond this limit there will be fatigue, cerebral anæmia or congestion, disgust, and impossibility to work. Generally it is wiser to limit the time to six hours or even less. But in these times of hard driving and high pressure many men for long years have to exert themselves far beyond the limits set down above as those of safety. As, for instance, the editor of the *Review of Reviews*, and many other men and women we could mention who crowd two days' work into one. Madame Blavatsky was a most indefatigable writer, and there is reason to believe that she prematurely used up her vitality by continuous overwork.

O R D E R .

MR. WILLIAM T. STEAD, Editor of *The Review of Reviews*, in a charming article called "My experience in Phrenology," writes as follows concerning the faculty of order. It is plain that Mr. Stead has been treated to some adverse criticism in this regard, as many naturally orderly persons have been before, and will continue to be, by those whose environment is so simple that they can successfully carry out their ideas and have plenty of time left to berate those who are not so situated. This is what he says :—

"I have always felt that the judgment of my friends was very unjust, but I never understood how it was until Miss Fowler solved the mystery by asserting, much to my satisfaction, that I had the 'bump' of order highly developed, and that I could plan out things, and arrange for everything to be in perfect order at the beginning, but that my interests were so varied and the amount of work that I was constantly undertaking so multifarious, that I would never be able to carry out my orderly plans ; and hence, notwithstanding my faculty of order, I would always be more or less disorderly."

Let those who have struggled to keep their papers systematically arranged, their bills classified, their letters copied and answered, in the midst of constantly arriving correspondence, and the thousand and one things pertaining to important interests, not one of which could be safely lost sight of for a single hour, take heart. It is aggravating as the writer knows from a painful experience, to be snubbingly informed that one has no faculty of order. And then how pious and important these critics look when they strike an attitude, as they all do, and remark that "order is heaven's first law." Not one of them seems to think that this quota-

tion has ever been made before. "Anybody with average brains can put things in order," a lady who has nothing to do but arrange and re-arrange her bureau drawers, alter the trimmings on her dozen or more hats, go shopping, informed me not long ago, "but it takes a wise person to keep things in order."

"And you can keep things in order?" I enquired.

"Yes I can."

"Then of course the inference is that you are a wise woman. I am glad to have seen one."

She had the grace to flush a little, and from this I argued a capacity for evolution, albeit it may be slow. One day last summer I called upon a famous literary man at his summer home in the mountains. As we had some business to transact he took me into his study. As we crossed the threshold my companion halted for a moment, and then in a most tragic manner pointed to his beautiful great desk in the corner. I noticed that the whole room looked as if it had just emerged from the hands of the sweeper and duster, so spick and span was everything.

"What is the trouble?" I asked in awestruck tones, for I certainly thought something terrible had occurred.

"Do you see that desk?" my friend inquired. "Do you see those chairs?"

Yes I saw them.

"Well, when I went out for my drive two hours ago they were filled with manuscript and letters, all classified and arranged exactly as I wanted them, and some orderly idiot has come in here and cleaned up."

Never shall I forget the sorrowful accent upon those last two words. "Cleaned up" has meant since then a great deal more than it ever did before, and I feel very grateful to Mr. Stead, for his written experience on this point. I can supplement his testimony by the statement that the greatest apparent literary disorder is not infrequently the most perfect order, and what may seem to the nice and unliterary house-keeper the most desirable condition, is simply "confusion worse confounded" to the brain worker.

Brooklyn, U.S.A.

ELEANOR KIRK.

GREAT ideas like great wealth may be perverted to selfish uses.

THE motor power is invisible; it is only the instrument that is seen.

COMMON sense is the greatest inheritance.

A MAN is not all wool because he is several yards wide.

DON'T cry over spilt milk. Rush around and find the cat.

TRAINING THE MEMORY.

A **SPLENDID** way to improve the memory is to begin by treating it as if it were another person, and then charging it, upon penalty of a severe upbraiding, to keep until wanted the information, fact, date, name, or whatever is to be remembered. By this course you unconsciously do two things—you sort out things worth while to know, and you impress them upon the memory in such a way as to cause it to grasp and keep them.

The latter is a most important thing to do. Half of one's forgetfulness comes from failure to properly grasp what it is that you are to remember. It is said of Thomas B. Reed, the famous member of Congress from Maine, who was Speaker of the House of Representatives for two years, that he considered it a great hardship to have to tell a man the same thing twice.

You ought never to cause any one such hardship.
—*Harper's Young People.*

Fowler Institute.

MEMBERS' NOTES.

*"Oh Nature! all thy Seasons please the eye
Of him who sees a Deity in all."*—GRAHAME.

ONCE more have we enjoyed the hospitality of the Institute authorities at our President's private residence, at Grove Park. As on occasion of previous visits to this lovely spot, nature smiled with wondrous freshness, peace and beauty, comparing most favourably with the friction of city life. During the afternoon, Mr. Piercy piloted a walking party through the fields and lanes, where both flowers and birds were apparently enjoying life as much as the pedestrians. On returning to the house, tea, which proved most acceptable, was most tastefully served upon the lawn. In the evening, the following ladies and gentlemen kindly assisted with songs and recitations: Mrs. Ormiston Chant and her children, Mrs. Dickinson, the Misses Maxwell and Dexter, and Messrs. Strickland and King. Mr. Fowler also contributed considerably to so interesting a time by reading the character of a lady and gentleman, both being delineated in that unique manner so familiar to us all. At ten o'clock a move was made for the train, with feelings of gratitude for the very pleasant hours spent with our hosts.

* * *

THE remarks made by Mr. Tovey at his lecture on "Criminal Anthropology," seems to have caused an impression on some minds, if we may judge from various comments since that event. The remedial side of the question was only touched upon, and therefore an

opportunity still remains for someone to show how phrenology can be used in this direction. Some look to education for the solution of this problem, but judging from the statements made by Dr. Wright, in an article he contributes to the *Nineteenth Century* we are but training our criminals to be more intellectual in their criminality. This is a lamentable reflection, but figures are hard facts, and the writer tells us that in the decade, 1860-69, one case was tried annually for every forty-four inhabitants in England and Wales; in 1870-79, the proportion was one in every thirty-seven; and in 1880-89, one in every thirty-eight.

Crime is regarded by some in the same light as certain diseases—incurable; but a suitable diet would be likely to prove as efficacious in the one case as in the other. We are told that whatever affects the body, affects the mind, and what affects the body more—after birth—than the food of which it is built?

* *

MR. SMITH, who has exceptional opportunities of coming in contact with “all sorts and conditions of men,” writes, that “while talking to a man who had lost one of his feet in a railway accident, he told me he had often been in the wars, although many of his colleagues, who were exposed to the same dangers, managed to escape unhurt. While he was speaking, he happened to take off his hat, and I noticed that the organ of cautiousness was extremely small.”

* *

MR. FOWLER has been conducting the Wednesday evening lectureries of late, when among other subjects he has spoken upon the “Importance and value of Man.” There can be few men better able to do this, considering that more than sixty years of his long and full life have been devoted to the study of man in various parts of the world. Would that there were more men of equal importance and value.

* *

THE negro is usually credited with possessing considerable power in his skull, or rather in the thickness of it; but when Nancy Sharp, a coloured woman, age 32, of St. Louis, died suddenly and mysteriously without medical attendance, the surgeon was not a little surprised at the autopsy to find “that her skull was fully an inch thick at the forehead, increasing gradually to an inch-and-a-half at the back of the head.”

* *

It is supposed that there is no creature possessing a larger brain in proportion to its size than the ant; but we may look forward at some future date to a paper upon these wonderful little insects by a lady member.

* *

THE July monthly meeting will be held on Saturday the 16th, and as previously announced, will consist of a ramble round the beautiful district of Hayes and Keston, with tea at Messrs. Rogers & Co.’s establishment, situated immediately between both commons. In order to facilitate the necessary arrangements, members who propose joining the party, will oblige by forwarding their names to the Institute, together with the

number of friends expected to accompany us, not later than July 8th. It is expected that 2/6 per head will cover expenses. Meet at Cannon Street Station under the clock, in time for the 2.53 train for Bromley.

G. B. COLEMAN.

Notes and News of the Month.

THE Institute is open in the evenings for Phrenological Examinations from 7.15 to 9.15 p.m., during the day from 10 to 5 p.m.

MEMBERS of the Fowler Institute who would like to form a party to Grindlewood in August or September, or to any seaport on the South or West coast, are requested to communicate at once to the Secretary, Fowler Institute, Imperial Buildings, Ludgate Circus.

THE interesting course of lectures in elocution, were brought to a close on Monday evening, at the Fowler Institute. The course has greatly stimulated the art of public speaking among the members of the class, for Mr. Strickland has shown that he has the intricacies of voice culture at (his fingers' end) the tip of his tongue, and knows how to train the various registers of the voice with wonderful skill and patience.

IMPORTANT ANNOUNCEMENT.—Owing to ill-health, Mr. James Coates has handed over to us the entire control of the *Phrenological Annual and Register*. We have therefore made arrangements to incorporate it with the Christmas number of the *Phrenological Magazine*. We hope that all professional phrenologists and friends of the science will continue to give us their support which they have done in the past. We shall endeavour to introduce into it all items of universal phrenological interest. Further announcements will be given next month.

The class for practical scientific examination of heads had a unique close on Monday evening. An examination of a Japanese gentleman was made by L. N. Fowler; also that of an American friend, who accompanied him. Mr. M. Kalaoka, a native of Japan spoke English fluently, was exceedingly pleased and surprised with the accuracy of the description of his inner self. He is in the Government Service and expects shortly to return home and was an excellent type for the class to examine.

Mr. Samuel attested to the truth of the statement, and said he is an excellent linguist, gymnast, writer, and an accomplished scholar. The class which has been well and regularly attended has manifested an enthusiasm for the science that speaks well for scientific research, and also for the entertainment of friends during the summer holidays.

The Classes will re-commence the middle of September. Particulars forwarded on application to the Secretary, Imperial Building, Ludgate Circus, E.C.

THE human brain weighs 1-35th of the whole body.

WE have received a copy of the *Herbal Annual* which proves to be of more than unusual interest, and can be obtained at 116, Friargate, Preston, price 1d.

A MEETING of the British Phrenological Association was held on June 7th, when Miss S. Maxwell read a well prepared and highly scientific paper on "Genius," which was followed by an interesting discussion.

DR. JOHN KIRTON, author of "Buy your own cherries," died on Wednesday, June 15th, at his residence, near London. His memory will ever be kept green through his exceedingly practical lectures on health, thrift, temperance, and home life. He possessed a very versatile mind, and a brain of more than average scope and ability.

THE Craig Memorial Fund has now reached, at the Fowler Institute, £13 14s., and Henry S. Trower, Esq., 51, Montague Square, W., and Mr. M. H. Piercy, Imperial Buildings, Ludgate Circus, E.C., have been appointed trustees of an annual fund, to which Money Coutts, Esq., D. E. Samuel, Esq., and H. S. Trower, Esq., and others, have subscribed from £3 to £5.

Natural Food.—L. N. Fowler, Imperial Buildings, Ludgate Circus, London.—The contents of the June Number are varied and valuable. The pressure of matter upon the editor, Dr. Densmore, has necessitated four additional pages in the present issue. In the current number of *Natural Food* there are several able articles, and not a few convincing testimonies, in support of the principles enunciated in the journal.

D. J. T. (Brecon) writes :—Dear Sir,—Twenty-five years ago (in '67) I received as a birthday present your "Self Instructor in Phrenology and Physiology." That book has proved invaluable to me, though, as regards my health, character, and my influence on others. The accompanying paper will tell you something of a character which your book did much to form, and though I have no elements of greatness, and have long since said "good-bye" to dreams of fame, I have honestly tried to fill my little niche in God's Great Temple. In studying your "Self-instructor" and "Lectures on Man," I found I possessed certain developments. This knowledge gave me confidence, and for over twenty years I have been a constant writer to the provincial Press, and have been for some time the correspondent of a progressive London weekly. As a speaker, for seventeen years I have been an acceptable and, I believe, useful lay preacher, and a speaker on Temperance and other social subjects. Phrenology seems to lay bear to me the sources of action as far as their human origin is concerned. I realized that an audience to be dealt with in a meeting was just like an organ, and if I touched certain keys certain tones or results would be produced; and

that a similar fact was true, as regards the wider audience to be reached, through the Press. And I have sought to use the power of "playing the organ" in a manner that great masters would approve. I often feel that under God I owe my life to the health precepts included in your excellent manual. Rev. A. E., of Brecon, whom I advised to see you, told me he thought you would be interested to hear from me. Hoping you are enjoying good health, I remain, dear Sir, yours sincerely, D. J. T.

Communication from J. G. (Birmingham) will appear next month.

Answers to Correspondents.

MEMFOWIN.—(1) By the cultivation of language, Broca's convolution is stimulated, and will in consequence cause fulness about, or rather under the eyes. (2) "Average" is the same as the word "moderate" in "Phrenology Proved." In later works, instead of small, and very small, the terms average, moderate, and small are now substituted for moderate, small, and very small. (3) No, the fibres connecting the organs of benevolence and causality with the base of the brain, &c., must in consequence of their position be somewhat longer than those of acquisitiveness, or destructiveness. (4) Yes, in young persons the faculties marked "full" can with constant exercise become "large;" in older persons the increase of the faculty is shown in the sharpness and density of the organ. (5) Perpendicular foreheads denote Baconian philosophy and originality of thought; and if broad as well as high, organizing power is added, as well as humorous sentiments and intuitive ability.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

J. H. H. (Haslingden).—This gentleman's photo indicates an active mind. The head is well balanced, and in harmony and fair proportion to his body. He has a predominance of the mental vital temperament. He is very active, intense, susceptible, and wide-awake. He is full of energy and spirit, and likes to take his share of life's work. He is very thorough in what he does; he does too much rather than not enough, and likes to get a thorough grip of what he has in hand. He is original and comprehensive in his style, critical and penetrative in his ideas, and is always on the alert for thoughts; constantly testing the old, and frequently forming new theories. He has an enquiring mind; wants to know something of everything, and is well-informed generally. He

is by nature a character reader, and quick to see the motives and intentions of others. He is full of sympathy, and quick in understanding the various phases of human nature. He is neat and systematic, and shews considerable taste and refinement in his work. He is broad in his views, and has considerable scope of imagination. He is ingenious, full of plans and power of arrangement. Is quite tenacious, conscientious, decidedly ambitious, and is highly social, warm-hearted, and agreeable.

SIMON PETER.—This gentleman possesses a strong body, and is blessed with a fair share of health and strength. In disposition, he is decidedly practical ; he does not object to do the hard and rough work rather than look on, or be idle. He is a worker, and prefers to work under someone else rather than act on his own responsibility. He is conscientious and sympathetic, and will do much for those with whom he comes in contact. He is not at all prodigal, but is disposed to take care of what he has, unless his sympathies are unduly worked upon. He is fairly cautious and prudent, if anything is doubtful. He will do well to throw himself more into the company of others, and work off his ideas. He should study to improve himself in public speaking, and to express his ideas quicker, and seek to be more connected in what he says. He is fond of variety and change, and is most suited for that kind of work that offers most variety, or in an active outdoor pursuit. The navy should suit him.

J. B. C. (Leicester).—The photo of this gentleman indicates a comprehensive mind. The head is large and in fair proportion to the body. The mental vital temperament is strongly marked, giving him warmth and feeling and the disposition to throw life into whatever he does. He has considerable constructive talent, and is ingenious and versatile in his work ; he adapts himself to whatever he is doing, and imparts a finish and style to all he undertakes. He should be known for his judgment and appreciation of art, oratory, literature, and for his expansiveness of mind. He is very apt in his representation of a subject, and is critical, and fond of arguments. He is quite original in his thoughts, and is disposed to prove most things. He does not readily take facts for granted, but wants to investigate and thoroughly test before believing. He is full of sympathy and is thoughtful of others ; he is stable and persevering, quite prudent, and thinks well before speaking or acting. He has a full degree of application, can give his mind to one subject at a time and finish it, if not to prolonged. He is quite conscientious, stands by his word ; is very fond of order and system ; shows considerable intuition, and understands character well. He is ambitious, rather sensitive, and is friendly, social, and entertaining, but appears to lack self-esteem and a uniform reliance upon himself.

ELIZABETH (Birmingham).—The photo of this lady indicates a finely organised and highly susceptible mind ; she manifests more than ordinary mental activity. In disposition she is intense and susceptible, she throws her whole spirit into her work, and is very enthusiastic and high keyed ; she does nothing by halves ; she is quick to see and learn, and is thoroughly in touch with all that is going on around her ;

is full of information, and always has something to tell of what she has seen. Her memory of faces is very good ; she is fond of travelling, and is quite anxious to get about to satisfy her enquiring mind. She is very neat and systematic, shews considerable appreciation and taste for art and beauty. She is quite original and comprehensive in her views, and shows considerable ability to plan, arrange, and adapt things. She is intuitive, and expresses her opinion from what she feels and thinks, and shews much foresight ; she is a good judge of the character and motives of others. She quickly makes friends when she throws off her reserve ; shews considerable affection, and readily gets in touch with others ; she is very firm, but is guided largely by her intellectual faculties, and can generally act on her first impressions ; she underrates her abilities, but possesses an independent spirit.

G. W. (Hull).—The photo of this gentleman indicates a strong vital organization. He possesses considerable force and efficiency of character. His perceptives are well developed and indicate a mind well stored with facts ; he always wants to see and know all that he can come in contact with, and has a thirst for general information. He lives on the practical plane of life, and is anxious to do all he can to improve his position. He is ambitious, and the desire to excel, to do something more than ordinary, is strongly marked. He is full of spirit and energy and has plenty of push and go in him. He is fairly reserved and prudent and does not say any more than he thinks well. He is very strong in his opinions and beliefs ; what he asserts he will stand by and does not readily go from his word ; he is critical and sharp in his judgment, very little escapes him. He shows considerable intuitive power, and judges of character ; is strong in his likes and dislikes of persons. He has a good business brain, and considerable versatility of mind. He can turn his hand to most things, and has force and power enough to execute his plans in a practical scientific or business line.

OLDHAM.—The photo of this gentleman indicates a fairly-balanced mind ; he is intensely active and wide-awake. He has an observing mind, and possesses an unusual fund of general information. He is ingenious and versatile ; can take things as they come, and throw off work with despatch. He has considerable taste, and shews good judgment ; he is fond of everything being well done, and is not easily put off with anything but the best ; and fond of improvement and embellishment. He has a large sense of order, works by method and rule, and is easily annoyed by disorders. He is kind hearted and friendly disposed towards others ; and will do much for his friends. He is not proud or vain, but rather sensitive to the opinions of others. He shews more independence than pride. His nature is a social one ; he is constant and warm hearted in his attachments. He is original and comprehensive ; full of plan and ideas, more than he can carry out. He is critical and fond of human science, and readily forms his impressions of people. If a student of phrenology, would take great delight in its principles and truths. He is not harsh in judgment upon others, and easily forgives.

THE
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AUGUST, 1892.



SIR JOHN. LUBBOCK.

THIS gentleman has by organization a very favourable development of brain. He is fairly developed in the base, giving energy, force, and a strong hold on life ; but his head is superior in height, giving strength of mind, will, and character. He has a very decided individuality, and a mind of his own. He does not feel dependent on others for an opinion. He is specially high in the central brain. All the top head, self-esteem, firmness, conscientiousness, and the other moral faculties, help in forming his character, and enabling him to exercise a positive influence over others. He is actuated by a strong moral principle, whether he makes

much pretension to religion or not. He is a straightforward man and can be relied upon, and must be more than ordinarily interested in the development of justice. His powers of intuition are great. He is a lover of truth wherever it is found, and he respects those who represent it, however much they may differ from his particular views. He has an expanded mind, not a sectarian one. He is willing to look on all sides and allow others the same privilege. He has an inventive cast of mind, is quite original, and not only thinks for himself but for others. He is not afraid of new ideas, but is interested in new plans and the application of principles, and has considerable power of invention. He does not copy others in making speeches, but follows the bent of his own mind. He may not be particularly mechanical in his mode of doing things, because he values originality of mind more than he does the education of that mind. His pleasures are not connected with the base of the brain. His great delight is in the investigations of the doctrines of nature. He is naturally both a philosopher and a great student of nature, and can become interested in almost anything that explains natural science. He talks when he has something to say, but he is not prolix in his style. His intellectual powers furnish him with ideas, and his brain is so clear and distinct that it is easy for him to give expression to them. He is cautious in taking his position, but very firm and tenacious in maintaining that position. He has a spiritual sense that must have a decidedly marked influence on his mind. He is open to conviction, but cannot very well adopt any measure that is not comprehensible. He has a keen sympathy of a certain kind. He is particularly fond of mirth and wit, and sees the ludicrous in everything. He is disposed to utilize his ideas in a practical way. Such a brain must unfold a mind that cannot be easily forgotten, for his is a cast of mind that enables him to make a lasting impression.

L. N. FOWLER.

Sir John Lubbock, F.R.S., is an ideal member for the London University seat. He is perhaps the only man living who has won distinction in the three careers of business, science, and politics. He has told the story of "Prehistoric times," and has introduced improvements into nineteenth century banking. He secured Bank holidays for the working classes, and has "almost taught his dog to read." The width of his own reading is revealed by his list of the Best Hundred Books. He has been president of the British Association and a number of other learned

societies ; also of the Bankers' Institute, and the London and Counties Liberation Union. He is LL.D. of Dublin, Edinburgh, and Cambridge, D.C.L. of Oxford, and M.D. of Wurzburg ; and what makes these scientific distinctions the more remarkable is, that his school life (Eton) was finished at fourteen, when he entered the Lombard Street bank. In Parliament he has carried a number of useful measures, besides the Bank Holiday Act. He has been vice-chairman of the London County Council, and an active member of that body. He is 58, and has a beautiful country seat in Kent.

WHAT IS THE CHIEF END OF MAN ?

BY L. N. FOWLER.

Lecture given June 22nd, at the Fowler Institute.

As he stands erect he has two ends ; the one end points to the earth from which it came and whither it will go ; the other end points above from whence his immortal spirit came, and to where it will go. Both in time will find their affinities and resting place. While living we walk with our feet, and look with our eyes ; we kick with our toes, and smell with our nose ; we dance with our feet, and think with our brains. We do all the inferior work of life with the lower end, and the superior work with the upper. With our feet we get through this world, and with our minds we get through the world to come. The lower may have the gout, the upper end the *delirium tremens*. The chief end of man is above his shoulders, his head and face ; they comprise the workshop and mirror of man ; the mirror is in front, and the workshop is above and behind. Faces indicate what is going on in the workshop, and express thought, impulse, earnestness and indifference, love and hate. There is no visible surface in the human body that from birth till death indicates so much, and such a variety, as the face. It indicates joy, despair, astonishment, calmness, curiosity, satisfaction, thoughtfulness, carelessness, anger, affection, humility, self-satisfaction, modesty, vanity, courage, fear, cunning, frankness, mirth, sobriety, respect, boldness, scorn, contempt, rage, firmness, fickleness, contentment, and disappointment. Some wear an assumed expression like the monks and pharisees of old, and their descendants to the present day. The face, however, is only the mirror that reflects what is going on behind it. The same face changes in expression and pleasantness according to the work being done in the shop. A child will cry one

minute and laugh the next ; a man kisses one minute and kills the next. I have seen a woman scolding with rage and looking fiercely, but when the door bell rang and a friend came in she was as smiling as a May flower. A handsome, pleasant looking face is one of the greatest attractions in the social circle. A good face is a powerful magnet and makes one comfortable to look at it ; it is of more real use in a family than a fortune without it. A homely soul-less, sickly face is repulsive. The face is dependent on the mind for its expression. Heads are superior to faces, as much so as the person before the mirror is superior to the reflection. Some heads are very much more valuable than others ; some are of no service to their owners or anyone else, for neither can any good be got out of them or into them. Improvement is out of the question. Others are worth more than their weight in gold, and they have paid first cost over and over again. Large hard heads are worth more than small soft ones. But small hard sound heads are worth more than large soft heads, for the value of heads depends as much on quality as size. Diseased and demoralized heads are below par and not worth giving away ; while healthy and well-trained heads are always above par and at the head of society. Heads of one storey in height are only fit to put cabbages and potatoes in, a storehouse for grosser materials, a butcher's shop. Heads of two storeys are of more than double the value of a one storey head. They are not only more roomy, but there is better light, air and atmosphere.

A two-storey brain does all the essential work of life, and it—with what work the base of the brain (as the seat of life) does—carries a person through quite comfortably ; but the two together can only do the work of life in the flesh, about the same as the monkey, bee, and ant, for the two together carry the mind no higher than the wants of life in the flesh. The work done in the basement storey of the brain is gross and bare, although very needful. No other part of the head would attempt to do the same work.

The third storey raises the mind above the wants of the body and the pleasures of life, and carries it into the investigation of first principles, the combination of them and their use, and the controlling of the elements. The investigation of mechanical, mathematical, and astronomical laws ; the origin and beginning of all things.

The coronal brain is the most valuable of all. The choicest work of all is done in the coronal brain, and all the most valuable, enduring, and costly properties are deposited there. It is this coronal brain that is the medium through which man

has the consciousness of immortality ; of spiritual life and influence, of supreme power, and of rewards according to action ; of mercy and love, as crowning attributes of the divine mind. The coronal brain gives a finish, a climax, a rounding up of the head that makes it perfect in form. The most perfectly-formed and useful heads are elliptical—a little higher and longer than broad.

Brains are the foundation of every intelligent act of man. The eyes see, but the brain takes note and conveys to the mind what it sees. The ears hear, but the brain turns hearing to a good account. There is no tool or piece of machinery that does such work and so great a variety of it as the brain, and it is constant in action from birth till death. However valuable the skull may be, that value sinks into insignificance when compared to the brain. All workshops are valuable as places where work is done, but the work done is still more valuable. By the action of the brain within the cavity of the skull all the work of life is concocted ; all mental operations are started ; all sources of enjoyment are contrived ; all kinds of work are settled upon ; all inventions are perfected ; all imaginations are originated and expanded ; all loving and hating, singing, talking and praying, making and spending, killing and curing, is arranged by the brain. The frontal sinus is a musical box, a sounding board, and gives tone to the voice. Thin, compact skulls, and clear voices go together. The contents of the skull make it more or less valuable. Empty skulls are cheap ; those well filled are more valuable. Such heads are rare and the result of care. Heads vary much in size, shape, quality, and availability. Some heads are very wide-awake, others are very dull ; some are very clear, others are very indistinct ; some are vigorous, others are delicate ; some are smooth and even, others are rough and irregular. Some brains are soft by not being used enough, and some are soft by being used too much. The skull is a knowledge box, a workshop, a laboratory, a casement and protector of that which is more valuable, and it is more or less valuable according to its compactness, or thinness, coarseness, or porous structure, its largeness or smallness, its elasticity or brittleness. Heads that are large, full, healthy, and high, are more valuable and useful than any others. Many do not value their heads any more than they do their heels. They think more about ornamenting the outside than the inside ; of what they put on than in. Some abuse their heads beyond measure.

Phrenology reveals to us the importance of the head and what it is made for. Phrenology tells us that the head is not only the capsheaf of man, but the head of the family and all

business and national transactions. Before it was understood that the brain was the organ of the mind, it was not so highly valued as it is now, nor so well cared for ; but it was looked upon and used as a packhorse of the body to carry burdens on, or to butt with, as the negroes do in savagedom, or to be adorned with skill and fashion. Now phrenology makes us look at the head instead of the fingers and feet to judge of a person's ability to do things.

It is where the brain is the most developed that indicates the capacity for different callings, or for suitable husbands and wives.

The face manifests the disposition to laugh, cry, love, and hate, etc., but the machinery that puts the expression upon the face is above and behind it.

The three vital organs, the heart, lungs, and brain, are the most valuable of all the bodily organs. The brain being the organ of the mind makes it the most valuable of the three, whilst the mind being the immortal part is the chief value of man.

Some faces are great magnets and exert an attractive, positive, or a negative repulsive influence. No one delights in ugly faces. A woman took her own life the other day for she was tired of looking at her ugly face. Many persons smile only when they look in the mirror. An honest, homely face does not look bad or repulsive, for the expression is agreeable. The worst looking faces are those that indicate sin, vice, dissipation and disease, for they all are indicated in the face as well as honesty, purity and love. One of the ugliest faces I ever saw was at Bethlehem. I gave its owner money to go away. The south of Ireland and the north of Scotland furnish many examples of strongly marked faces.

With many, the head is only a block or dummy to show off new styles of hats and bonnets, and some appear to be more proud of what they have on their heads than what they have in them.

The face is a real tell-tale, it is an impressive history of love and hate, of joy and sorrow, of anxiety and carelessness, of thought and observation, of courage and cowardice. Faces represent the organs and functions of the body. Different diseases and weaknesses are manifested in the face. A large full face indicates a strong hold on life ; a long narrow face indicates physical delicacy ; a short face indicates impulsiveness ; a long face indicates stability.

We cannot think without the chief end of man. We cannot walk without the inferior end of man. Both ends are important in their place, but the upper end is far more useful.

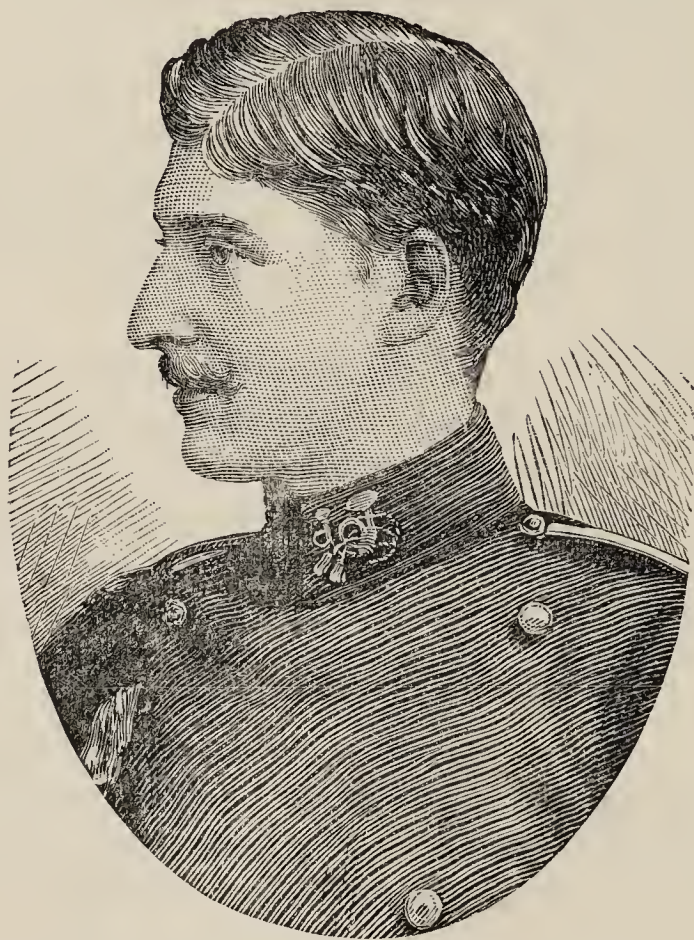
Man, as he exists on the earth, appears very different under different circumstances. When an undressed savage ; when a half-dressed Barbarian ; when a highly-dressed civilized man, and when developed into complete manhood ; feeling his strength ; conscious of his importance ; and yet acknowledging a superior power ; when an infant in the cradle ; when full of warm blood ; when laboring with age ; when living in perpetual snow, or in the temperate or torrid zone ; when he respects and governs himself ; when he lacks ambition, decision, pride, and self-government ; when he is honest and true ; when dishonest and demoralized ; when successful and rich ; when unsuccessful and poor ; when full of health and strength ; when weak, and full of disease ; when with a family, or alone. Learn to look : we look much, we see but little, or we remember but little of what we do see. To know nothing about astronomy, yet looking into the starry heavens, does but little good. Looking into the working of complicated machinery that we know nothing about gives us but limited knowledge.

Most people look at the dress and get-up of the person, without taking stock of their real make-up and natural stamp. A cultivated mind can see much more, especially if cultivated in a special direction. A detective is quick to find his victim, and the inspector, at the entrance of the prison, takes a piercing look at all that are taken into the prison, and he is sure to know them again. Looking at each other, without knowing the indications of physiognomy, physiology, or phrenology, would be a very indifferent, unintelligent look ; but to look with a full knowledge of them all, would be to see almost the entire character and pedigree of the man with his habits and tone of mind—his health, strength, and probable long or short life.

MEN AND WOMEN OF OUR TIMES.

CROWN PRINCE FERDINAND OF ROUMANIA.—His Highness has a marked degree of the motive mental temperaments. He is organized on a high key, and is very sharp and quick in all the operations of his mind. His character is very positive. His mind is decidedly penetrating, and he is distinct in all his mental workings and manifestations. He has a predominance of will power and practical intellect. He is very quick in observation, positive in his opinion, practical in his judgment, and intuitive in his perceptions of character and of what to do. He may be sufficiently loving to appreciate his own family, but in

society his motto is, business first and friends afterwards. He is strongly attached to place, is very connected and concentrated in his thoughts and feelings, and has but one object in view at a time, and that he pursues with great tenacity. He is quite alive to what is going on around him, and is able to manage various kinds of business with equal promptness and success. His moral brain aids in giving him a very distinct character; whether pious or not, he has by nature an elevated moral standard, and does not trifle or let himself down to a low degree of enjoyment. Amongst strangers he is comparatively proud, minds his own business, keeps himself at a proper



CROWN PRINCE FERDINAND OF ROUMANIA.

(From photograph by Mr. Mandy, Bucharest.)

distance from others, and goes straight ahead. Amongst friends he is urbane, kind, and respectful. He will command respect wherever he goes. He is very accurate in all his business calculations, and methodical in his mode of doing work. His intuitions are very correct. He is not particularly witty, jolly, or given to mirth. He enjoys a joke, sees the full force of a truth, and is quite direct in his style of talking, although not particularly oratorical or gifted in verbal memory. He was a born commander; he is in his element when taking responsibilities. He is noted for finishing what he begins.

PRINCESS MARIE OF EDINBURGH.—Her Highness has a high degree of the vital and mental temperaments. She is full of life and animation ; she has an aspiring turn of mind, will never be satisfied with any medium place in society. She possesses more than average power of mind and constitution. She will endure much and take heavy responsibilities without flinching. She possesses more than average will, determination, and resolution. She has a practical intellect, is much interested in the external world, and takes great pleasure in coming in contact with life and society. She is a good judge of men and things, and could make a capital business woman. She will



PRINCESS MARIE OF EDINBURGH.

(From photograph by E. Uhlenhuth, Coburgh.)

manage her affairs with more than common ability, and will not need to be told what is going on, for she will find that out herself. She is capable of enjoying almost everything ; scarcely anything comes amiss to her. She is full of thought, although not so copious in talking as some. She gives positive orders, and expects everything to be promptly done and at the time appointed. She prefers an active life, but can enjoy the pleasures of it to the full extent ; and if called upon to take an important place in society she will manage her part with skill and ability. Whether she is engaged in telling what she knows, or using her judgment, she will under all circumstances be able to meet the demands, and exert her influence

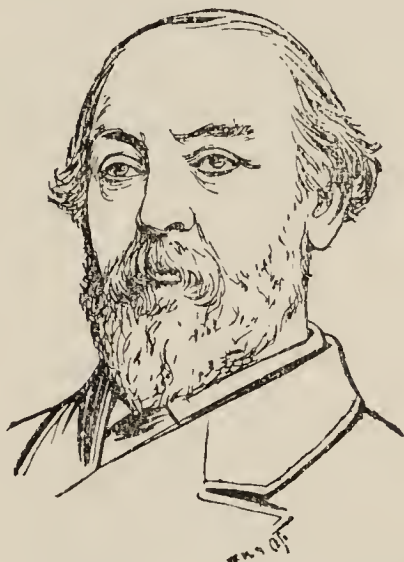
with energy, and if circumstances require her to attend to details she is equal to the task. She is one of the kind that will wear well, and when exhausted will recuperate speedily.

He of the two is more positive and commanding; she is more tenacious and plucky. They are well suited to each other in temperament, and if they have patience to make proper allowances for variety of temperaments and education they will ply very favourably. He being masculine and she feminine in character the chances are favourable for a happy life in their married state if others do not interfere. She, however, is to be led rather than to be subjected to authority, and he will take the place of a leader and commander general; but there are few ladies who are so ambitious to be at the head of society as she.

The betrothal of Her Royal Highness Princess Marie Alexandrina Victoria, eldest daughter of the Duke and Duchess of Edinburgh, to Prince Ferdinand, heir to the Crown of Roumania, second son of Prince Leopold of Hohenzollern-Sigmaringen, and nephew of King Charles I. of Roumania, is regarded with gratification as a personal arrangement likely to secure their future domestic happiness, and as a token of the confidence shared by the Courts of Great Britain and of Russia, since the Duchess of Edinburgh is sister to the Emperor Alexander III., in the stability and prosperity of the Roumanian Kingdom.

HENRY LABOUCHERE, ESQ., M.P.—This gentleman has an available brain and mind. He has a practical talent; what he knows he feels sure of. He delights in realities, and takes much pleasure in developing the truths of nature. He comes to the point, and knows what he is talking about. He is not wanting in taste and imagination, but he is naturally more scientific and philosophical than poetical. He has good conversational talent, and can tell what he knows easily. He has a favourable talent for a scholar, and for extended learning. He is particularly successful in being able to tell what he knows in an agreeable way in conversation; and his general memory of what he sees, where he goes, and what he does is first class. He is a man of method and system, with a favourable development of practical talent, versatility of mind, and ingenuity. His brain is strongly developed in the emotional nature; he appreciates sentiment, takes varied views of the same subject, and will find it necessary to restrain his emotional tendencies in order to keep a good

ground for his imagination, for his æsthetic faculties are such as to lead him to show almost too much liberty of action, scope of thought and feeling. He can handle a subject in various ways, and present his ideas with marked freedom, as though he were not confined to a particular phraseology or definite line of thought. He must find it difficult to restrain his liberal feelings and views; no matter how much of a debater he is, his mind is open to conviction on a great variety of subjects. He is rather given to speculating on truths, and has more than average curiosity to look into every new book and subject. He should be a sparkling debater, and able to take a meeting at its ebb and flow, and particularly give an animated turn to all prosy arguments.



H. LABOUCHERE, ESQ., M.P.

Mr. Henry Labouchere has represented Northampton since 1880. He is 61 years of age, and was educated at Eton. He is the proprietor of *Truth*, has also a large interest in the *Daily News*, and is brother-in-law to the Bishop of Rochester. In the House of Commons he is always like an electric light, bright, original, lively, and so witty that he claims a hearing where other members, who are dull and tedious, fail. His jokes are enjoyed by everyone—except, perhaps, the subjects of them. As a politician, Mr. Labouchere is, according to one biographer, a cynic (without being a Diogenes), hence his political independence. He was very useful to Mr. Gladstone during the Home Rule negotiations, and among the London radical workingmen “the gospel, according to Mr. Labouchere,” is preached with much popularity. His country house is Pope’s Villa, Twickenham.

ORION.

It is usually a man who has a head like a cork who gets along best in the swim.

MENTAL SCIENCE.

BY T. V. GIFFORD, M.D.

PHYSIOLOGISTS are becoming more and more convinced of the fact conceived many years ago by a few far-seeing minds, that there are moral idiots as well as intellectual idiots.

As this truth becomes generally known and understood by law makers and those who exert a controlling influence over the affairs of man, the modes and plans of dealing with the criminal classes must be largely modified.

Persons who are uninformed on mental science and its relation to organization are prone to hold all mankind morally responsible according to their intellectual ability or information and ability to know what is right.

While it is with the intellect only to know what is right and what is not right; it has no moral force, no conscience, no care, no over-sight nor government of the person. The office of the front brain, the intellect, is to get knowledge. The whole governing power in man's nature lies in his moral faculties or upper brain, which has no power to know anything. Its office is to see to the complete execution of whatever the intellect may decide upon as being right. Being unable to discern right and wrong the moral nature will urge the execution of a wrong conclusion of the intellect as persistently as it will a right conclusion.

So while the intellect is the only reliance for knowledge of good and evil, the moral faculties are the only reliance for directing and governing the deeds of life.

Another department of man's nature dependent on brain bulk and brain action for its whole manifestation is the selfish propensities which prompt man to look especially to his own individual interest; this depends on the size and development of the side head back of the intellect.

If the moral brain is not there the person is morally idiotic, just to the same degree that he is idiotic or deficient in intellect when the front brain is wanting.

The intellectual idiot is not held accountable when he is lacking in ability to know what is right.

The moral idiot should not be held responsible, because, however much he may know, he has no governing brain to prompt the execution of that which he knows to be right.

This does not imply that all criminals are moral idiots. Many are very bad criminals because of their lack of correct knowledge; others having large moral faculties may become criminals owing to their surroundings and influences being

unfavourable to the development and cultivation of their moral nature.

In order that one may have moral self-government, he must have both the knowledge and the strong moral force or nature.

There are those, too, who know enough and have full brain in the moral region, whose environments have been such as to cause them to struggle for a meagre subsistence, and thus the selfish brain has been brought early into action and become over-developed, making criminals of many fairly well organized beings by force of circumstances.

And thus we might single out many conditions of life that produce such strong influences on mankind in his development that many are driven into criminal acts by the overpowering force of circumstances.

The popular education of the present with all of its wonderful blessings falls far short of what is possible in education, especially in mental, moral, and religious science.

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(*Continued.*)

D.—AGREEABLENESS.

Pleasantness, blandness, youthfulness; ability to interest and entertain others; smoothness of manner; power to say and do severe things in an acceptable way; pliability of disposition; suavity.

Agreeableness seems to work with all the faculties, and will serve to lubricate them and make their actions acceptable after human nature has taught us how the person being treated ought to be dealt with, and how to say disagreeable truths without giving offence, and make the language and conduct welcome to others. Agreeableness tends to put honey into the voice, and a wavy ease into the gestures and the bow, and the possession of it is a fortune to a man who has a good general organization, for he can occupy places of difficulty where most men are too tart and curt to be employed, and he will make himself so useful in the business that he will seem to be indispensable. Such an element of the mind cannot be properly expressed by any other faculty or combination of faculties, although approbateness, and imitation, benevolence, and friendship, come the nearest to its expression. Some people are so bland and polite that they compliment and criticise at the same time, and leave no sting of bitterness behind. Other people with the same desire to do good through their remarks, express the same truism, but offend, and fail to reach the conscience of their friends or enemies. Manner is often quite as important as matter. Men will often

swallow bitter doses of truth, if expressed in a sweet acceptable manner. Even nauseating pills can be sugared over so as to be eagerly and freely taken, which would be unceremoniously rejected, unless rendered thus palatable by words and looks of honeyed import.

A law of mind as palpable and important as this should be practised by all, and especially by those who have any wholesome moral medicines they would administer to individuals or communities. In other words, all should "choose out acceptable words," and use



EMPRESS AUGUSTA.

no other. To public speakers this agreeableness is of the utmost importance. It may be so used as to carry an audience by storm, and render most obnoxious truths inoffensive, if not even popular. Especially should this important means of success and happiness be encouraged in the young. For this, mothers have every facility and should lose no opportunity of doing.

VERY LARGE.—One having agree., very large, will be particularly winning and fascinating; talk with ease to their greatest enemy; with

lang., large, and with combativeness moderate, will bear no grudge, and show suavity of manner towards everyone ; with large approbateness, will be affected, and pile on the agony, "blarney," and compliment people too much.

LARGE.—One having agree., large, will have a pleasing, persuasive, conciliatory mode of addressing people, and of saying things ; with adhesiveness and benevolence large, are generally liked ; with comparison and human nature large, say unacceptable things in an acceptable manner, and sugar over expressions and actions ; can say and do pungent, severe things in so pleasant a manner as not to give offence ; easily wins the confidence and goodwill of all, enemies included ; so says and does things that they take ; makes few enemies, and gets along smoothly and pleasantly among men.

FULL.—One having agreeableness full will be pleasing and persuasive in manner, and with ideality large, polite, and agreeable, except when the repelling faculties are strongly excited ; with small secretiveness, and strong combativeness and activity, are generally pleasant, but when angry are sharp and blunt ; with large benevolence, adhesiveness, and mirthfulness, are excellent company.

AVERAGE OR MODERATE.—Have a good share of pleasantness in conversation and appearance, except when the selfish faculties are excited, but are then repulsive. Are rather deficient in the pleasant and the persuasive, and should by all means cultivate this faculty by smoothing over all said and done.

SMALL AND VERY SMALL.—Say even pleasant things very unpleasantly, and fail sadly in winning the good graces of people ; are almost totally deficient in this faculty, and should try to feel agreeable and express those feelings in as pleasant and bland a manner as possible, study and practice politeness as both an art and a science, compliment what in others you can find worthy, and render yourself just as agreeable to those around you as lies in your power.

LOCATION.—Agreeableness is located between imitation and causality, on each side of human nature, above the line that commonly divides the forehead from the top of the head under the frontal bone, and in the second or middle frontal convolution. It has two divisions ; the lower or outer part gives youthfulness, the upper or inner part gives blandness.

REPOSE.

After having defined and located the various faculties of the mind that have as yet been discovered by Gall, Spurzheim, Combe, Broca, and others, there seemed yet another unlocated. Some faculties seem to sleep and lie dormant, while others seem to collect all the nervous vitality that is not used by the inactive ones, but no faculty of the mind has the power of quieting all the organs of the brain with the exception of the one called by myself *Repose*. It may be contended that the lymphatic temperament will do this, for it is the inactive condition of body that predisposes those persons who possess it to sleep, but if we were to recognise the elements of *Repose*,

as only possible to emanate from those persons who possess that temperament, how could we account for the fact that persons who have the other temperaments also express the necessity for considerable Repose. When my attention was first drawn to the fact that a certain portion of the brain was largely developed in persons who required a certain amount of regular sleep, and those persons were deficient in that same portion of brain, who could knock about, be robbed of rest, and snatch it on the wing, I concluded there was some ground for my surmise, and I subsequently tested it in every examination I made.

VERY LARGE.—When the faculty of repose is very large it disposes a person to take an extra amount of sleep. Such a person cannot do his work if robbed of his rest; he could not sit up night after night even under excitement. The faculty, when very large in children, can easily be influenced by a magnetic person passing his hand over this part of the head.

LARGE.—When this faculty of repose is large a person will be dull of intellect if robbed of sleep; with large repose and large dest., a person will use up the energy and force of the mind and will feel to need considerable sleep to re-energise him; with the perceptive group large, will be fond of observing and examining objects of scientific interest, but will not allow such research to interfere with the usual hours of sleep; with the reflective group large will delight in philosophical subjects, but if the latter are carried on beyond the time when rest is generally taken, will fall asleep when reading or thinking.

FULL.—One having the faculty of repose full, will require a fair amount of sleep, but will not be so disturbed in the work of the day if robbed of part of a night's sleep; will enjoy his rest, but be able to take it at intervals.

MODERATE OR AVERAGE.—One having the faculty of repose moderate, will find it difficult to sleep consecutively for more than a few hours at a time; will be restless and uneasy in sleep, and quickly wake at any noise; with time large, can wake at any hour desired with clockwork regularity; such persons can always be depended upon to rise at a certain hour.

SMALL AND VERY SMALL.—One having the faculty of repose small, will find it difficult to take sufficient sleep; will be very wakeful, and will often resort to artificial means to obtain rest; will be able to sit up far into the night to complete work that could not be accomplished in the day without apparent exhaustion, provided he has a healthy constitution. When the faculty is very small, the person does not take sleep as an enjoyment, and never feels the inconvenience of any loss of rest, can with large vitat., combat., and firmness endure great fatigue, exposure, hardship, and anxiety, without complaining. Nurses and soldiers show little of this faculty; Napoleon is a good example of a very small development of repose. When very small a person shows how little sleep can be taken without becoming drowsy.

LOCATION.—The faculty of repose is located below caut., and friend.,

and above secretive., and combat., about an inch above the lambdoidal suture, and under the parietal bone ; it is an inch and a half above vitat., at the junction of the parietal, temporal, and occipital convolutions.

The class of functions performed by the reflective faculties is of a far higher order than any other, and also, when fairly developed and furnished with correct data, if allowed to operate in an unperverted and unbiased manner, they will always form correct conclusions, and furnish us with the truth. But the great misfortune to mankind is that these faculties are seldom allowed to assert their own proper prerogative, and sway that influence over human actions and human conduct, for which they were originally designed. Hence it is that we so much more frequently see men guided by feeling, by passion, or by prejudice, than by reason.

This great and deplorable evil generally arises either from a neglect to cultivate the reasoning faculties, or from a perversion of them. It cannot be denied that the animal and selfish passions in man frequently occupy the greater portion of the brain ; but yet on a close examination, it will generally be found that the moral and intellectual faculties, if properly cultivated, are sufficiently powerful to keep in check, and to control the feelings and the passions. At present, however, we have to consider the neglect and perversion of the reflective faculties only.

As society is now constituted, even in what is called civilized and Christian communities, men are often taught to fight, to covet, to cheat, lie, and scandalize ; but how rarely are they taught to think ! In proof of this we have only to look abroad upon the face of society. How often do we see our beautiful system of religion debased and degraded, and made subservient to the vilest and most selfish purposes ; her sacred vestments tattered and torn by sectarian strife and party discord ; her holy altars polluted by base hypocrisy and sordid iniquity ; her sublime doctrines perverted, and her righteous laws trampled under foot ? How often do we see the unprincipled pretender gaining his selfish objects by practising upon the ignorance and credulity of his fellow men—the ambitious, rising to high places of power and profit by making use of the basest duplicity and the most heartless intrigue—by fostering the pride, flattering the vanity, pampering the luxury, and gratifying the selfish passions of those around him ? Now, it is evident that if men were taught to think—if their reasoning faculties were properly cultivated and trained to perform their legitimate functions with energy, these things would not, these things could not, take place ; because, in the first place, aided by the moral organs, they would restrain the sinful passions and desires, and the unhallowed ambition of the designing ; and, secondly, so enlighten the minds of the common people as to prevent their being thus deceived and imposed upon.

But the vices and follies of mankind grow out of the perversion of the reasoning faculties more frequently, perhaps, than out of their neglect ; and when this is the case, their tendency is to make man

worse even than the brute, for they are then under the dominion of the selfish passions, and are rendered almost wholly subservient to the gratification of their wants ; they are then actively employed in searching for new objects upon which the indulgence of the passions may be expended, and new excuses for such indulgence they are energetic in seeking out, and presenting artificial, improper, and unnecessary stimuli to the selfish propensities of which the brute can never form any conception, and, of course, upon which it can never exert or debase its mental functions.

Again, mankind are not only, not taught to think, but they are frequently mis-taught to think ; that is, they are often taught to think in a particular way—taught to believe certain doctrines, and to disbelieve others—taught to believe whether reason approves or disapproves ; and all this is brought about by a kind of ratiocinative legerdemain, or by causing the eye of reason to look at all objects through the dim spectacles of prejudice. This point may be illustrated by a reference to children. Before their reasoning faculties have become perverted, they frequently reason more clearly and accurately upon some subjects than their tutors or their parents ; for, in the simplicity of their honest hearts, they deduce from the premises presented to their minds, the conclusions which naturally flow from them. Hence many would do well to take the hint, lay aside their bigotry and their prejudices, bow their stubborn pride, and, in reasoning, adopt the simplicity of the child.

PHRENOLOGY AND RELIGION.

THE present age is one of intense mental activity and progress. In all branches of science, art, literature, and religion, we discover marks and indications of progress. The human intellect is incessantly engaged in probing the foundation of all things, human and divine. No received opinion, however sacred, is allowed to remain unquestioned, and every weak joint in the armour of truth is the mark for a thousand arrows. All the above are opposed, criticised, condemned, by sceptical and ignorant-minded men. The celebrated George Eliot tells us with much truth : “ It is a common sentence that knowledge is power, but who hath duly considered or set forth the power of ignorance ? ”

Phrenology stands in the forefront of the battle ; around it rages a violent storm of controversy, even the most honest phrenologists are sometimes perplexed by the subtle objections of the adversaries. But truth is a power which never fails to conquer ; she contains within herself the elements of success, and her ultimate triumph is as sure as her nature is unalterable. Ignorance may oppose, but light shall ultimately break forth and surmount every obstacle.

There are two principal methods of discovering truth: first by reasoning upon it, secondly by demonstrating it. The greatest, the most sublime, the profoundest truths are experienced in the life and character of the individual. Feel a truth, that is the best way of comprehending it. We may fail to put the sense of such truths into words in the shape of accurate maxims or doctrines, language may fail to describe the truth in all its beauty and fulness, but the truth exists notwithstanding.

There are old Methodist preachers who have been unable to express their beliefs in theological forms, but they have, nevertheless, discovered the truth which has "made them wise unto salvation."

Phrenologists may fail to describe fully, clearly, and distinctly, the truth of phrenology, yet the truth is discovered.

Now, the unerring test of truth is experience. False systems, false teachings, dishonest teachers, fade and perish, before the irresistible force of reason. There is a vast number of truths which can only be discovered by the guide of experience. A man may leave a legacy of twenty five-pound notes, but he cannot bestow upon another the legacy of twenty years' knowledge. Every individual man and woman must encounter the various temptations of the world in order to learn those lessons which ennoble and enrich human life. Many persons have tested and applied the principles of phrenology to the reading of their own lives and characters, yet they are unable to express their views in phrenological terms.

Opinions differ on all subjects. No two men in this vast universe think precisely alike. No two minds are constituted exactly alike, so that men must necessarily think and act differently. In every life there is a distinct individuality of character. One is industrious, another is indolent. One is impulsive, passionate, and hot-headed; another is cautious, thoughtful, and considerate. One is loving and kind; another is not so. One is social, genial, full of sunshine; another appears as though he were suffering from a bad bilious attack. One is a musician; another is incapable of distinguishing between the noise of a donkey and the singing of the "Old Hundred."

Even anti-phrenologists must admit that the above named types of men exist. We meet with them day by day. The benevolent, kind man is distinguishable from the criminal, and *vice versâ*.

To condemn any subject without due examination is unworthy of reason. Christ said, "Seek and ye shall find," and the law of Christ applies itself to all branches of science and religion. It is persevering industry which constructs

railways, cuts through mountains, builds bridges, makes discoveries, ennobles and enriches human life.

There are numbers of well intentioned people who ignorantly state that phrenology teaches men to despair and despond, but where they obtained their information, or upon what ground their opinions are based, it is difficult to say. Phrenology teaches men that the great end of life is to develop their mental, moral, and spiritual powers, and if they comply with the above, life will become brighter, better, and more Christ-like.

Phrenology opens out her treasures freely, unreservedly, and without the least hesitation to all anxious and inquiring minds. "Seek and ye shall find." Study carefully, diligently, and phrenological truth will become more interesting and more instructive.

D'ALLOTT, M.F.I., M.P.L.U.

THE AGE OF RESPONSIBILITY.

IN relation to the question of responsibility, according to the French criminal law, there does not appear to be any age at which a child is absolutely exempt from punishment. If an offence be committed under the age of sixteen, and it be found to have been committed "without discernment," the offender is to be acquitted, but, according to circumstances, he is to be returned to his relatives or placed in a house of correction, to be brought up there, and detained for any number of years not exceeding his twentieth. By the criminal code of the German Empire a person cannot be criminally prosecuted for any offence committed before he has completed his twelfth year.

In his "History of the Criminal Law of England" Sir James Stephen expresses himself as follows: "By English law children under seven are absolutely exempt from punishment, and from seven to fourteen there is a presumption that they are not possessed of the degree of knowledge essential to criminality, though this presumption may be rebutted by proof to the contrary. Like most other presumptions of law, this rule is practically inoperative, or at all events operates seldom and capriciously.

My own opinion accords with that expressed by a writer in the *Lancet*, that the age of complete irresponsibility should be raised, say, to twelve (except in the case of a few specially atrocious crimes), and that it should be succeeded by complete responsibility. This definite expression of opinion by an authority of such eminence and experience must carry great weight.—Ed. *Phrenological Magazine*.

OBJECTIONS TO PHRENOLOGY.*

FROM the earliest ages, every new science, system of philosophy, and invention, have had to contend with the opposition of those who have ignored their truths, without being sufficiently acquainted with their claims for consideration.

Greece, at one time, had different schools of philosophy, the disciples of which contended with each other as to the importance of the various tenets they believed, while the people discarded them as a whole, fearing that they infringed upon their divine rights.

Pythagoras was expelled from Athens. Anaxagorus was imprisoned. Democritus was considered insane, because he attempted to discover by post-mortem examinations the causes of insanity. Socrates was condemned to drink hemlock. Galileo was imprisoned on account of his peculiar opinions in astronomy. Linnæus and Buffon were called infidels. The works of Descartes were burned by the University of Paris ; and Locke was denounced as a fatalist.

It is not surprising that phrenology has had to contend with opposition, or that many refuse to examine its claims, because they do not wish to be convinced of the truth of a new science. If the opponents of phrenology would adopt the course of Dr. Vimont, of Paris, who endeavoured to gather all possible data, in order to disprove the science, I should not fear for it in the least ; as, like the candid doctor, they would very soon perceive that the testimony of comparative anatomy is so strong in favour of the science, that they would be obliged to admit its truth.

There are two great classes of objections brought against Phrenology, viz., the

MORAL OR RELIGIOUS, AND THE ANATOMICAL OR
PHYSIOLOGICAL.

The first class declares that phrenology leads to fatalism, materialism, infidelity ; that it destroys accountability, opposes the doctrines of "change of heart," and "growth in grace."

The anatomical objections are, that bony processes are frequently found in the skull ; that there is a frontal sinus ; that the skull is not uniformly of the same degree of thickness ; that the external of the brain does not harmonize with the external of the skull ; that great men have not always large heads ; that bad men have not always bad heads ; that the skull does not change in the same proportion, or degree, as the character is modified by education.

* Which have been clearly demonstrated on public platforms by L. N. Fowler

These objections will be candidly examined ; and I bespeak a careful consideration of their refutation.

One of the most important objections brought against phrenology is, that it leads to

FATALISM ;

that a man with a certain form of head is not accountable, because he is compelled by his organization to do certain things, and cannot act freely. It is not the phrenologist who says this, unless he is already an infidel, and has espoused phrenology in order to find a support for his infidelity, in the same way that a man with preconceived ideas of religion will read the Bible, and afterward exultingly declare that his peculiar opinions are to be found in the Sacred Book. Phrenology teaches most distinctly the doctrines of a necessity for growth, improvement, and advancement ; that the mind is feeble in the organization of the child ; but that it develops, expands, and unfolds, as it is trained and educated. If fated, we are so by a higher power, by our Creator, and consequently have no occasion to complain.

Phrenology explains the nature of the organization ; but it does not make the brain, or teach that a person must pursue a certain course. If, for example, a boy steals, and his mother brings him to me, and I say to her, "Guard the mind of the child for his Acquisitiveness is very large, and if it become perverted in action, he will covet that which does not belong to him," I do not say to her, "Your boy must or will steal ;" but explain that Phrenology recognises an organ—the perversion of which leads to stealing,—which is prominently developed in the brain of the boy, and that she must teach him to control that tendency of his mind. Phrenology does not put the tendency there, and it is just as much the duty of the chaplain of a prison to explain why one prisoner has committed the crime of murder, while his neighbour in the next cell has been a burglar. He will answer in a wholesale way, "that it is depravity that makes men go astray." I would ask why all men are not tempted by depravity to be equally wicked ? He will reply, "The grace of God has restrained them." I would ask, "Why is not the grace of God sufficient to restrain all men, equally under similar circumstances ?" In this way we might continue our investigations, until we should become lost in the mysticisms of metaphysics and theology, or "reasoning in a circle," arrive at the point from which we started : alas for the deplorable fact ! we are all so limited in mental power, that we are unable to elucidate many truths of which we have a faint perception.

The advantage of Phrenology to the mother of the boy that steals is, that when she knows his tendencies, she will teach him to restrain those faculties that are naturally too strong in development : hence, Phrenology is of great benefit rather than the opposite.

It is a fact that we are fated physiologically to have a certain colour of eyes and hair ; peculiar forms of ears, noses, &c. Physiology recognizes that the stomach is principally concerned with digestion ; that the lungs are connected with breathing, and the heart with the circulation of the blood. So, Phrenology declares that there is one power of the mind that enables us to think ; another gives to us the emotions of love ; another is connected with devotion, and so on, through the long catalogue of mental operations. The charge of fatalism is generally brought against Phrenology by those who preach predestination, or that men are fore-ordained to go to heaven or hell. I am acquainted with clergymen who preach strong predestination doctrines, and at the same time oppose Phrenology most strenuously, because they have declared that it led to fatalism. It is a fact that men differ in mental and physical peculiarities ; that some are strong, while others are weak, organically ; that some are long-lived, while others die prematurely ; that some are strong-minded, others are naturally weak in mental power ; some can resist temptation others find more difficulty to control their propensities. These are *facts*, without reference to Phrenology ; and it is a strange thing that the objector calls upon the Phrenologist to *account* for these facts. They are in our organization, and anterior to every system of mental philosophy.

If man were perfect, there would be no occasion for him to change ; but the Creator has not fated him to commence his existence as a perfect being. He is in a constant state of progression ; beginning as a child, he grows into manhood. His mind, as well as his body, is constantly developing ; and he goes from one degree to another, improving as long as he lives. The differences in the human race arise from the fact, that one has a better organisation than another ; more native power and ability, and is more susceptible of receiving an education. Why this difference ? Some say, the Creator makes it. The children of two parents inclined to insanity are liable to become insane. The children of consumptive parents frequently die before the mother. Does God make the child insane or consumptive ? as much as He makes human beings imperfect in any way. If one child is better organised than another, there is a cause for it. There can be no fatality in the matter ; because the result has arisen from superior

parentage, and the obedience of the laws of hereditary descent. If you wish good fruit from the trees planted in your garden, you prune, nourish, and graft good fruit into the branches. Let the trees grow wild in the woods, and you will pluck fruit not fit to be eaten. The same is true with regard to the development of the body and the mind. It is a fact that those parents who understand and obey the laws of life, bear more perfect children than those who neglect or infringe those laws. It is unwise for anyone to say that the Creator makes idiots. We might, with greater truth and propriety, infer that they are the result of certain mental or physical conditions of the parents, which have affected the minds or constitutions of the children. Those who have badly-formed heads, owe their malformations to the peculiarities of their parents. If an individual possess a very small development of the moral brain, and a great preponderance of the selfish and animal propensities, it does not necessarily follow that the individual must be bad, or that the Creator intended that he should be so. But if the Creator specially designed him to have such an organization, he ought to obey its dictates, and to fulfil the destiny which was marked out for him.

Phrenology explains more clearly than any system of theology or mental philosophy, why it is that man, being born with an imperfect organization, with the propensities to steal, and to commit crimes of various kinds, is not fated to lead a wicked life ; of course, I except idiots, who have not generally the control either of the mental or physical forces of their being. It also gives explicit directions, so that the normal powers may be developed harmoniously.

Phrenology does not teach that a man has a bad head, and hence must be bad ; but that sometimes the various faculties may be too strongly developed, so that there is a want of harmony or balance of the powers ; consequently, there is in such cases, inconsistency in mental action. It also declares that all the primitive powers of the mind are good ; were given to us for a legitimate purpose, and that the vices we see in society come from a perversion of the faculties. When alimentiveness is perverted, it leads to gluttony and intemperance ; but no normal power is given for this excess. When acquisitiveness is perverted, it leads to stealing ; but there is no organ for theft. If there was a faculty given for that purpose, phrenology would not be blameable ; neither would the man be responsible for the exercise of the faculty. But the smallest child that has been taught the difference between right and wrong, knows that he should not take that which does not belong to him. Every man with a fair amount of

mentality, is conscious that he is doing wrong when he steals, and thus acts contrary to his convictions of right and wrong. When he eats the food that is prepared for him, he does not feel guilt and condemnation. When we honestly earn money, we are not self-condemned for so doing ; for it is the legitimate action of acquisitiveness. Some look at this whole subject in a superficial manner, and reason, that because some persons steal, there must be an organ to incline them to do so ; and they hence conclude, that such have no responsibility in the matter. Many of these tendencies are transmitted hereditarily ; and where families have certain predilections, the children frequently inherit the same. There is one kind of fatalism that is affixed to every created thing, viz. ; all species of animals, and all the human races, produce after their kind ; lions produce lions ; the Chinese always produce Chinese children. The leopard never becomes the tiger ; neither does the Indian ever become the Anglo-Saxon ; but, as we have observed that the mind changes and progresses, we positively declare that this charge of fatalism is unfounded.

(To be continued.)

Hygienic and Home Department.

CANON FARRAR'S TRIBUTE TO WOMAN.

IF it be true that "the corner-stone of the Commonwealth is the hearthstone," how important is the work of every woman, even in that sphere of family life which many are tempted to despise as too narrow for their energies. Every woman should, indeed, aim at doing good in wider regions of life, and should endeavour by the irresistible force of sweet and silent influence, if in no other way, to raise the whole tone of national thought and conduct. But even if a woman, whether married or unmarried, be "never heard of half a mile from home," the purity and loftiness of her ideal, the devoted unselfishness of her life, may tell with immense and continuous power upon every member of her family. The bright invisible air produces effects more stupendous when no whisper of a breeze is heard than all the fury of the passing hurricane ; and the influence, conscious and unconscious, of thousands of women entirely unknown to fame, may go to the ennoblement of the moral being of generations yet unborn. Men are, and ever will be, what their wives and sisters, and

above all their mothers, tend to make them, by influence which begins with the cradle and ends only with the grave.

FREDERICK W. FARRAR.

CARPENTRY FOR WOMEN.

WHAT a blessing it would be to the many "superfluous women" if a knowledge of light carpentry was an essential part of their education! So many small comforts and conveniences would result from the ability to use a hammer, gimlet, and saw—handily and well. In one of the pleasantest suburbs of the Hub, a set of bright society girls took a course of lessons in carpentry, to their great enjoyment and profit. There was, necessarily, some scoffing and much laughter and raillery, but the brave damsels were nothing daunted, and have often declared since that few more pleasant hours have fallen to their lot than those spent among the sweet-scented woods and the clean disorder of the canny old Scotchman's shop, and the good man himself declares that he had never more willing and heedful pupils than these same gay girls.

STUDENTS AND THE SPONGE BATH.

IF the student is in fair health and desires to remain so during the school course, we would decidedly recommend him to take the sponge bath before retiring. If he is vigorous, cold is better than tepid water for this purpose. It will help to neutralize the effect of severe study on the brain, and induce healthful sleep. The scalp should be brushed well before retiring for the night, and the face and hands well washed with soap and water.

THE CHEST.

IN physical culture there is one point which must often be referred to, and will bear to be repeated many times, for it is the foundation-stone without which the superstructure cannot be erected. It is thus: The chest always dominates the rest of the body. Keep the chest firm and high. A contracted chest some authority declares indicates weakness of soul or body or both, while the expanded chest means strength, activity, and nobility.

AROUND THE HOUSE.

SALT and vinegar used hot will brighten copper and brass kettles.

A brown crust boiled in the water with cabbage or cauliflower will help to subdue the strong smell.

The best way to clean plaster of Paris casts, which have not been waxed, is with a paste of starch. Pound two cups of starch to a powder, sift them through a flour sieve, make a thick paste of it with cold water and apply this to the plaster of Paris surface. Allow it to dry on the plaster. Then brush it off with a stiff brush and cloth.

One of the best remedies for fleas in or about a house is Persian insect powder used freely in their habitations. There is a great deal of difference in the varieties of this pyrethrum powder, which if pure and unadulterated is a certain remedy against all varieties of insects. Buy it of a trustworthy druggist in bulk, it is so light that a quarter of a pound is a large quantity.

PROPORTIONS OF A PERFECT FIGURE.

THE height of a person with a "perfect figure" should be exactly equal to the distance between the tips of the middle fingers of either hand when the arms are fully extended.

Ten times the length of the hand, or seven and a half times the length of the foot, or five times the diameter of the chest from one armpit to the other should also give the height of the whole body.

The distance from the junction of the thighs to the ground should be exactly the same as from that point to the crown of the head. The knee should be exactly midway between the first named point and the ground at the heel.

The distance from the elbow to the tip of the middle finger should be the same as from the elbow to the middle line of the breast.

From the top of the head to the level of the chin should be the same as from the level of the chin to that of the armpits, and from the heel to the toe.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., AUGUST, 1892.

THE PRESENT POLITICAL CRISIS.

FOR the past month we have been in the throes of the most hotly-contested election that perhaps we have ever known; and as we go to press the decision of all the constituencies is not known, but the probabilities are that Mr. Gladstone will be asked to form a new Cabinet, which, though a difficult

task, will without doubt consist (among the Lords) of Lord Rosebery, Lord Spencer, Lord Aberdeen, Lord Ripon, and Lord Kimberley (who was liberal leader in the last Parliament). Lord Herschell, Lord Carrington, and Lord Brassey follow close in their claims. Among the Commoners Sir W. Harcourt, Sir G. Trevelyan, Mr. John Morley, Mr. Fowler, and Mr. Shaw-Lefevre are sure to find places in the Cabinet, and others on whom a choice most probably will fall, are Mr. Arnold Morley, Mr. Majoribanks, Mr. Cyril Flower. Among new men who will be likely to receive some office are Mr. Campbell Bannerman, Mr. Osborne Morgan, and Mr. Mundella. Mr. Stuart, Mr. Causton, Mr. Sydney Buxton, Mr. Channing, Mr. Labouchere, Mr. Dyke-Acland, Sir Walter Foster, Mr. Burt, Mr. Fenwick, and Sir James Kitson have done their utmost to make themselves prominent. Sir Charles Russell has the best claim to the attorney-generalship, and either Mr. Rigby or Mr. Asquith will most likely be given the solicitor-generalship. Character sketches have already appeared in the *Phrenological Magazine* of Mr. Gladstone, in 1880 and 1883; Sir W. Lawson in 1881; Mr. J. Chamberlain, the Duke of Devonshire, and Mr. Mundella in 1882; Mr. Henry M. Stanley in 1883 and 1890; Lord Salisbury and Lord R. Churchill in 1885; Mr. Woodall 1886; Mr. Goschen and Sir M. H. Beach in 1887; Mr. John Burns, Mr. J. Dillon, and Mr. Davitt in 1889; Dr. Richardson and Mr. W. S. Caine in 1891; and Lord Rosebery in 1892, to which numbers we refer our readers.

THE LOCALIZATION OF MENTAL FACULTIES.

AMONG other encouraging statements which have been expressed of late on the localization of mental faculties, is the valuable evidence of Sir James Paget, Bart. During an inaugural address on the occasion of the opening of the National Hospital for the paralysed and epileptic, Sir James Paget alluded to the vast progress that had been made in neurological science during the past twenty or thirty years; when surgeons only undertook operations upon the brain with the greatest trepidation, and when trephining was only performed as a last resort in cases that were likely to die. "The mortality from that procedure," said Sir James Paget, "could not be accurately ascertained, but it must have been enormous." It is satisfactory to note at this period of psychological research, what he affirms with regard to the operations upon the brain to-day. These he says can now be

undertaken with a feeling of security, owing to the co-operation of scientific experiment with scientific observation.

Another point of immense importance to the student of psychology is Sir James Paget's reference to the localization of the faculties of the brain. He said, "One of the fruits of the pathological investigations had been the localization of the several faculties of the brain," or as is generally termed faculties of mind manifesting themselves through the brain, which carries with it the belief that the brain must be composed of a congeries of organs. If the brain were a single organ, then the hypothesis that a localization of function was possible would fall to the ground. One celebrated experimenter whom Dr. Brown Sequard criticises in an extreme degree, says he would feel inclined to regard the intimate relation subsisting between ideation and the unconscious outward expression of the idea in muscular action, as a strong proof of the close local association of the ideational and voluntary motor centres, which justifies the hope that ere long this great leader will be carried to the conclusions made many years ago by Gall and Spurzheim. Gall was well aware of the effects of the application of a stimulus to the brain surface, and he maintained, in direct opposition to the current doctrine of the physiologists of his day, and to the asserted proof to the contrary afforded by the experimenters of Flourens and other mutilators, the competency of the surface of the brain to originate muscular movements. Gall was far-seeing and duly appreciated such muscular movements. He saw clearly what Dr. Ferrier failed at first to perceive, namely, that the movements excited were but secondary, and the outcome or effects only of the conduction of the stimulus employed from the surface to the base of the brain, and parts adjacent thereto. To confine the operations of the electrodes to the upper and convoluted surface of the brain would be to beget phenomena of a purely psychical nature; but inasmuch as this cannot be brought about, else as an exception to a very general rule, the phenomena induced are necessarily of another, a motor character. Such is the close relationship of our mental and bodily natures, *i.e.* the "psychical" and "motor."

Between the convoluted surface of the brain and the basal ganglia, so intimate and close a relationship exists in man and animals—so continued is the interchange of impressions from above downwards, and from below upwards—that the independent action of either, whether in health or disease, may be said to constitute an exception to the rule. In man, the intimate and close relationship between these upper and

lower strands of nervous matter, common to the brain and the "medulla spinalis," is shown by the occurrence in time of epilepsy, or chorea, which make him subject to acute mental anxiety, or suffering from brain exhaustion. The same relationship is made manifest by the loss of brain power common to, or the effect of, epilepsy of long standing. The first is the effect of diseased action, acting from above downwards. The second is the effect of morbid action, acting in the opposite direction.

IN repeating the experiments of Ferrier, it was suggested to Dr. Burdon Sanderson to slice off the gray matter of the brain, and apply the electrodes to the cut surface of the white or fibrous structure. It was then found that the same effects to all appearances followed this mutilation of the animal operated on. The value of the experiments exists in the fact that the movements so called forth can be in no way dependent on the gray matter of the convolutions, or rather on any "physical antecedents" occurring thereto, and of which the psychical phenomena observed in the absence of such mutilations are the direct effects.

DR. MAUDSLEY.

DR. MAUDSLEY says, regarding cerebral development, "it behoves us, as scientific inquirers, to realize distinctly the physical meaning of the progress of human intelligence from generation to generation. What structural differences in the brain are implied by it? That an increasing purpose runs through the ages, and that 'the thoughts of men are widened with the progress of the sun,' no one will call in question; and that this progress has been accompanied by a progressive development of the cerebral hemispheres, the convolutions of which have increased in size, number, and complexity, will hardly now be disputed." Work done by the hand twenty or thirty years ago is done by the ingenious machines of men of clearer mental perceptions; and it is perfectly comprehensible to the student of mental science, and gratifying to the phrenologist to note that the progress of the latter half of the nineteenth century has been accompanied by, as Dr. Maudsley expresses it, progressive development of the cerebral hemispheres, even the convolutions of which have increased in size, number, and complexity. That principle was one of the chief proofs laid down by Cuvier, to guide the student of comparative anatomy in his researches.

Gall demonstrated the hypothesis that the greater the size, number, and complexity of the convolutions, other things being equal—quality, etc.,—the greater the intellectual power, and here we have a physician and scientist of renown expressing the same fact in his work on "Body and Mind." We have heard doubters of phrenology explain their reason for not accepting its principles and proofs in the following language: When scientific men believe and establish it as a science, then I will believe in it. To hold good their argument we beg them most earnestly and respectfully to prepare to follow their leaders of thought, and accept as much as they admit is established.

DR. PRITCHARD.

DR. PRITCHARD'S comparison of the skulls of the same nation at different periods of its history, led him to the conclusion that the present inhabitants of Britain, either as the result of many ages of great intellectual cultivation or from some other cause, have much more capacious brain-cases than their forefathers. Still, let us not allow this complimentary fact to blind us from accepting another, that "Size is not the only measure of power."

GRATIOLET, when examining the brains of existing savages, found a striking simplicity and a regular arrangement of the convolutions of the frontal lobes, which presented an almost perfect symmetry of the cerebral convolutions of the lower animals. The brain of the Hottentot Venus that he figured and described, was palpably inferior to that of a normally developed white woman, and could only be compared with the brain of a white idiotic from arrest of cerebral development.

MR. MARSHALL examined in 1870 the brain of a Bush-woman, and has discovered like evidence of structural inferiority. The primary convolutions, although all present, were smaller and much less complicated than in the European; the external connecting convolutions were still more remarkably defective; the secondary sulci and convolutions were everywhere decidedly less developed; there was a deficiency of tranverse commissural fibres, and in size, and every one of the signs of comparative inferiority, "it leaned, as it were, to the higher quadrumanous forms." The developmental differences between this brain and the brain of a European were in fact of the same kind as, though

less in degree, than those between the brain of an ape and that of man.

DR. PYE SMITH ON OVER-PRESSURE.

WE have often heard the question of over-pressure discussed, and our own pages have been open to remarks on the scientific bearing of the subject, but according to the valuable experience of Dr. Pye Smith, we make a great mistake, and waste our pity on people who are said to have broken down under the strain of excessive brain work, or work of any kind. On his lecture delivered recently before the College of Physicians, he observed that the vanity of human nature is tickled by ascribing its disorders to such respectable antecedents as industry, energy, and intellectual activity, and that we must all have felt this when the obvious results of habitual idleness, or gluttony, are ascribed by a patient or his wife to an overtaxed brain, or too strenuous devotion to business.

It may be comforting and soothing to many who have continued brain work to do, there is no fear of any one using their brains too much for their health. No doubt, for those who indulge in sentimental ideas about their working too hard, and having too much to do, this may be wholesome advice, and bestir the lethargic energies to fuller activities; but to those who are already wide awake to the possibilities and importance of life and its shortness, it may seem like useless talk.

There is, however, sound common sense in the belief that mental labour or honest work of any kind does not interfere with health, or that it shortens life. There is a saying that more people die early from want of some practical work to keep them from ennui than the people who have a little more work than they can get through.

Dr. Pye Smith's Lumleian Lectures on "Certain Points in the Etiology of Disease," are comprehensive, raise many points of extreme interest and importance, and show a vast knowledge of the subject. He introduces us to the fact that the principle of disease is as natural, as physiological, as health. That "no living thing is immortal, and life is a constant struggle against surrounding forces, in which each individual organism succumbs after a while, by handing on its life to its successor when it has ensured the victory of the race. Pathology is only a chapter in physiology, which for convenience we have separated from the rest."

We agree with the *Lancet* that whether "disease is as natural as health" depends upon our definition of "natural." We can

understand how decay is as natural as growth, death as natural as birth ; but we cannot be sure that rheumatic fever or pneumonia can in any true sense be said to be natural. They are not part of the necessary evolution of the individual, although they have, of course, their place in the evolution of the race.

This latter is evidently the point of view of Dr. Pye Smith, who says: Let us look upon diseases not as unnatural, lawless, luterogeneous, abnormal, revolutionary, but as parts of the vast order of creation. They are not to be explained by any single all-mastering principle of physical evils. The various ancient systems of pathology, which pretended to discover a common origin of disease, are all outworn, dead or dying, as absolute as the correlate systems of therapeutics which pretended to deal with disease as a whole by some universal antagonistic principle."

Dr. Pye Smith enumerates the chief etiological factors in disease which injure orderange the ordinary functions of a living cell—as :—(1st) mechanical injuries, (2) electrical changes, (3) extremes of heat and cold, (4) chemical agents. In addition to these the cell may be (*a*) starved for want of food ; (*b*) stifled for want of oxygen ; or (*c*) poisoned by its own excreta. The lecturer also deals at great length, and with signal ability, with such questions as the influence of sex, age, occupation, climate, and race upon the etiology of disease, which has been more fully explained in the *Lancet*.

Fowler Institute.

MEMBERS' NOTES.

"Nature is not only intellectual, but is likewise endowed with soul, not only mental, but emotional ; and she appeals to our sympathies, because we also are creatures of emotion and impulse. Every passion in the human mind meets with a response in nature."

TWENTY-FIVE members and friends assembled at Cannon Street Station on Saturday, July 16th, as previously arranged, for an excursion to Hayes. Bromley was duly reached where a wagonette awaited those who preferred the easier and more rapid mode of viewing the beautiful scenery of Chislehurst, Orpington, and its surrounding neighbourhood. The walk from the station to the Common proved a most enjoyable one, the weather maintaining the happy medium between cloud and sunshine. Upon reaching our destination tea was provided in the open, and after this was despatched another drive was arranged, the remainder of the party choosing to stroll through Lord Derby's delightful Holwood Park

at Keston, where Wilberforce's old and memorable oak was an object of much attention. At Hayes Station all met just in time for the train, which reached town at a conveniently early hour, after spending what we hope proved a pleasant, and not over fatiguing, few hours in the admiration of nature.

No monthly meeting will be held during August, but on September 12th we shall have the pleasure of listening to Mr. S. Ward's "Thoughts on Theosophy."

WE have occasion to again rejoice that our revered and esteemed president has completed another year of usefulness in his very remarkable and eventful career. On June 22nd, the members took advantage of this fact, to show, in a slight manner, their deep appreciation of him and his work by presenting him with an album containing a number of photographs of the Institute members. In making the presentation, Mr. Brown remarked, that "in Mr. Fowler we had the specialist of specialists, and an example of the value of age. His influence was not confined to ourselves, but its effects are now spread throughout the world." He then read the following letter:—

June 23rd, 1892.

To Mr. L. N. Fowler, president of the Fowler Institute.

Honoured and Dear Sir,

We, the members of the Fowler Institute, are desirous of offering you our most hearty congratulations upon the celebration of your eighty-first birthday.

There are but comparatively few, whose lives, like your own, have been devoted to the elevation of humanity, and still fewer who have left so indelible a mark thereon, that we take especial delight in having this opportunity of addressing you.

Such a living example of manliness and virtue, combined with the precious qualities of friend and adviser, we have never met; it is therefore with mingled feelings of joy and hope that we look upon your superior, mental, and physical condition to-day, and trust that our earthly intercourse with you, which has proved so invaluable, may be long continued.

We furthermore ask your acceptance of this album, containing the photographs of some of the members of this Institute, who have many times listened to your words with so much benefit and pleasure in the past, and look forward to numerous occasions of a similar nature in the future.

Signed by the
Committee on
behalf of the members.

{ WM. BROWN,
JAMES BALDWIN,
G. B. COLEMAN,
EMILY CROW,
S. H. MAXWELL,
DENNIS SAMUEL,
S. SMITH,
EDITH RUSSELL,
ALICE WILSON.

Mr. Fowler, in suitable language, thanked the members for the handsome album and especially for the letter accompanying it. He anticipated much pleasure in looking over the photographs of the members already placed in the album. Miss J. A. Fowler, in a pithy little speech, said how inestimable she had always considered her father, and that she hoped he would be spared to us some time longer and complete a standard work on Phrenology which is now in course of progress. She also invited members to forward any facts, sketches, or observations likely to prove of value in such an undertaking. The many letters, referring to the presentation, recently received from all parts of the kingdom and from America have been of a most complimentary character, and only help to prove how valuable and far-reaching the influence of one true man can be to his fellow-creatures.

Some few spaces still remain in the album for promised photographs not yet to hand, the fewer the vacant pages the greater value it will prove to Mr. Fowler.

A balance of a few shillings from the money collected is to be devoted to the purchase of a book for the library.

THE attacks made upon phrenology by some opponents are indeed amusing displays of ignorance. A fair specimen of this may be seen in the *Family Doctor* of June 18th, where the writer commences by telling us the "system was conceived by a cloudy-minded German." Two illustrations accompany the article, in which the organs are arranged, or disarranged, in a curious fashion; combativeness is *non est* altogether, and "laughter" takes its place. Furthermore, we are informed that "where you look for the bump of crime there is often only an accidental thickening of bony layer." This, of course, is very valuable information, but we are not told where to look for this "bump of crime." One statement really appears to be correct, *i.e.* that "Gall's system has been strongly opposed," but if this article could be considered as opposition, we should then have to reject even this statement. It is possible that the illustrations were taken from the head of the author, in which case we need no further explanation why the subject has not been justly criticised.

EVERYONE will admit that it is excellent practice for the student of phrenology to note the various brain developments of men who have attained anything like eminence in their particular walks of life, with a view to applying the knowledge gained to the practicable purpose of selecting pursuits for future clients. At the same time, I hardly think a phrenological practitioner, or even one of that genus said to inhabit the Blackpool sands, expounding a peculiar "Bumpology at 6d. a head," would have the hardihood to suggest to a client that he should adopt the profession of Bottle Balancer to the British public. Yet individuals with such an avocation certainly do exist, and their profession does not seem overcrowded. The champion of this cult has recently been interviewed by a member of the Institute, on the champion's own stage, *viz.*, the street, when one or two items of more or less importance were

imparted. The bottles used were ordinary two gallon ones, and a larger one weighing about 36 lbs. ; these the champion balances either separately or together upon his skull, the neck of the bottle being downwards. A cursory examination of the head revealed the fact that a deep circular impression existed just between the organs of firmness and veneration, into which the neck of the bottle fitted ; while in the centre of this impression was a bony eminence rising slightly above the surrounding skull area, and situated so that it would protrude slightly into the aperture of the bottle. The strain on the skull must have been great to have thus disfigured it, and the pressure had had a pernicious effect upon the man's sight. The ex-champion—whose mantle this man possessed—was obliged to wear spectacles, and sadder still, to retire from the profession. The present champion admitted that his sight also was failing, and that he had been advised to court popularity in some less dangerous occupation. The temperament of this man is chiefly motive ; his perceptives, including the organ of weight, are very well developed.—P. T.

“DOCTOR, what is the meaning of that peculiar formation just at the back of baby's ear ? ”

“Combativeness, perhaps.”

“Why someone said it was love of domestic life.”

“Oh, well, it's all one and the same thing.”

THE runners in a recent road-race from Paris to Belfort were measured and weighed, both before starting and at the finish, by Dr. Emile Lévy, when some interesting particulars were revealed. Not only did some of the competitors lose as much as 14 lbs. in weight, but all were considerably shorter. The winner, and others who wore shoes of twisted rope, similar to those adopted by the French troops, suffered far less from blistered feet than those who wore ordinary leather shoes.

MR. JOHN BURNS has recorded the fact that his fight for Battersea reduced him 16 lbs. Further particulars of this description would prove interesting if not useful, and could be easily collected if members would bear these facts in mind before undertaking any special form of exercise, and make the necessary observations.

SOME casts, taken from monuments in the Museum of Gizeh, have lately been added to the Egyptian antiquities at the British Museum. Among others, is a statue of Khafra, king, about 3,666 B.C., the builder of the second pyramid ; and a sarcophagus of Khufu-Aukh, a high-official and priest under Khufu, about 3,733 B.C., the king who built the great pyramid.

G. B. COLEMAN.

THERE is a good deal of gospel in the right kind of a handshake.

MAN'S life is a constant trial and all his neighbours are on the jury.

Notes and News of the Month.

THE *Phrenological Annual and Register*, for 1893, formerly edited by James Coates, of Glasgow, will now be edited by L. N. Fowler. Among the contents, which will be varied and interesting, will appear a Phrenological and Scientific tale; Field Notes of What Phrenologists are Doing; the Register of Practical Phrenologists, Physiognomists, and Specialists; the Year's Work at the Fowler Institute, the British Phrenological Association, the American Institute and the Tasmanian Phrenological Society; Special Articles by Joseph Parker, D.D., John Lobb, Editor of *Christian Age*, M.L.S.B., H. Snowden Ward, Editor of *Practical Photographer*, and Mrs. Charlotte Fowler Wells, President of the American Institute, and others.

THE December number of the *Phrenological Magazine* will contain character sketches of leading scientists, authors, &c., and special articles by Nelson Sizer, of New York, N. Morgan, Mrs. Ormiston Chant, A. T. Story, and Bernard Hollander.

PRIZE OFFER (No. 1.)—The one who obtains the largest number of subscribers (over twenty-five) to the *Phrenological Magazine* will be given a course of phrenological instruction at the Fowler Institute or by correspondence. Prize offer (No. 2.)—A life membership will be given to the member of the Fowler Institute who gains ten new members by March, 1893. A Home Exerciser will be given to any member who gains five new members to the Fowler Institute by March, 1893.

AT the July Meeting of the British Phrenological Association a lecture was given by Mr. B. Hollander, on "Phrenology, the Old and New," in his usual able manner.

THE last lecture of the session was given on June 29th, by Miss J. A. Fowler, on "Psychological Research with regard to Phrenology." At the close of the lecture a very interesting examination was made by Mr. Fowler, of a Swedish gentleman.

THE British Parliament for Science will hold its meetings this year in Edinburgh, at the beginning of August. Sir Archibald Geikie, LL.D., D.Sc., is the President elect for the ensuing year. He is the Director-General of the Geological Survey of the United Kingdom.

A TELESCOPE of dimensions hitherto unattained is to be constructed at Paris. The two largest telescopes at present in existence are at Lick in California and at the Observatory of Nice. The latter is the larger of the two.

THE champion coin counter in the United States is a lady in the Treasury Department at Washington. She can count 75,000 coins a day. Her fingers are so sensitive and familiar with the touch of good

money that a counterfeit cannot slip through them, even when she is counting at this lightning speed.

THE zoological collection of Marseilles has suffered a loss in the death of the giraffe Victorine. There are only nine giraffes in Europe, and it is almost impossible to procure these animals at present, owing to communication with the Soudan being cut off. At Regent's Park the Gardens are without a giraffe for the first time for many years.

THE VALUE OF MASTICATION.—Dr. Lauder Brunton, in the course of a recent lecture on mastication, at St. Bartholomew's Hospital, made use of the following remarks :—" I think it was a magnificent stroke of genius on the part of the President of the Royal College of Physicians, Sir Andrew Clark, when he informed Mr. Gladstone that he had one mouth and thirty-two teeth and that for every mouthful of food he took every tooth should have a chance, so that he should take thirty-two bites to every mouthful. And," continued Dr. Brunton, " if the patient has lost some of his teeth he should allow two bites for every missing tooth and even that will not always do if many teeth have gone."

THE Government of this country costs £90,000,000 per annum, while the drink bill amounts to £140,000,000.

REV. Newman Hall, D.D., preached his farewell sermons on July 3rd, before crowded congregations in Christ Church, Lambeth. He has reached the age of 76. The Rev. F. B. Meyer has been asked to fill his pulpit, and it is generally understood that he will accept the call.

A SPECIAL meeting is to be held at the Academy of Sciences in Paris in order to examine a list of candidates for the post of Director of the Observatory, rendered vacant by the death of Admiral Mouchez. M. Janssen has presented to the Academy a photograph of the sun spots, which are of enormous proportions at present. Their total surface is equal to that which they presented in February.

" KEEP pegging away," said President Lincoln, " and you will succeed at last." He said these words when the fortunes of the great Republic were clouded, and when the slave-holding power of the Southern States was lifting, with a prospect of success, its brazen front against Christian civilization. The result we know. Mr. Joseph Chamberlain modifies Lincoln's phraseology, and says :—" We have only to keep pegging on, and the truth will at last prevail." This is particularly true with regard to phrenology.

THE president of the Anthropological Institute is Dr. E. B. Tylor, D.C.L., F.R.S., whose manual of anthropology is a standard text-book. Among the vice-presidents, *ex-officio*, we find the names of Flower, Galton, Huxley, Beddoe, Lubbock, and Pitt-Rivers. The secretary is

C. Peek, Esq., M.A., F.S.A., and the assistant-secretary, George W. Bloxam, Esq., M.A. The rooms are at 3, Hanover-square, where there is a library of between three and four thousand volumes and a collection of typical skulls. At the last meeting of the Session two interesting communications were read : (a) An Ethnological Enquiry into the Basis of our Musical System ; (b) Notes on some Minor Japanese Religious Practices. Numerous curiosities were passed round, which illustrated the valuable remarks of Prof. Basil Hall Chamberlain.

It was Sir Joshua Reynolds who said that if a painter wanted to succeed he must cut out his tongue. To illustrate this we may give the following anecdote told by Charpentier of two of the Caracci, the famous Italian painters. Augustino Caracci once made a long discourse in praise of the Laocoon, and it was remarked to his brother Annibal that it was strange he did not add his eulogium on this wonderful production of antiquity. Annibal said nothing, but took a crayon in his hand, and drew the marble group with as much correctness as if he had had it before him. This action was praise more impressive than if he had employed the most energetic expressions and the most brilliant figures of speech. Turning to his brother, he then observed, "Poets paint with words, but painters speak with their pencils."

WHEN at his work the late Gustave Doré was a good example of the silent artist. He could so abstract himself from what was going on around him that in the evening he would be unable to recollect who had called upon him in the afternoon. Strangers who visited his studio at the Rue Bayard for the first time were often astonished at his unceremonious and silent ways. "He would give them a nod—perhaps a frowning nod—and go on with his painting, running up and down the steps of a ladder, or along a platform, and pausing now and then with a long low whistle, to look at what he had done. 'Don't wake him, he's dreaming,' the familiars used to say ; and it might happen that a visitor would have to go away, after a couple of hours' waiting, without seeing Doré wake !"

WRITING of "Brains and their Fortunate Possessors," a lady correspondent reminds us that at the death of Gambetta, his brain was given for examination to Dr. Broca, the greatest living physiologist of the day. The report, which appeared in all the French papers at the time, is as follows : "Had this brain been put before me without my knowing to whom it belonged, I should have said that it was that of a woman who had well used all her faculties ; it is below the average weight of the male European brain." Possibly this compliment to Gambetta might not have gratified the statesman, as he was largely opposed to the advancement of women.—W. H.

THE September number will contain a yearly summary of the British Association meetings ; a criticism on Romanes' latest lectures on "Darwin after Darwin," delivered at the University of Edinburgh, and at the Royal

Institution ; what Dr. Sully, M.A., the great authority on psychology, thinks of "The Human Mind ; Ears, and what they tell us of Criminal Anthropology ;" and character sketches of Sir Archibald Geikie and the late Thomas Cook.

THERE are about 2,400,000 pores in the human body. If unravelled they would be $2\frac{1}{2}$ miles long.

IN man growth is complete about 20, in the horse at 5, in the ox at 4, in the dog at 2. This gives for the duration of life in man 100 years, in the horse 25, the ox 20, the dog 10.

THERE are records of elephants that have lived for 200 years, and an age of 150 years is not regarded as so very old for an elephant. It takes about a quarter of a century to get the elephant to full maturity.

SEVERAL communications have reached us regarding phrenology on the sands at Blackpool ; where, it is sad to relate, twenty men have been pretending to examine heads at sixpence each, with the exception of one, whose charge was one shilling. We earnestly protest with all eminent phrenologists against this disgraceful charlatanism. It is well that the police have taken this matter in hand—for letters have appeared in the local papers ridiculing phrenology, which is not to be wondered at with such a state of affairs. We trust that the Local Boards at other seaside places will act in a similar manner, and stop the practice of these would-be phrenologists, who cater to a degraded curiosity without any love for the science itself.

THE Craig Memorial Fund has now reached the sum of £15 at the Fowler Institute. Messrs. Henry S. Trower, 51, Montague Square, W., and M. H. Piercy, Imperial Buildings, Ludgate Circus, E.C., have been appointed trustees of an annual fund. Messrs. Money Coutts, D. E. Samuel, and H. S. Trower, and others, have generously promised to annually subscribe from £3 to £5 each.

PRESENTATION ALBUM TO L. N. FOWLER.

ON June 22nd, at the close of the weekly lecturette, the members of the Institute presented Mr. Fowler with a handsome silver-mounted album, with a chaste monogram in the centre of the outside cover. The inside contained photographs of the members. Mr. Fowler desires to thank all who were not present for sending him their "Heads and Faces" for remembrance sake, and to express to them what a lasting gratification it will be to him to possess them, as nothing could have given him greater pleasure on his 81st birthday than to have been thus surrounded.

J. A. F.

Correspondence.

DEAR EDITOR,—Under separate cover I send you two photographs of your humble servant, who was first examined by you in Bradford, when a factory boy, nearly 30 years ago. At that time I could scarcely read, and could not write, but through your advice I put myself down as a student in the old Mechanics' Institute; to-day I am Secretary for a similar institution here, and have been for the last nine years.

Phrenology alone showed what could be made out of a street waif, as I was then: working all day in the factory, and selling papers at night, and living anyhow. I hope you will not consider me as a flatterer, if I say that you deserve all praise for the change in my career, because, had I never sat under a phrenologist, I should never have occupied the position I do to-day.

Yours very faithfully,

SAMUEL ROSS.

Newcastle, New South Wales,
Australia.

Book Notices.

“FOUR National Exhibitions in London, and their organiser,” by Chas Lowe, M.A., is an interesting record of daring enterprise and brilliant triumph. Everyone remembers the American, Italian, French, and German exhibitions, held at Earl's Court, when for periods of six months during the years 1887-8, 1890-1, there were established veritable colonies of those nationalities in our midst. This, undoubtedly, is an age of exhibitions; no fewer than fifty such were held between the years 1880-5 alone, in various parts of the world, and these great gatherings of industry have done much towards developing that cosmopolitan spirit, so essential to our progression as a race. We are told that “Peace hath her victories, no less renowned than war,” and here we find chronicled four as great successes, surely, as ever distinguished private enterprise, and undertaken, too, in a spirit of generous philanthropy. The magnitude of the task, its essential difficulties, the uphill struggle against keen opposition, the numerous discouragements, the multitudinous details, the constant travelling, the strain, the anxiety, all these would have overwhelmed a man, less qualified by natural endowment, education, and experience, than John Robinson Whitley, initiator and director-general of those four great exhibitions. Of the six-and-a-half millions of people, who from first to last attended them, it is safe to say, few could with ease have taken his place. A glance at the excellent photogravure prefacing the title page, which portrays the well-developed perceptives; the method and order; the organising ability and resolution, furnishes to the discerning eye a key to his success. The character is well described in the preface to the work, where the author has aptly quoted from the *Phrenological Magazine*. The perusal of a work such as this, leaves one fairly amazed—as well at the nature of the task it describes, as at the immense influence of the

commercial relations it establishes ; and we cannot but feel, that in the publication of this volume, there is another, and in some measure, a more permanent tribute to the genius of John R. Whitley.

A LITTLE volume has just left the press, entitled, "Anthropological Notes and Queries : a Guide to Research." It contains directions for obtaining information useful for the purpose of the science, and is intended for the use of travellers, and for all who are interested in anthropology.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

"D. MACDONALD" (Cathcart).—The photos of this gentleman indicate an organization which favour a fair balance of power. His digestion is his weakest bodily power. The tendency of his mind, however, has been to cultivate the superior faculties, somewhat at the expense of the basilar. He improves the style of work done by others, and shows considerable imagination, power to plan, think, and originate. He has ability to embellish, and thoroughly appreciates colour in everything. He delights to allow his imagination full scope. He has considerable powers of observation ; is always seeing something that he can turn to account. His mind is an available one ; he can turn his hand to almost anything. His knowledge is extended and general, and he should be known for his versatility of mind. He is a thinker, and has to be convinced through his reason before he will believe. He is decidedly ambitious, is sensitive to the opinions of others, is friendly and social. He needs to be prudent with regard to health ; he can keep his own affairs to himself, and is reserved ; but he may impulsively do more than his strength can well stand at times, and think he can stand any amount of strain. He is adapted to commercial pursuits or photography.

"EDMONTON" (Leeds).—This gentleman's photo indicates a strongly marked physiognomy and an active mind. He has a predominance of the mental temperament, and rather a susceptible, nervous, anxious, disposition. He has more of the planning, adapting, and originating mind, than the practical, pushing, and energetic one. He should be known for his deliberation and prudence ; he does not act without thoroughly acquainting himself with what he has to do. He is very critical and apt in his comparisons, quick to see the relations and differences of things. He has a penetrating mind, and acts partly from his sympathy ; he feels what he ought to do before he has thought it out. He is unselfish, and quickly interested in the welfare of others.

and would do much to alleviate their sufferings and wants. He cannot bear to see pain or to inflict it. He is intellectually social and friendly, and has distinct likes and dislikes. He is apt in his expressions, and can represent his ideas in a clear and concise manner. He is cautious and reserved, but expresses himself freely when appealed to. He is sensitive, and does much to encourage the good will of others.

“DULCIE” (Southampton).—This lady possesses a favourable organization, and is endowed with a good deal of vitality, and can sustain continued exertion. She has plenty of spirit, vigour, and the disposition to create and impart life into all she does. She is full of energy and activity, and must be on the move doing something; she works with a will and a motive, and cannot rest until her object is achieved. She has a predominance of the vital mental temperament; she is quick to see, to compare, to analyse, and has considerable power to generate thought and feeling. She has large sympathies, and acts from a desire to do good and be unselfish; she has a friendly and social disposition. She is quick in forming judgments of things, makes up her mind at once, and holds to her opinions. She is reserved and prudent in the management of her affairs, and does not tell any more than she thinks it is necessary for others to know. She is practical and not disposed to take exaggerated views of things. She has a good memory of faces, an available mind, and knows something of most things.

“HELENA” (Southampton).—The photo of this lady indicates a very active and wide-awake mind. She is quick in her observations and reflections, and her faculties are marked by great activity; she has an ardent, intense, and susceptible nature, and is thoroughly in touch with her surroundings. She possesses considerable energy, and always has something to do; she is prompt and effective in all she undertakes; is rather too reserved, and hesitates too long over little things; but her actions all show forethought. She is hopeful and of a sanguine disposition; has considerable imitative power; is very conscientious, and would inconvenience herself rather than fail to keep her promise. She is strong in her likes and dislikes, and when the occasion requires, speaks her mind freely. She is neat and systematic, and has a place for everything. Has a good memory, and remembers what she sees remarkably well. She ought to be where she can superintend others and mark out work.

“E. K.” (Rochdale).—The photo of this lady indicates a practical cast of mind, one well adapted to the nineteenth century. She does not allow the grass to grow under her feet. She is very energetic, full of spirit, and thorough in every way. She is not selfish or contracted in her actions. Her labours are more for others than herself. She has strong sympathies, and manifests them in her consideration of others. She is always ready to help and do for others. She makes many friends through her sympathies. Is full of life and disposed to enjoy fun when the jokes are not too personal; and has a happy frame of mind. She is hopeful, expectant, and yet thinks considerably over her troubles and disappointments. Her moral brain is well developed, giving her an honest, truthful, and spiritual cast of mind. She is care-

ful and considerate in little things ; is neat and precise, and annoyed by untidy or disorderly habits. She should show considerable ingenuity and considerable taste in what she does. If her health will allow she could make a first-class teacher.

“ J. K.” (Faversham).—The photo indicates considerable strength of constitution, and there is every indication that with care she may live to a good age, which is indicated in her chin. She has the disposition to resist disease and throw off foreign influences. She has a continual flow of vitality ; her mind is a positive one ; she is full of action and likes to be employed. She has considerable observing powers ; is always on the alert, nothing escapes her, and can attend to details very well ; she is sympathetic and enters into all she undertakes to do. She is intuitive and is very apt in her conclusions. She is critical and quick to detect a fault, her knowledge is more than superficial ; she desires to know a thing thoroughly. She is penetrative, and sounds a thing very quickly, and is not easily imposed upon. She is very determined and can hold to her own opinions ; is sensitive and ambitious ; is friendly, social and warm-hearted : her attachments are genuine and strong. She is fond of travel, and has a good memory ; is influenced by surrounding circumstances and needs to have some one to call her out of herself.

The Employment Bureau.

[The Employment Bureau has been opened by the Fowler Institute to assist people who are seeking employment, and also to aid heads of firms to secure suitable employées. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.] ———

A FRENCH LADY of ability, who knows English well, desires re-engagements to teach her own language.

A well-educated Russian gentleman desires to be further employed in literary and secretarial work.

AN ARTIST is wanted who can make pen and ink sketches, and also reduce pictures to 2 × 3 in.

ANY firm who is seeking a capable reliable accountant, or a contractor desiring a practical man for making and giving estimates, can find one by applying at once to the secretary of the above Bureau, Imperial Buildings.

IF an elderly gentleman who is seeking a young gentleman companion ; or a hydropathic establishment that is wanting an assistant ; and a publishing firm that is in want of a sharp intelligent lad, will communicate with the secretary of the Employment Bureau, they will greatly oblige, and facilitate the usefulness of the above department.

THE
Phrenological Magazine.

SEPTEMBER, 1892.



(From Photograph by Elliott and Fry.)

SIR ARCHIBALD GEIKIE,

PRESIDENT OF THE BRITISH ASSOCIATION, 1892.

THE organization of this gentleman is most favourable for almost any useful sphere of life. He has balance of power that enables him to succeed without much effort. His whole nature appears to work in harmony, but his brain power predominates and guides the rest. He should be known for exerting a very tender, but leading and positive influence. The base of his brain is well represented, which gives animal life, vital force, and love of action. One element of his mind shows itself in his sociability, friendliness, domesticity, and ability to exert a very extensive influence in society. He has force of mind, but his will-power predominates, so that whatever he takes hold of in real executive business he makes a business of it, and finishes what he begins. He has more than an average amount of intellect and moral power, and with his gentle manner he usually gains his point, and becomes a leader. He has no lack of force and

propelling power, but he has a superior organization to guide and regulate the forces of others. He can be led and influenced when there is any principle involved, but he will stand by the man he thinks is right, in spite of consequences. He is exceedingly tenacious in his purposes, and is in his element when he is the leader and master of the situation; but he is not domineering, and does not try to guide others by force. He is known, first, for his elevated and refined tone of mind, hence he has the advantage of many, because of this superior power. He is not so radical as to be unpopular, but he holds to his opinions, through any opposition. His moral feelings have a predominating influence over combativeness and destructiveness, making him comparatively mild as a leader, yet a permanent master of the situation. He makes friends everywhere, and is quite a social magnet. He is usually cautious, and has more than an average amount of shrewdness, and if necessary, is quite plucky in carrying his point. He should show more than an ordinary gift of speech, and exert more influence on the platform than most speakers. He is methodical and systematic in his business operations. He plans his work, arranges his ideas, and knows what he is going to do beforehand. His plans have a practical bearing. He is comparatively utilitarian in his ideas, and usually exerts a distinct influence over his audience through his direct way of putting things. He does not try to be funny, and yet he is decidedly mirthful and playful in his spirit. He has a scientific mind, and could sustain himself well as a literary man. His best gifts are of the high, intellectual and philosophical kind, joined to his imaginative and spiritual conceptions, and power to expand and extend his researches. He is a close observer, and a great student of nature. He deals in facts and real conditions of things. He has superior power to analyse, criticise, and discriminate between one thing and another, consequently the points in his character must be, first, definiteness of observation; secondly, method and system in his studies; thirdly, his power to analyse, criticise, and ability to see the bearing of one subject to another; fourthly, he has a superior intuitive power and gets at the exact truth easily, and he weeds his speech of all vagueness and imagination when he is talking.

L. N. FOWLER.

Sir Archibald Geikie, was born and educated in Edinburgh, and through his brilliant achievements in scientific research, he has won distinctions not only in his own city but in London and abroad. In 1870 he was nominated as Professor of

Geology and Mineralogy, in Edinburgh University, and received the degree of LL.D., in 1885. He has given to the world of science several books on geology, such as the famous "Story of a Boulder," 1858; "The Phenomena of the Glacial Drift of Scotland," 1863; "The Scenery of Scotland, viewed in connection with its Physical Geology," 1865; and class and text books on physical geography and geology. In 1881 he was appointed Director General of the Geological Survey of the United Kingdom, and Director of the Museum of Practical Geology, London. Sir Archibald Geikie is a Fellow of the Royal Societies of London and Edinburgh, &c., and of many foreign academies. He has received numerous medals and distinctions in acknowledgment of his contributions to scientific knowledge, and this year the honour of knighthood was conferred upon him by the Queen.

THE VALUE AND IMPORTANCE OF MAN.

BY L. N. FOWLER.

A Lecture delivered at the Fowler Institute.

THIS is a large subject. Life is so valuable that it should not be dissipated in the pursuit of trifles, and it is of vast moment that a man be "just right" when starting.

Many railway lines appear to be running parallel; they digress so gradually that the separation is hardly noticeable, and it seems immaterial which one you travel by—but presently as the train gathers speed, or turns a corner, or enters a tunnel, the difference is perceptible, and one passenger finds himself travelling to Edinburgh, another to Belfast, and another to Bristol. So with life. Hamilton says it is not enough that you book for the better country, you must keep the way, and a small deviation may send you entirely wrong. A descent from honesty, truthfulness, or sobriety, may throw you on a wrong track altogether and make a failure of that life which should have proved a comfort to your family, a credit to your country, and a blessing to mankind.

It takes a life to prove the real value of a man. Many a child has been called a dolt, but proved to be a very valuable man. Many a child has been very bright, but proved to be only a butterfly for the hour; while the last act of some old man is the most important of all. Selfishness in man is of value in proportion as it benefits him, and, through him, society. The feelings and sentiments are most powerful for

good or evil, for happiness or misery, and are therefore very valuable and important. The sentiments raise the mind into angelic spheres, and give man his main importance. It is through the intellect that we guide action, comprehend law, philosophy, theology, and politics, and understand science, and its applications to everyday life.

Enjoyment has its value to man, and men pay higher for it than anything else. To enjoy and be happy appears to be the great design of creation. Those who can enjoy the most in every department of life are more valuable to themselves at least than those who can enjoy but little, and that little in a feeble manner. Man has enjoyments of various kinds both in degree and quality. To eat a good dinner is a physical enjoyment, but to do good to another gives a higher degree of enjoyment. To make money gives pleasure, but to spend it profitably gives greater pleasure. To save life gives happiness, but to save a soul gives greater happiness.

The cup of enjoyment of each may be full, but the one may be as large again as the other. Pleasures and enjoyments that come from the mind, located in the base of the brain, are less elevating, consequently less valuable than those coming from the moral brain; as much so as a man is superior to an animal, or the spiritual superior to the physical. A clear, discriminating, penetrating mind is more powerful, consequently more valuable than one without these properties. Society makes a great difference between one who knows just enough to turn the crank of a hand-organ, and a Mozart; or a fishmonger orator, and a John Bright; a chimney-sweep, and a Lord Chancellor. Vigour, force, and executive power increase the value of the mind, for they put the clear penetrating mind into action.

A mind is doubly valuable that can clearly see into, and promptly execute a plan. Washington had a mind of this kind. In fact, those men rank very high, who in times of emergency can both plan and act.

But a clear executive mind is increased in value by the addition of largeness and comprehensiveness. The value of a mind that is clear and vigorous only in a small way is small when compared to a mind whose comprehensiveness and grasp is equal to any required task. A man is of value if he can finish up and do the little work of life, but more valuable in proportion as he can block out, originate, and execute the great work of life.

To save a child from sudden destruction is a great thing, but to save a nation from the same ruin is still greater. A little mind can do a shilling business. A large mind can do

with a large capital. A boy of limited value can lay a plank across a rivulet or dig a fox out of a sand-hill, but it takes a full grown valuable mind to construct a wire bridge across the Mississippi, or make a tunnel under the Thames.

But as dispatch is the order of the day, so is promptness of mental action of great importance to man. The highest price, and the greatest importance are put upon the quickest performance; hence the fastest horse, the express train, the telegraphic news, are the most eagerly sought. In battle, very much depends upon quickness of movement. The mind that is clear, vigorous, comprehensive, elevated, quick, and immortal, cannot be valued by any earthly price. But it becomes less and less valuable as it decreases in the above qualities, until the only value that is left is connected with its immortality. If man were only mortal, then he could be estimated, but no price can be put upon his immortality.

Some nations are more valuable than others. The place man holds in society increases or diminishes his value; as the soldier in his place, the general at his post, the scavenger at his work, all have their separate value. The same man rises and falls in value in proportion to his life, habits, education, age, and circumstances. King Henry VIII. was of more value when he went upon the English throne than when he left it; and his son, Edward VI., was of more value when he left the throne than when he took it; when he was 15 than his father at 60.

Education generally increases man's value, but when he learns evil instead of good, and yields to bad habits and practices, then his learning does him more harm than good.

The times in which men live and the circumstances under which they live make their lives more or less valuable. This was shown in the lives of the following men:—Confucius, Pythagoras, Abraham, Alfred the Great, Toussiant, Washington, Columbus, John Bright, Mahomet, Jesus Christ. Some are moral, mental, and physical cripples by their parentage, and in their birth, and by accidents and diseases during their infancy are rendered useless for ever. There is a vast amount of human rubbish in this world that is not only useless, but in the way, like floodwood in the stream of time, and hinder progressive development. There may be too much of a good thing under some circumstances, too large an amount, too small an amount.

Cromwell's army was a good one, but it was made better by being made smaller. So also was Gideon's army. More money than a person can use or enjoy becomes a burden and

less would often be better. Too large a brain is sometimes in the way, and too small a body is equally distressing.

Any man who is doing more harm than good, and is more vicious than virtuous, who exerts more bad than good influences, and sets more bad than good examples, is worse than no man at all, and is far below first cost. All persons who are improvable in any way can increase their value. An untrue man to himself, his neighbour, or his Creator, is losing in value in proportion as he is untrue. Some men have diminished their value to such an extent that they are not only of no value, but they are worse than nothing. They are an expense to society, and in debt to it in more ways than one, and doing moral damage. The value of reformers, founders, discoverers, teachers, inventors, missionaries, organizers, is in proportion to the importance of their work. When the little shoe is empty, to a mother a great prize is lost. When a large shoe that was filled by a philanthropist is empty, a nation feels the loss. The mother felt her loss just as much as the nation felt its loss.

Persons may be very valuable in one way but good for nothing in another, because their genius is partial. Hayden was a good painter but a poor financier. Old Bull was a good musician but good for nothing else. Armstrong was a poor lawyer but a good inventor. In a legitimate honest business, the man who succeeds is of more value than the one who does not. The man who gets into office because of his own personal goodness and fitness is more valuable than the one who gets in by bribery, intimidation, or by money made in a dishonest business. The man who conquers without blood is more valuable than the one who conquers with. The Emperor Adrian conquered, subdued, and ruled foreign nations by the power of the sword. Marcus Aurelius was so good a ruler that nations came and put themselves under his rule.

Two men may be equally valuable so far as native qualities are taken into account, but the one has a much better opportunity to make use of his gifts than the other, so that the one is like the beautiful, fragrant flower in the forest, while the other is like the cultivated rose on the walls of the palace. David was the youngest son of Jesse, and Samuel made choice of him to rule over Israel instead of his more gifted brothers.

By the force of circumstances, a less valuable person is sometimes made to take the place of one much more valuable, hence the latter is thrown into the shade, and the former is seen in the best light. Besides, education brings out and polishes qualities in one man that are kept back in another for the want of it. The value a man puts on himself is not

always a true value. Some people are liable to put too high a value on their friends. Other people are liable to put too low a value on their enemies. Few are fully appreciated while they live. Many very good men are starved, persecuted, and banished, when living, but idolized when dead. The preacher of righteousness is of value, but the worker of righteousness is still more so.

A well-known nobleman commenced his career with every possible chance to be valuable, but took a downward road on the race course, and ended his career; broke his constitution; broke his bank; ruined his credit and character; set bad examples; did evil and only evil; and died in bankruptcy and ruin at 26 years of age.

There is more hope of the end of a man who begins bad and becomes good than there is of a man who begins good and then becomes bad, for men seldom change radically more than twice. Good qualities may be under a cloud or their use perverted for a time—afterwards brought out and rightly directed, and the man prove to be most valuable, such as St. Paul, Titus, Bunyan, Weaver, Fiddler Josh, Ewin. Some men sail under false colours and get the credit of being much more valuable than they really are, for they have robbed some very valuable man of his real qualities, preached his sermon and said his prayer without giving any credit; and many authors and inventors have also been robbed. All valuable qualities do not always go together. Some men have some most excellent qualities, but have such great impediments in the way that they cannot use them to a good advantage. Some have a good head but poor lungs. Moses could not talk, Melancthon lacked energy, James the First lacked stability, Voltaire lacked balance of power. Rosseau had some most valuable ideas of liberty and freedom, but was far from being well balanced himself. Robespierre had love of justice and order, and had great powers of memory and observation, but was excessively vain and lacked dignity, stability and judgment.

There is great advantage to be secured by a knowledge of our real value, both in a mental and physical sense. Physical value may be known by a thorough knowledge of physiology. By it we learn what is strong and weak, what is good and bad, what is health and disease. Phrenology helps us to understand the strength, weakness, and value of the mind. What parts are strong and what are weak. What faculties are weak, morbid, and perverted, and what are normal.

To properly value ourselves, we need not only take into account the common work of life—in taking care of ourselves

and families, but to take into account our relations to society, to our Government, to our Creator, and to the effects of our lives and our influence on others when we are dead. When we have made the most we can of our physical, executive, social, and intellectual powers, we still have the greatest work of life to do—to cultivate and rightly exercise the moral and spiritual parts of our natures. To give them the ascendancy and monopolising influence and guidance over the animal impulses.

The world needs more such disinterested men as Berenger, Garibaldi, Cobden, Lincoln, Pestilozzi, Savonarola, Muller, Josiah Mason, Joseph Sturges. To perfect human character, the moral and spiritual powers located in the coronal brain should have the ascendancy in the mind and modify as well as guide the other mental powers, and our supreme love should be centred on objects higher than mortals. Pleasure, dissipation, excitement, indulgence, relaxation, and inactivity tend to disorganize, derange, disease and demoralize men and lower their standard, and thus make them place less value on themselves than they should. There is more danger of men making themselves too cheap than of over valuing themselves. Effort, experience, self-examination, and a thorough knowledge of the science of phrenology will aid men to know their true mental value and thus place themselves aright before the world, and enable them to understand the work for which they are best fitted by nature. A perfect body fully developed in all its parts is of no small value, but a mind that is well adapted to all the labours of life, one that is clear, quick, vigorous, and comprehensive, is of still more value, but a moral, spiritual nature, highly cultivated, stimulated by high motives and true love to God increase that value a thousandfold. As the foundation is not of much value without the roof, so man's animal nature is not of much account without the moral or spiritual nature as a covering or crowning element.

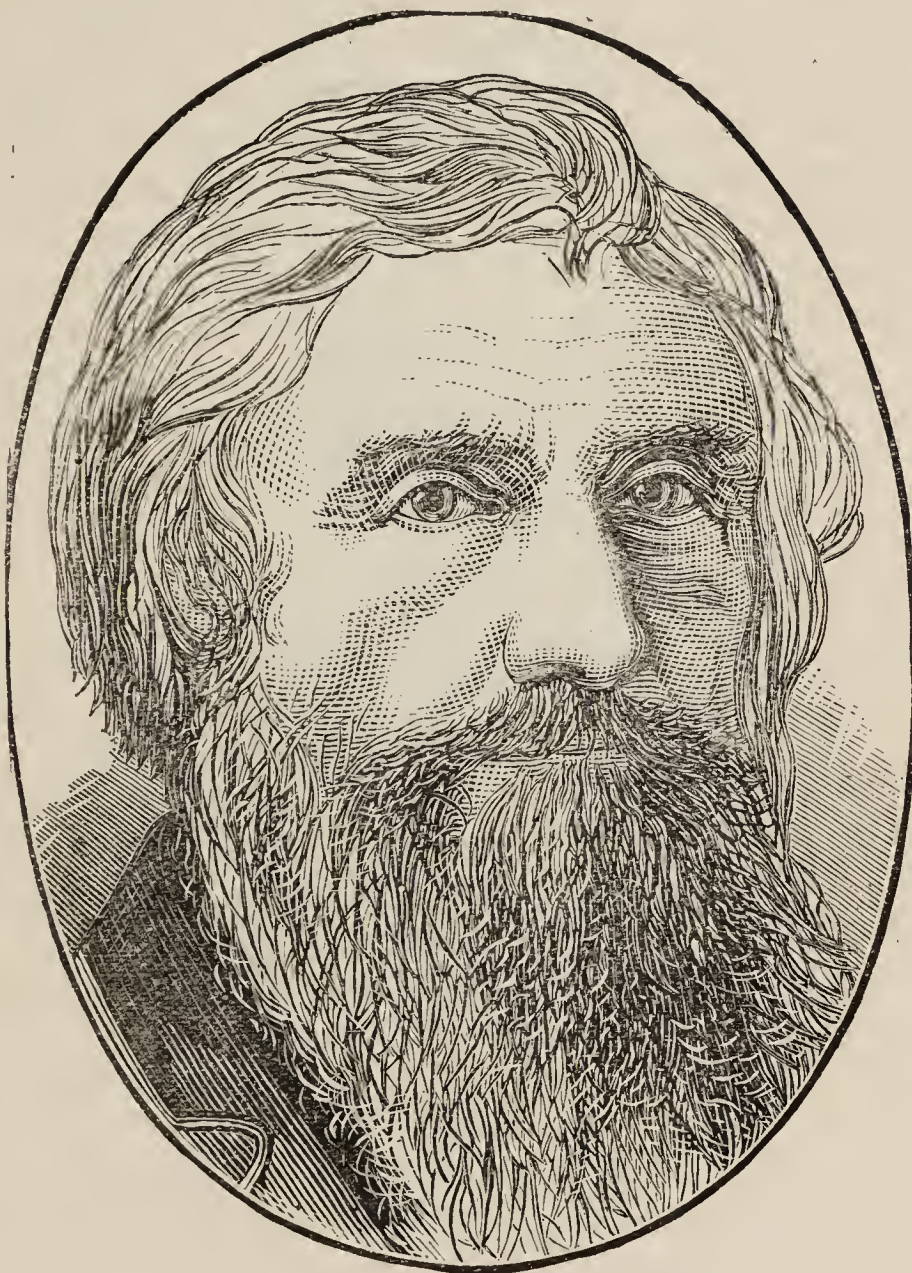
The climax of creation is man ; the climax of man is his mind ; the climax of mind is the moral and spiritual nature.

Man is valuable in proportion as he has the climax qualities.

MEN AND WOMEN OF OUR TIMES.

CYRUS FIELD.—This gentleman had a very marked head and character. His mind could not work in limited spheres, and he was never in his element when doing ordinary things. He took large and extravagant views of things, of everything

he took hold of. His spirit was very elastic, his mind was comprehensive, and his perceptions extensive. In his prime, his large hope manifested itself in great anticipations and consciousness that certain things should be accomplished. His ideas were far ahead of ordinary conceptions. His ability to express his thoughts was superior to that of most men, and his head indicated ample power to explain his ideas. His large sublimity, ideality and hope combined, however, made him



CYRUS FIELD.

almost too extravagant in detailing simple facts. He did not know what defeat really meant, for his hopes carried him forward, and his large perceptive faculties planned fresh achievements and successes. His organization considerably changed during the last twenty years of his life. His disposition to run risks to accomplish his ends, and plan extensive schemes, was noticeable in the rare combination of his mental faculties.

The late Cyrus West Field was a pioneer of the American cable enterprise. He was born in 1819 at Stockbridge, Mass., U.S.A. He devoted himself to business, and was so successful that in 1853 he retired. He did not retire to vegetate, but to devote his newly-won capital and his still youthful energies to an enterprise of world-wide importance. His first venture was the construction of a line from the coast of Ireland to that of Continental America by way of Newfoundland. It was in 1857 that the English and American warships put to sea with the first cable on board. The cable snapped three times; and when three hundred miles of wire had been paid out, the vessels returned and abandoned what seemed a hopeless enterprise. A second attempt failed in 1858 through a violent storm. In a third, made in the same year, Valentia, in Ireland, and Newfoundland were actually connected, but almost as soon as the two congratulatory messages had been exchanged between the Queen and the President, the power of transmitting intelligence utterly ceased.* It is supposed that the wire had been too heavily charged with electricity, and that some parts of it had been actually melted in the ocean bed. However, Mr. Field had determined that the thing should be done. A new company was formed in 1860, and in 1865, when the American Civil War was ended, the new cable was shipped by the "Great Eastern." But again the attempt failed. In 1866 the same monster ship sailed with yet another cable, and this time the work was done and done for good. Mr. Cyrus Field reaped the honorary reward of his exertions in a gold medal voted by Congress, and the substantial reward in a fortune. He was, moreover, feasted with great honour in London. He engaged in many undertakings, and increased his fortune by almost every venture. He was largely concerned in laying the elevated railroad in New York. He was a man of exceedingly placid aspect and gentle address, but all who knew him well were aware that this was but the mask of a most invincible patience and an iron will.

MR. THOS. COOK.—This gentleman sustained a well known and marked character throughout the world for fifty years or more. He will be missed because he had a very intuitive, influential individuality. His work was most distinct and useful. Few men were so well known to so many individuals in different parts of the world for their labours as he, for he worked for the world as well as for himself. His organiza-

* L. N. Fowler was in Newfoundland at the time, and remembers the remarkable occurrence.

tion was a marked one but not eccentric. He was well balanced in body and mind. The leading points of his character were moral and intellectual; and in the intellectual his thinking capacities predominated; hence he was known for his judgment, thoughtfulness, and power to plan. His moral brain was specially large. He manifested a religious tone of mind. He was noted for his prudence, forethought, reverence, and sympathy. He was not proud and haughty, but commanded respect and was looked upon as a leader. He appeared to be about equally interested in the affairs of this life, and in religious work. He endeavoured to spread what he considered to be the Gospel, and it is not straining the truth to say that he practised what he



MR. THOS. COOK.

(From Photo by J. Burton & Sons, Leicester.)

preached. His perceptive faculties as a class were not so marked as his reasoning brain, hence he dealt in thoughts and principles more than in mere objects of perception, or in narrating what was taking place around him. He appeared to be in his element when doing good to someone else. Without having a large development of brain his head was so well balanced that he seemed equal to the task set before him. He was known more particularly for his enterprise, sanguineness of mind, and disposition to probe new subjects and do new work. His sympathy, reverence, justice, and hope were all marked qualities of his brain; but self-esteem was not so marked as to make him boastful, dictatorial, or domineering.

He seemed to be absorbed almost exclusively in the welfare of other people, and began very early to show his goodwill toward mankind, and laboured for the benefit of the whole community. His son, Mr. John Cook, having for many years helped his father in his business, will continue the colossal work thus organized. He has a very distinct organization, and appears to be Thomas Cook magnified, for he is individually interested in many things connected with public life and enterprise in various parts of the world, and has thus far proved himself equal to his task, and his labours prosper in his hands.

We regret to announce the death of an old friend, Mr. Thomas Cook, the "Grand Old Man of Travel," who lived to be 84 years of age, for he was born at Melbourne in 1808. He began at an early age to earn his own living. Soon after he was 10 years of age, he learned the business of wood carving. At this period he came under strong religious impressions and joined a General Baptist Church, where his zeal and character led to his appointment at the age of 20, as Bible reader and village missionary for the county of Rutland. In that capacity he, in one year, covered 2,106 miles on foot. In 1836, he became a total abstainer, and continued for the rest of his life an ardent temperance reformer. He was one of the first in the field in the matter of temperance literature, *The Temperance Messenger* and *The Children's Temperance Magazine* owing their origin to him. It was, in fact, in connection with his total abstinence work that the idea first struck him which led to the world-wide travelling organization with which his name will be for ever identified.

Mr. Cook began his first cheap trip in 1841, when he carried 570 passengers from Leicester to Loughborough and back to attend a temperance festival, at the rate of 1s. a head. With great energy Mr. Cook began to organize his system—arranging to house as well as to convey his patrons. He conveyed to the Great Exhibition of 1851, and back, no fewer than 165,000 persons. On July 4th, 1856, the first "personally conducted" party left Harwich for Antwerp, Cologne, Baden-Baden, and home by way of Paris. Next, Mr. Cook embraced Switzerland, and then, with letters from Mr. Bright and Mr. Forster, travelled to New York, and began to spread his nets over the United States. He has been reckoned amongst the greatest benefactors of his country. Mr. Cook's services were especially valuable in Egypt. Before General Gordon mounted his camel at Morosko on his last journey to Khartoum, he wrote a glowing testimonial to the firm, and Lord Wolseley publicly bore witness to the good

work done by Mr. Cook on the Nile in 1884 and 1885, when the firm made all the arrangements for the troops sent to relieve General Gordon. Sir John Gorst has been quite as flattering as regards India and the pilgrims to Mecca. Although of late years an invalid and also blind, Mr. Cook's mental vigour never declined; and he was one of those who recorded their votes in the Harborough division of Leicestershire in the recent election.

Mr. Cook was distinguished not more for the administrative capacity and enterprise, amounting to genius, which made him famous the world over, than for the deep religious spirit and unswerving adherence to principle which characterised his whole life. He was a liberal giver to Christian and philanthropic objects. His memory will be handed down there by the handsome Memorial Cottages which he has caused to be erected for the benefit of the poor. Leicester also has been dowered in a similar way by the gift of some commodious mission premises. He was a staunch Nonconformist and Liberal. He has been truly called, "A Great Guide to Pilgrims."



MRS. MASSINGBERD.

MRS. MASSINGBERD has a good executive brain; she is full of life and action. Is well balanced in powers of body

and mind ; she enjoys herself all over, that is, she does not make much of a trouble of what she wants to accomplish. She should be remarkable for her energy and love of action ; for her great powers of observation, and ready memory. She is a free, easy, copious talker, well qualified to entertain company or make impromptu speeches. She quickly recalls what she has seen and experienced, and has a favourable development for system, method, and exactness, for she is naturally neat and orderly. She is ingenious and versatile, and can turn her attention to many different things. She has marked abilities for a scholar, and appears to have a distinct taste, if not talent, for music and art. She is full of ambition and sentiment, and is more impressed through spiritual channels than she is aware of. She is decidedly practical and likes things for use rather than for ornament. She is fond of the ideal, sublime, and poetical in nature. She may sometimes express herself extravagantly, for she takes broad and liberal views of things. She will attract attention by whatever she does or says, for she is a regular magnet, and cannot help impressing people with her personal individuality.

Mrs. Massingberd comes from an old-established Lincolnshire family, and she can trace back deeds which are in her possession at Gunby Hall to the thirteenth century. She has inherited the spirit of the Commonwealth, and works heartily for progress in every department in which women are engaged. By and through her influence she supports many worthy objects. The Temperance Cause has come in for a large share of her interest and attention. On the death of her father she converted the "Massingberd Arms" into a coffee tavern, on her Lincolnshire estate ; while at Bournemouth she has established another coffee house, attached to which are men and women's clubs. Aside from all her other work she has just organized a "Pioneer Club for Women," at 180, Regent Street, W. Although it has only been open a few months, already 100 members have enrolled themselves. The object of the club is to form "a home in the heart of London," for women from all parts of the world without social distinction, and certainly this has already been accomplished. There are two spacious drawing-rooms, a library, and refreshment room ; four bedrooms attractively furnished, a dressing room and parlour, and kitchens above. The motto of the club is most unique, and recommends itself to every mind—"In great things unity, in small things liberality, in all things charity." Mrs. Massingberd is President of the Club, and sustains all financial responsibility ;

but before the first year's accounts are examined, it is not too much to suppose with its present rate of success that it will have become self-supporting. Mrs. Massingberd has travelled extensively, hence has many friends in far away lands ; and with her excellent qualities of mind is just the one to gather around her women of every clime. Tuesday evenings are devoted to debates on various subjects.

MRS. MARTHA RICKS.—Mrs. Martha Ricks has a marked physiology, and, so far as can be seen, a distinct development of the brain. Her face is deepening, the lower part being



MRS. MARTHA RICKS.

(From Photograph by Elliott and Fry, Baker Street, W.)

smaller than the upper, which indicates considerable character. She is naturally a very capable woman. She should be characterized first, for her power of observation, her intellectual curiosity, her ability to see what is going on, and to remember it. She is very broad between the eyes, indicating that form is large. She could have succeeded as a student of nature, and would have made an interesting teacher. She never forgets faces, or places ; has large locality, which gives her desire to travel and see for herself. All her perceptive faculties are strongly represented, and the indications are favourable to large eventuality, giving memory of her life and actions. She may not be very strong philosophically,

and given to abstract thinking, but has great power of analogy, the resemblance and fitness of things. Her head, as a whole, is largely represented in the front, giving strength of mind, and individuality of character.

Mrs. Martha Ricks has shown an enterprising character, and her desires have been signally gratified. She was born of a slave family in America, but her father, fortunately, purchased his own freedom, and that of his entire family, and took them to the West Coast of Africa. Mrs. Ricks has all her life felt a strong love for the Queen of England, whom she regards as the mother of her people, and of all the poor and oppressed. It was the happiest and grandest day in her life, she says, when "the Queen spoke very softly" to her.

ORION.

PHRENOLOGY

PROVED, ILLUSTRATED, AND APPLIED.

(Continued.)

OBJECTIONS TO PHRENOLOGY.

ANOTHER objection that is often seriously raised against phrenology is that it destroys

Accountability,

so that a person, with a bad organization, will feel that he is not responsible for his bad conduct. Some are not a law unto themselves. Others can resist temptations better than their neighbours. Those who have large firmness, causality, veneration, conscientiousness, and secretiveness are not as liable to say or do indiscreet things as those who have these faculties smaller in development; just as a ship at sea under heavy sails, without sufficient ballast, is more liable to capsize when a squall of wind comes, than a ship well balanced.

We must recognize these natural differences in human beings, which every one must admit, and we shall find that the individual is accountable in proportion as he possesses the capacity to understand the claims of truth. No rational being will say or believe that the Creator holds the human race equally responsible; that when the native of the Fiji Islands is called upon to give an account of his stewardship, he will be considered as morally accountable as the Caucasian, who has a more perfect organization, a better moral brain, and balance of mind. He is accountable only for the power he possesses. Some have but one talent, while others have five; certainly the latter are more responsible than the former. Phrenology explains this difference in organization and recognizes a difference in responsibility, but makes neither the one nor the other. As man is

not perfect, he has not the same degree of guilt when he does wrong as he would have if endowed with a more perfect organization. If we admitted fatality, man, being imperfect, would be compelled to remain so ; but I believe that his work in this world is to endeavour to become as perfect as possible, that as long as life lasts he must relax no efforts to improve, restrain, and balance his powers of mind.

Man has yet to learn more fully his real duties and relations to his Creator, to comprehend that he was sent into the world with an infantile mind and body, which are to be developed, trained, and educated in order that he may fulfil all the designs of his existence.

The element of mind in the organization, at first feeble, is capable of becoming enlarged and perfected until it is increased to a mighty power.

No one who carefully studies human nature will doubt the depravity of the race, the "total depravity" if that pleases better ; but how many persons quibble and contend about the signification of terms and phrases, when in reality they entertain the same opinions, but differ in the form of expression ! If I should say that Phrenology taught that

" In Adam's fall
We sinned all ; "

and attempted to make no explanation of the manner in which sin was transmitted from parent to child, the majority of religious objectors might be pleased. The most devout clergyman, however, is not satisfied to read Bible doctrines to his congregation ; but he enlarges and amplifies these simple and beautiful truths, seeking aid from commentaries and making the most learned researches in order to give lengthy discourses from the pulpit, when the whole moral law is comprehended in "love to God and love to man."

Why, then, may not the scientific man or the mental philosopher attempt to harmonize the teachings of science and those of the Bible and explain from his stand-point the physical, mental, moral, and spiritual relations of man, as well as the theologian who professes only to have the Bible for his guide ? Why should they be denounced as infidels by one who does not know their private sentiments on religious matters ?

The answer to this subject of unaccountability can be embodied in one sentence ; that in proportion as we have capacity, natural qualifications, opportunities for education and improvement, are we accountable. This is simply a reiteration of Bible doctrine. That an individual who is born where he receives no religious instruction, has no Bible to read, hears no sermons or prayers, has only the instincts of his moral brain to stimulate him to action without the circumstances and surroundings which would favour a high degree of morality, when everything has a tendency to discourage rather than encourage his great progress, is not as accountable as the one who is born in the midst of Sunday instructions, Bibles, Churches, with every opportunity for improvement, even though both have similar organizations.

Another objection is, that phrenology leads to

Materialism.

This is a great bugbear, and is brought forward on every occasion when the claims of phrenology are presented. By materialism, the objector means that mind and matter are identical; that the brain and the mind are synonymous terms; that as the brain in childhood is a weak and limited power, so is the mind; that when the brain is defective there is a corresponding imbecility of mind; that they expand together, and when one decays the other is lost.

Phrenology teaches that mind and matter are distinct; but that there is no manifestation of the mind except through the organism, and we have no acquaintance with mind unless we see it developed through a living being. When the child is dead, reason tells us that its mind is gone. The brain is matter formed of the food that we eat, and sustained in the same way as the body. After the formation of the body, we read "that God breathed into it the breath of life," and endowed it with a living soul. When the body dies, and has no further use for the mind or spirit, the latter goes back to the source from whence it came.

The mind has its existence, its attributes, its individuality; it is not flesh and blood, but an ethereal or subtile essence pervading the brain, and the more organized the brain is, the more perfect is the development of the mind.

There is a vast difference between a rock and electricity, yet both exist. A rock is hard, substantial, has its locality, can be seen and handled, while electricity is a fluid that passes rapidly and is so volatile that you cannot grasp it. How much more difficult it is to comprehend and analyze the mind than electricity! Materialism cannot be charged against phrenology any more than against every other system of mental philosophy that makes mind depend upon matter for its manifestation; whether the mental philosopher locates mind in the brain as a whole, or in part of it, as in the pineal gland, that system leads to materialism if phrenology does.

The only difference between phrenology and the old systems of mental philosophy is, that while the latter endeavour to prove that the brain as a whole is the organ of mental manifestations, phrenology teaches that certain nerves of the brain are the organs of certain powers of the mind, and those nerves were made for the express purpose of manifesting the mind, as much so as the optic nerve was made for vision, and the olfactory for discerning different odours. But we hear no objector denounce the systems of Stewart and Brown because they lead to materialism, though every system of mental philosophy is founded on the idea that the mind depends on the brain. In spite of many declarations to the contrary, some persist in saying that phrenology leads to infidelity. For every person made an infidel by studying phrenology, I can point out a man made an infidel by reading the Bible. Some, as I have before remarked, have a certain kind of belief, and read the Bible with a fixed purpose to

find in it arguments to prove their own sentiments. In the same way an infidel may suppose that phrenology supports his infidelity. The fact is, his mind was fixed before he studied the science.

Phrenology expands and liberalizes the mind. Phrenology does not teach sectarianism, but it distinctly points out a power of the mind which leads man to feel his dependence upon a higher source, to worship and conform to what he conceives to be a higher authority; also other moral faculties which give sense of obligation and of justice, a consciousness of immortality, of spiritual existence, and feelings of charity, sympathy, and kindness.

Some men do not grow spiritually. They think that if they are converted, join the church, become rigid sectarians, they have done their whole duty. At the commencement of their Christian life they are full of zeal and the spirit of prayer for all mankind; long to have the world know all they have enjoyed; but in a short time their ardour and enthusiasm have cooled; they have pinned their faith on creed, doctrine, and the declarations of the pulpit, until they have quite forgotten the first liberty that they felt at their conversion. I have not a word to say against the church organization, or religious influences; in fact, were the inhabitants of the whole world gathered into Christian folds, they would be more restrained from committing overt acts of vice and wickedness than now. Some do not understand the difference between religion and Christianity. While phrenology does not profess to expound the dogmatic tenets of the day, yet it says nothing against the doctrines of Christ, nor does it oppose Christianity. It, in fact, proclaims that love to God and love to man are the highest prerogatives of a human being. It says nothing against any particular form of worship, belief, or recognition of the Deity; but with a spirit of charity, it indicates that some persons are so constituted that they require a special creed, and can lead a more consistent life by joining a particular religious organization, while others can maintain the principles of Christianity without so much observance of form and ceremony. The teachings of the New Testament and phrenology are, in many respects, identical; and whoever says the converse of this, does not understand the application of either, or has a settled belief which he persistently affirms.

Two persons cannot see the attributes of God exactly alike, unless they have similar minds, have been surrounded by the same influences from childhood, and have had the same general religious instruction. Phrenology explains why the Bible is interpreted so differently by different persons. One who has large destructiveness and conscientiousness, with less benevolence and adhesiveness, will read the Bible very attentively, and will mark every passage that says that "God is angry with the wicked every day." He ejaculates, "that is right; man is a sinner, and ought to be dealt with according to his iniquity." Again, he reads that God punishes the wicked for ever and for ever. "Nothing more than he deserves!" he will exclaim. I examined a man who had a similar organization, and told him

“that he would be impressed by such doctrines.” At the close of the examination he pulled out of his pocket a newspaper, filled with passages that he had culled from the Bible, every one of which tended to prove the eternal damnation of sinners. If a man have small destructiveness and conscientiousness, with large benevolence and adhesiveness, he reads such sentences as, “that God would have all men come unto Him and be saved;” “that God is our Father, and Christ is our Saviour.” Every paragraph that speaks of the goodness of God, and His desire that none should be lost, is marked. These men read and interpret the Bible according to their peculiar organizations; and it is not surprising that there are 1,100 different creeds in the world, because there is such a great diversity of mind.

Men look at subjects through different-coloured glasses. To one, all the rays are reflected through red lenses, while another sees all nature with green glasses, and so on. Phrenology shows to us the colours of the glasses through which we see objects, and informs us why some clergymen always preach the law, while others declare the gospel; why some are such inconsistent Christians, while others manifest uniformity of conduct, irrespective of circumstances, or surroundings. Phrenology shows that there can be philosophy as well as emotion in religion. In former ages religion was shrouded in mystery; but at the present time, the race has greatly emerged from the superstitions of the past; and we now hear lucid explanations of the moral duties of man from the pulpit.

The objector asks again, how phrenology can account for or explain the doctrine of

“A Change of Heart”

as taught by Christianity and as experienced by many persons. By “change of heart” is meant that a man may be very wicked, a great sinner one day, but on the next is very penitent and disposed to turn completely from his wicked courses to a life of piety. The objector asks, Do the organs of the brain change as suddenly, and is the organization different after the conversion, and if not, of what use is phrenology? I would emphatically say that there is no sudden change in the phrenological development. There is neither a power added nor any taken away; no creation or destruction of a primitive element of mind. The converted man has the same colour of eyes, shape of nose and mouth as before. He exhibits the same peculiarities of disposition; but he is differently guided, is actuated by different motives, is living for a different purpose, and hence pursues a different course in life. An idiot never meets with such a change as this, because his moral and intellectual nature cannot receive moral impressions. If the ship has lost its rudder, it may be fit for the voyage in other respects, but it is not safe among the rocks; so if a child is demented to such a degree, that it has no power to think, reason, or feel the force of moral truths, and is not susceptible of moral culture, though it may be healthy and vigorous physically, yet it will always lack power to guide itself, and

be at the mercy of others. Such should be carefully protected by those who are able to control themselves.

When a man experiences what is called "a spiritual birth," he has the same faculties after the change as before. As he yields to his moral feelings and endeavours to guide his passions, the former become more active and vigorous, and the latter less prominent in a vicious sense. The change implies the better guidance or use of the powers that he has; but how often is his life a struggle, and how many exclaim, "When I would do good, evil is present with me!" "The spirit is willing, but the flesh is weak." What do these expressions mean? Simply that St. Paul was the same man organically when he arrived at Damascus as when he left Jerusalem. He started to destroy and put into prison those who believed in Jesus Christ, and returned a convert to the same faith that he previously denounced. He declared, "that he was honest in all that he did," and supposed at one time that he was zealously performing his duty when he was persecuting the Christians. He was as energetic after his conversion as before, had just as much courage, learning, talent, and brilliancy; but a great change came to him—and he worshipped God with as much earnestness and devotedness of purpose, as if his past life had been spent in His service; and yet his future life was a constant warfare. The "change" in St. Paul consisted in the direction of his mind; but he was annoyed by the same besetting sins after as before his conversion. And it was a long time before he could bring his passions into subjection to his moral nature. I appeal to Christians who have met with this change of heart, and ask them, if they can, at once, root out of their minds the propensities that have been stumbling-blocks in their way from childhood, and if they ever attain to their standard of perfection in this world? If this were ever the case, if their strong predilections to go astray, if the elements of depravity were instantaneously and for ever obliterated, we might expect that there would be a great change in the phrenological organs. But the destructiveness and combativeness that at one time were manifested in strife and contention, when the purpose of life is changed, are still active organs, but are exhibited in a good cause. The man who cursed and swore in vehement manner, before his conversion, prays as vehemently after his conversion, because it is his nature to do everything earnestly.

Some persons have no enthusiasm, and as Christians are cold, formal, and lukewarm. If "change of heart" made men perfect, there would be no need for ministers to preach and pray continually for Christians as well as sinners. We know that one mind influences another; that frequently a good man has the power to persuade his neighbour to change his entire course; that an affectionate wife has sometimes a wonderful influence over a dissipated husband.

If it be possible for a human being to exercise a wonderful power over another, it is certainly possible for there to be an intimate relationship between man and his Maker, through the influences of the Spirit to such a degree, that a man will be quickened to perceive

Divine truths that had never before touched or affected him, will feel their importance, and will be so much impressed, that he believes his eternal happiness or misery depends upon his yielding implicit obedience to their dictates. We see daily such remarkable instances of an entire renovation of purpose, that we are forced to believe fully, in a "change of heart," and yet, as I have before remarked, this change, though radical, only affects the *motives* of conduct; but there is neither a creation nor annihilation of faculties.

Intimately connected with the doctrine of "change of heart" there is another favourite tenet called

"Growth in grace,"

and the objector asks, how can we explain this phrenologically?

"To grow in grace" consists first in overcoming the besetting sins of which we are conscious, and secondly, in making positive progress in our advancement. The mind develops more and more in a moral and spiritual direction, by becoming less subject to the influences and appetites of the body. The person, who "grows in grace" becomes more pure and elevated, labours to do more good, to secure the happiness of the greatest number, to set a better example to his neighbours, to extend the mantle of charity over the frailties of his fellow-beings, to enlarge his sphere of usefulness to improve the human race, and to have a noble conception of the attributes of the Deity. When the higher faculties of the mind are able to control the propensities, then we may be assured that we are "growing in grace." The child cries because it desires to eat, drink, and have playthings. But the child grows and develops, and its desires increase. It not only in a few years wants physical gratifications for its body, but it desires knowledge. As the reasoning powers expand, the child inquires not only who gave to him his body, brain, and soul, but who is God? where does He live? who is the father of God? and it is evident that there is no bound or limit to the metaphysical queries of an investigating mind. We are conscious of this intellectual growth of the child as he emerges from childhood into manhood. "Growth in grace" is a similar process, only that it is spiritual in its nature. The mind grows in grace in proportion as a man strives to live a life preparatory for eternity. We have our besetting sins, and these are peculiar to the individual. Some persons have an appetite which controls them; others have to contend with a strong will, pride, vanity, &c. While we continue to have tendencies of mind that lead us downward, we lack balance of power and that harmony of development which produces a beautiful consistency of conduct. In proportion as the intellect and moral brain have the ascendancy, in that same proportion do we grow. Phrenology distinctly teaches this doctrine. A clergyman would tell a querulous brother in the Church, that in order to perfect himself in the Christian graces, he must cease from quarrelling, and regard the rights of his neighbour as his own. Phrenology, using a little different phraseology, instead of giving general direction, would say that an excessive development of destructiveness and combativeness induced the man

to fight and contend ; that he must repress the perverted action of these executive organs, stimulate benevolence and the other moral faculties. One of the leading principles of phrenology is, that the organs increase in size and activity by cultivation, and diminish, as the muscle of the arm, by a want of action.

If a man should be too censorious and fault-finding, phrenology would tell him that if he would "grow in grace" he must become more charitable and exercise his rigid conscientiousness by noticing his own shortcomings without complaining of the derelictions of his neighbours, that he must cultivate sympathy for all mankind.

Phrenology, rightly understood, instead of being in opposition to, is in favour of Christianity ; in fact, it is the handmaid of religion, and though some affirm that many good people have lived and died without believing it, that clergymen have been successful in their ministrations without embracing its doctrines, yet the same thing may be said with regard to the whole range of science and literature, the arts and improvements.

Every candid mind who will examine my lecture on the "Proofs of Phrenology" ought to be convinced that this science is worthy of their consideration. It seems almost unnecessary to notice the objections brought against it by opponents ; but there are very many good people, especially among professors of religion, who have heard their ministers denounce the science, affirming that its tendencies were bad, and as they have faith in their spiritual guides they have been precluded from examining the subject for themselves. These charges, which have been uttered from the days of Dr. Gall to the present time, can be so fully met and answered, that I have felt it due to the science to present the objections in the present form.

The second class of objections brought against phrenology are the anatomical objections. These are maintained by physicians, many of whom are unacquainted with the nomenclature of the science, but they are governed by a superficial knowledge of its claims. They may be thoroughly versed in their own sciences, and hence sometimes feel that they have a special prerogative to denounce any subject which may seem to be an encroachment on their theories. If an objection is once started, it may be refuted again and again ; still many prefer to believe the objection, rather than admit the refutation.

Sir William Hamilton wrote a work on "Mental Philosophy" forty years ago, when phrenology was in its infancy. Like the dawning of any new science, there was much connected with it, that a further investigation has improved or expunged. Frequently, when an inventor brings out a new patent, after a few years he modifies his machinery, or gets it into better working order ; so with phrenology. In its early days, Dr. Gall called one organ theft, and another murder. He thereby recognised only one condition of the faculty thus named ; but at the present day, these manifestations are considered to be the perversion of faculties that were given for our own good. Sir William

Hamilton boldly declared that there was a

Frontal Sinus,

and that it was so large, that if phrenology were correct, it could not be made practical; for from six to twelve phrenological organs were covered by this bony protuberance. There is a frontal sinus, or an opening between the external and internal tables of the skull over the orbits of the eyes; but it is never seen in children, and it is prominent only in those persons who have a strongly-marked osseous system, a heavy base to the brain, large hands and joints. A skilful phrenologist can generally judge when it is developed, by an observation upon the condition of the general system, as accurately as the physician can decide upon the state of the stomach of a patient. We rarely see it in the skull of a woman, unless she is very masculine in organization. Neither does it cover as many organs as Sir William affirms. When it does exist, we regard it as the exception, rather than the rule.

A person who has a clear, sharp, shrill voice, that can be easily heard and distinctly understood, has but little of the frontal sinus; and, so far as my observations upon thousands of heads have gone, I have usually found that those men who have a heavy frontal sinus, have manifested the perceptive faculties in their character, and hence I conclude that it is a portion of the brain that has protruded the skull in the direction of the sinus. Beside, it only covers a few of the perceptive faculties at the most, and it does seem strange that a professor of mental philosophy should attempt to overthrow a science by such a feeble objection.

Some anti-phrenologists affirm, that while one skull is only $\frac{1}{8}$ of an inch in thickness, another may be $\frac{1}{2}$ or $\frac{3}{4}$ of an inch in thickness. This fact, that every anatomist understands, is readily perceived by the skilful phrenologist.

If Cuvier could, by seeing one bone of an animal, tell the species and genera to which it belonged, it certainly is not presumption for a person who has made a critical examination of thousands of living heads, and also of large collections of skulls during the period of fifty years, to affirm that he can, with accuracy, judge of the thickness or thinness of the skull, and hence decide upon the activity or non-activity of the brain. Let a person speak, and if his skull is thin, there will be a perceptible vibration in the coronal part of the brain, and the converse is equally true. Beside, as, in the animal kingdom, there is harmony in the frame-work of the animal, so there is the same degree of harmony in that of man; and when the other parts of the osseous system, as the hands, &c., are delicate in structure, we find the skull is generally thin.

The exception to this—and exceptions prove the rule—may be found in the skulls of the insane. Insanity has defied the power of the metaphysician more than almost any other mental condition; but, I have repeatedly gone through an insane asylum, and told the idiosyncrasy of the different patients by the aid of phrenology; still, there may be special cases that would puzzle the most profound to decipher.

Many persons are objectors to phrenology because it does not give them a perfect organization. They might equally object to the Bible, that says the human race is imperfect. Dr. Sewall, of Washington, D.C., is a case in point. He had proclaimed his great and unequivocal interest and belief in phrenology; but had a phrenological examination, when he was told that he was wanting in conscientiousness, veneration, and had inordinate self-esteem. He was much chagrined in consequence of perceiving that he was not perfect; afterward, having a personal spite or pique against Dr. Caldwell, an eminent anatomist, and professor of a medical college at St. Louis, who was a prominent advocate of the science, he openly said that he would leave no means untried to make phrenology ridiculous and unpopular. He, therefore, ransacked anatomy, physiology, and his own imagination to find some plausible objections to the science; and published a small book on the subject, which has been quoted by those who have not had the patience, or the mental capacity to examine for themselves.

Another objection is, that the external of the brain and the external of the skull do not harmonize; that the convolutions of the brain make an impression on the internal surface of the skull, when there is no similar outward manifestation of that development; therefore, the external of the skull does not show the form of the brain. Some suppose that the phrenologist looks for "little bumps," in order to find the developments of the mind. But it is the general form of the head that gives the true index to the character. Is the head large or small, narrow or broad, high or low? Is the preponderance of the brain in the base, or in the coronal region? These are the queries that the phrenologist first solves. He is not guided by the little ridges on the outside of the skull, but takes the form and shape of the whole head into account. I would ask, if the brain does not give shape to the skull, by what power does it become of varied proportions and conformations? If you doubt that heads differ in size, the hatter or the milliner would soon settle that difficulty.

By placing a lighted candle in the skull of known individuals, I have always found that the thinnest parts of the skull were directly over the organs of the brain which had been most vigorously exercised.

Some will say

That great men have not always great heads.

This may be true in certain respects; but very few men are great or distinguished in all the sciences. Some have special "hobbies," and become distinguished in special departments of science or literature, but have those phrenological organs which are adapted to the very callings and professions they have chosen. There is a world-wide difference between an universal genius and a person who may be clever in a few things. But show me a man who is truly great, endowed with a strong and comprehensive mind, who exerts an extensive influence in society, and I will predict that he has either a head 23 inches in circumference, or one prominently developed in

the coronal region. There is never mental power without a brain of good size ; but sometimes it preponderates in height rather than in breadth. Then, adds the objector, how can any one make out a mathematical deduction, when he has to ascertain so many things, and to judge in what direction the brain is developed ? I have only one reply to make to such a query, so often asked ; that it is in this power of judgment that we find the art of phrenology ; an amateur artist may know, that by combining certain colours, he can produce a specified colour ; but it takes the practised artist to put the paint on to the canvas, even after it is carefully mingled.

Another objection is, that all bad men have not bad heads. Persons frequently cite the case of "Eugene Aram," who was executed at York. To a superficial observer his head does not look like a bad one ; but a side view of the head shows that he was deficient in conscientiousness. Eugene Aram was not really a hardened criminal, but was very clever, intellectual, and sustained a fair reputation for honesty for many years. Temptation came and he yielded to it. The surrounding circumstances of his life were quite unfavourable : he had an immoral wife, with whom he disagreed, and as his home was not a happy one, he spent his evenings in bad company which had its influences upon him. His temperament was ardent and social, his brain was unevenly balanced, and he did not show the consistent life that a man similarly organized would have done, provided he had been restrained by pleasant home associations. Still, if his brain had been more harmoniously developed, he would have overcome and resisted the temptation to go astray. We do not fully understand who are really bad and who are not, but I have yet to see a hardened convict who has a good moral brain and elevated organization. Sometimes men murder from the love of money, when acquisitiveness is perverted, as in the case of Dr. Webster, a professor of chemistry in Harvard University ; but his brain was unevenly balanced, and he lacked conscientiousness, the rudder of the whole brain. A man is not born to be a murderer, or a thief, but some are naturally and organically so weak in moral power that society ought to be protected from their violence, as much as a community would desire to be protected against the rapacity of a lion or tiger.

Another objection is, that phrenology flatters, and gives a man too good a character. It is not flattery on the part of the phrenologist who ascribes to a man certain powers of mind that he has not as yet exhibited ; for very few human beings are ever developed to the fullest extent of their capacity. Almost every individual has latent powers, and when phrenology points these out, the person may feel that he has not evinced as much mentality as has been given to him. If I should ask the persons I meet, are you doing as well, or as much as you can, every voice would be in the negative. Phrenology tells what can be attained, as well as what has been done by the individual, and herein is it of great utility ; for it encourages all to cultivate their natural gifts.

Does the skull really change after maturity? asks another objector, who has just begun to examine phrenology, or at least to find some objection to it. The skull does not change materially after maturity, and yet maturity sometimes *never* comes. Some are old at twenty-five years of age, and others are young at fifty or sixty. Sometimes a person may cultivate his mind after the skull becomes ossified at thirty or forty years of age, and in such cases, the fullest extent of the faculty may not be evident; yet there will be to the end of life a sharpness or pointedness to an organ that is much exercised, and the brain will be more fully developed in that part, when the circumference of the skull may not materially change; therefore, this objection is in reality no impediment, though it would require considerable practice to judge correctly in such cases.

As to the anatomy of the brain, several standard anatomists have declared, that the dissections of Dr. Gall and Dr. Spurzheim have thrown as much, if not more, light on the mental capacities as the ordinary method of examining it.

So far as bony excrescences are concerned, they seldom or never come on both hemispheres of the skull, and can easily be discerned by the phrenologist.

With regard to external injuries to the skull, they generally produce cavities rather than prominences, which a novice of a phrenologist could detect; and even though some of the brain may be lost, in consequence of the injury, there is the same probability that the brain grows again, as the bone and muscle sometimes grow, after they have been impaired or destroyed by an injury. Hence we need not be astonished that a person retains activity of the mental powers after injuries on the brain.

I am certain that phrenology will extend its valuable doctrines and applications to the every-day affairs of life in spite of all objections brought against its tenets, and that candid persons, not influenced by prejudice or ignorance, must acknowledge its truth.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE same day as the New Imperial Parliament met in London the Parliament for Scientific Research met in Edinburgh. The proceedings commenced on Wednesday, August 3rd, by an inaugural address by the President, Sir Archibald Geikie, who took as the key to his address Hutton's theory of the earth, and he remarked how appropriate it was that a hundred years from the time when that theory was under discussion the British Association should be meeting in the city of its author. The fundamental doctrine of Hutton's theory was that the present aspect of the earth's surface was

due to the destruction and redintegration of older surfaces, and it was specially characteristic of his theory that it sought in the changes taking place to-day an explanation of the changes which had taken place in the past. He noted how tardily Hutton's theory had been received partly from external causes, such as the influence of the rival theory of Werner, and the suspicion of its supposed irreligious tendencies; and partly also from internal causes, such as the uniformity and gentleness of the operations of nature upon which its exponents insisted. The theory also demanded practically an illimitable antiquity for the earth. Recent physical science had brought within definite limits the age which could be assigned to the earth, but the President joined issue with the physicists on this point, maintaining that geological evidence showed an antiquity for the globe which could not be explained except by an allowance of time much beyond the limits which recent physical speculation would concede. Finally, the President dwelt upon the influence of the imagination in enabling us, with the aid of geological knowledge, to reconstruct the landscapes of former epochs.

INTERNATIONAL CONGRESS ON EXPERIMENTAL PSYCHOLOGY.

A VERY interesting Congress was held the first week in August at the University College, London, under the Presidency of Prof. H. Sidgwick, when a large number of scientific papers were read and discussed. The meetings were supported by a host of distinguished Vice-Presidents; among them were Professors A. Bain (of Aberdeen), Baldwin, Ferrier, Hitzig, Delbœuf, Richst, and Schäfer; and 270 members, among whom were Mr. A. J. Balfour, M.P., Mr. Francis Galton, Prof. Victor Horsley, Dr. Donaldson (Chicago), Prof. Helmholtz, and many others; Mr. James Sully and Mr. F. Myers, Hon. Secs.

The President in his opening address said:—It must be admitted that England had fallen somewhat behind in the recent movement of psychology in the experimental direction—if the term “experimental” were taken in its more ordinary sense, to denote investigation under artificial conditions, prepared with a special view to the investigation. English psychologists had taken hardly any part in the efforts that had been made during the last thirty years, with continually increasing vigour and elaboration, to convert psychology into an exact science. But if the term “experimental psychology,”

which denoted the basis and scope of their association, were taken in its wider sense to include the whole science of mind so far as it was based upon induction from observed facts, no one, he thought, would contest the established claim of England to be the ancient and original home of the science, in which the method of empirical reflective observation and generalization had been carried on for two centuries by a line of eminent thinkers—from Locke and Hume down to Bain and Spencer in our own day. They had decided then to take the word “experimental” in a sense intermediate between the stricter and laxer meanings which he had contrasted. They had included all investigations in which the reasoning was based on observations methodically pursued for a special purpose, and not merely those in which the method was in the strictest sense experimental. But, though they had thus extended the meaning of the word “experimental,” they had not taken it as simply equivalent to empirical; they had not desired to comprehend the whole range of the discussions which would properly be included in a complete treatise on empirical psychology. With regard to the term “experimental psychology,” which was adopted at the first congress to denote the subjects of their discussions, he would like to add a few words on the term “physiological psychology,” which was thereby superseded. It was superseded because it was found to be too narrow, since the systematic investigation of the facts and laws of mind, which they wished to claim as their sphere, must clearly include inquiries which could not properly be called physiological. What they had there mainly sought to bring forward for comparison and criticism were the results of methodical interrogation of experience, with a view to obtain definite answers to definite questions or groups of questions, which mere reflective analysis of ordinary experience did not enable them to solve. All students of psychology, including those who were most opposed to materialism, for whom he felt specially qualified to speak, were anxious to learn the lessons which physiology had to teach. The most unphysiological of them were desirous of apprehending and appropriating all that experts regarded as known and ascertained about the physical states and changes which were the antecedents, concomitants, or consequents of psychical states and changes. The antagonism that was marked 20 or 30 years ago, between one-sided extreme views on the neurological and the psychological side respectively, had now almost died out. On the one hand, the crude materialism or positivism which pushed contemptuously aside all results of introspective

observation had now mostly given way before the general recognition that psychical processes are objects of experience, altogether distinct from the nervous processes which invariably accompany them; and though we might regard them as "two faces of the same fact," they must admit that they were "incapable of seeing, or even imagining," how the two were connected; and that, in order to know what could be known of the double fact, they must give systematic and careful attention to both its sides. On the other hand, the attempt of some students of mind to mark off a department of mental phenomena, elevated above the condition of being accompanied by nervous change, was now, he thought, generally abandoned, even by the psychologists who were most strongly opposed to materialism; they found, as Shakespeare's Troilus said, that "We cannot fight upon that argument." It had become clear, in short, that the important issue between materialists and their opponents did not relate to the nature of the two-sided facts with which psychology had to deal, or the connexion of their two sides, but rather to the casual nexus that linked each successive double fact with psychical and physical antecedents and consequents—the materialist maintaining, and his opponent denying, that this causal nexus lay wholly on the physical side, and that psychical facts were merely inexplicable effects, and not in their turn causes of physical facts. He conceived, however, that empirical psychology might properly leave this controversy on one side. The empirical psychologist might content himself with tracing uniformities of co-existence and sequence among the psychical phenomena that he studied taken along with their physical accompaniments, without entering on the question of their ultimate causation. In the performance of this task physiology would aid him, not merely in the way of supplementing the results of introspective observations with a knowledge of the physical antecedents, concomitants, and effects of psychological phenomena, but also more directly by showing him where to look for psychical facts—such as muscular feelings—which come into clear view when attention is adequately concentrated on them, although they are commonly overlooked in introspective observation. The importance of the aid that had been already obtained in this way was so palpable that an able writer almost went the length of asserting that no one but an accomplished physiologist was duly qualified for observing his own emotions, impulses, and volitions. Without endorsing this paradox, he thought they might agree that it was difficult to limit the extent to which psychology might be aided by the progress of

physiology. They had, therefore, not hesitated to constitute a special section for papers of a mainly or largely physiological character. Side by side with this they had placed a section on "Hypnotism and cognate subjects." The prominence given to hypnotism and cognate subjects at the meeting in 1889 did not meet with universal approval, especially in Germany. They thought, therefore, that the only way at once to carry on the work of the last congress without any breach of continuity, and at the same time to make their meeting as truly and impartially representative as possible of all schools of psychology, was to constitute a special section on hypnotism, parallel to the section on neurology, and devote their general meetings to other departments of experimental psychology. In that subject France was their master, as Germany was in experiments on the sensations of normal human beings; and they were glad to have so full a representation of the French hypnotists, and especially of the school of Nancy. For without desiring in the least to depreciate the value of the Salpêtrière study of hypnotism as applied to hystero-epileptic patients, the broader lines on which the school of Nancy had worked were those which investigators in England—and he believed in Europe generally—had chiefly followed. It was their experience that ours had confirmed, and it was according to their doctrines that we had mainly looked for guidance.

Mr. Erichsen, F.R.S., President of University College, said that he desired to offer on the part of the council a hearty welcome to the members of the Congress.

Fowler Institute.

MEMBERS' NOTES.

"Narrow minds think nothing right that is above their own capacity."

MISS J. A. FOWLER represented the Fowler Institute at the British Association in Edinburgh and secured finger impressions from the following distinguished anthropologists, Dr. Benedikt, of Vienna, whose recent experiments on the cure of epilepsy are mentioned below; Dr. L. Manouvrier, of Paris, who a year ago estimated woman's brain power to stand first, man's second, monkey's third; Dr. Louis Robison, the authority on the prehensile power of infants; Dr. Warner, the great statistician on mentally weak children; Dr. Wilberforce Smith; Dr. Garson, London; the Secretary of Mr. Francis Galton, who was taking anthropometrical measurements; Professor Macalister, President of the Anthropological Section; and many other distinguished scientists.

To the list of members the latest addition has been Mr. Lorenzo Franklin Fowler Piercy, grandson of our President, L. N. Fowler, who enrolled himself on Saturday morning, 12.15. He has already readily consented to increase Miss Fowler's valuable collection of statistics, and pulled down the scales at 7lb. 9oz., head measurement 15 inches, and has promised further cranial measurements, also feet and hand impressions for Mr. Francis Galton's and Dr. L. Robinson's collection.

“Thoughts on Theosophy,” by Mr. H. S. Ward, is the subject for the monthly meeting on September 12th, when, if our friends have made the best use of their holidays, and imbibed a full supply of nature's blood purifier—oxygen—from some sea-side resort, country fields, or mountain side, we may anticipate even a better discussion than usual. The majority of us are too lazy to breathe thoroughly, and in consequence, as Mr. Fowler has often reminded us, “we only half live.”

During a recent and pleasurable river excursion of a few Institute members and friends, vegetarianism formed one of the topics. This many sided problem is worthy of careful consideration in its relation to anatomy, physiology, chemistry, ethics, &c. It is often urged that such a system of diet is useful in the cure of some diseases, but is otherwise condemned as an unnecessary fad. Certainly it is true that the simple products of nature are instrumental in eradicating even such a terrible disease as consumption, and after, in rebuilding the system to a better condition than by any other means. If such a mode of living will effectually eradicate accumulations of waste or disease, it also has the power to prevent any similar accumulations, and this being so, why wait until nature literally compels an alteration to a pure and natural food?

The unwritten laws of fashion are so stringent that the majority fear to act as an unbiased judgment would dictate, and hence we frequently hear, “that a little meat is considered necessary.” To those who really believe this and rely on flesh food for the support of their bodies, I would commend a paper by Josiah Oldfield, M.A., B.C.L., which appeared in some recent numbers of *The Vegetarian*, where the relation between tuberculosis and flesh-eating is clearly shown, also that large quantities of diseased animal carcasses find their way into our meat markets despite the official inspection. The consideration of the various objections our members may have to vegetarianism and their reasons for preferring the practice of kreophagy, would certainly be of interest to some and perhaps instructive to all.

Judging from Lady Paget's remarks in the July number of *The Review of Reviews*, she evidently realizes the deleterious effect of flesh food, in cases of cancer at any rate; she states that “by abstaining from animal food the cancer seems to be deprived of its nourishment.” When it is more fully recognised that the fermentive element in our food is at the foundation of the many diseases from some one or more of which so few escape, then will bread—that should truly prove “the staff of

life"—be more universally sought after, the similitude of that, about which Sir Andrew Clarke once remarked, "Anyone eating that bread does not require meat." The terrible malady cancer, so much upon the increase of late, would then commence its decline and operations for the complaint, that merely temporarily remove an effect without touching the cause, will become as much a thing of the past as the old fashioned system of bleeding is at the present time.

According to the late Professor Bischoff, of Munich, the average weight of a woman's brain is 100 grammes less than that of a man's. After his death, it was found his brain weighed somewhat less than the average he had fixed for the brain of a woman.

J. B. Romford, of Los Angeles, is evidently practising the economical side of the food question, or, as he calls it, the Edenic system. Raw wheat is his only diet; of this he consumes about three-quarters of a pound a day, representing an outlay of about one or two cents. He sets a good example by only eating when hungry, and it is said that he thrives upon this fare.

Despite the incredulous manner with which the majority of the medical profession receive phrenology, we now have Dr. Benedikt, professor of neurology at Vienna, declaring that "on the strength of his phrenological studies" he believes that he has discovered a successful mode of treating epilepsy. Dr. Von Mosetig, professor of surgery, assists the discoverer in the operations, which consist in "trepanning and the extirpation of those parts of the grey matter of the brain in which the seat of illness is supposed to be." It is by taking accurate phrenological observations that the professor can determine the exact spot of the skull necessary to be removed, and thus the opening need not be larger than one centimètre. This treatment will doubtless prove far more successful than the usual mode of administration of bromide of potassium, but the most natural and effectual has been proved to be a strict and suitable vegetarian dietary.

Cycling is a sport so largely upon the increase among all classes of the community that its effect must be a marked one either for good or evil in the health of its participators. As in many other forms of recreation, so in cycling, the tendency seems rather to the reduction of records, than the promotion of health.

The American record for a 24 hours' ride was recently beaten by F. E. Spooner. From a brief and graphic description of this task we might be tempted, if such things often occurred, to erase wheeling from the list of "sports." It appears that on the completion of his 150 miles, Spooner begged hard for one and a quarter minutes' rest, but the furious

threats of his trainer caused him to continue until 233 were completed, when his condition was a pitiable one. He dismounted for nineteen minutes, and after being bullied, pinched, and rubbed till he groaned, was set going again. Notwithstanding this form of encouragement, nature again demanded repose, his eyes closed occasionally, and at 360 miles to prevent sleep overtaking him, the dauntless trainer vigorously applied buckets of water in the rider's face at each lap.

What a difference to young Shorland's remarkable 24 hours' performance at Herne Hill, when he, with comparative ease, reeled off 413 miles. Shorland, like most cyclists of fame, is of the tall, tough and thin type, together with a prominent degree of the organ of firmness.

G. B. COLEMAN.

THE BRITISH MEDICAL ASSOCIATION.

AFTER an interval of thirty-five years, the British Medical Association visited Nottingham, where it held its sixtieth annual congress. In 1857 the attendance numbered but 85; this last congress about a thousand visitors were expected. Not only was British medical science strongly represented, but there was a considerable number of distinguished Continental professors at the conference, and, for the first time in the history of the association, one of the principal addresses—that in surgery—was delivered by a Colonial representative, namely, Dr. W. H. Hingston, surgeon-in-chief, Hotel Dieu, Montreal, professor of clinical surgery at Laval University. The President was Mr. Joseph White, of Nottingham, who, it may be noted, acted as hon. local secretary when the Association visited the town thirty-five years ago. He delivered his address in the Mechanics' Hall.

The museum was divided into sections, arranged under the heads of—(A) Food and Drugs; (B) Pathology; (C) Anatomy and Physiology; (D) Instruments and Books. At the Guildhall there was an exhibition of sanitary appliances, organized by Dr. Boobbyer, the Nottingham Medical Officer of Health. This was opened by the president, the Mayor of Nottingham, and Sir Walter Foster, M.P. There were 64 exhibitors, and certificates of merit were awarded by a committee of judges to deserving inventors and manufacturers. An extraordinary general meeting of the association was called for the purpose of discussing an important motion, of which notice was given by Dr. Galton, who proposed so to alter and amend the

articles and bye-laws of the association as to allow of the admission of lady members. The business proceedings were agreeably diversified by a number of pleasant social functions. "At homes," garden parties, and conversaziones were included in the week's programme. Excursions were organized to Lincoln and to three ducal seats in the neighbourhood of Nottingham, viz., Chatsworth, Belvoir, and Welbeck, at all of which places the visitors were hospitably entertained.

A change in the right direction has taken place in the constitutional rules and regulations of the Medical Association. The Council has now decided to admit women into its membership.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., SEPTEMBER, 1892.

WHEN THE MIND RESTS.

IN private conversation one day one of Chicago's oldest and most learned physicians gave utterance to the following:—

Why is it that when we see a person gazing fixedly for several moments at a certain point on the floor or in the street we say he or she is thinking hard about something? Nine times in ten a person thus engaged—or disengaged—is thinking of nothing. At such times, if you only know it, the mind is napping and there is no thought. Probably one of the oldest fads—and it seems to be nothing more—consists of persons when at such times they are asked what they are doing saying "thinking hard!"

In the large majority of cases, when a person is thinking hard or intently, the eye roams from one object to another, and the hands and feet are moving more or less.

The busiest and hardest working brain insists on taking momentary naps several times a day. Just before "dropping off" into one of these naps the mind commands the eye to fix itself upon some object, thus usually insuring the holding of the head and probably every part of the body quiet. Then the mind catches its little nap. These little mind naps or flashes of rest may never be more than twenty seconds long, and yet they have been discovered to do the mind a wonderful amount of good. They never come to the deranged mind, and it has also been discovered that the supposedly

sound mind which does not take them is on the verge of insanity.

DR. CUMING, at the Medical Conference at Nottingham, said: "We can and ought to cultivate the study of normal mental action to enable us to comprehend more clearly the relationship that exists between the physical and the psychical, and thus possibly to gain some sounder knowledge of therapeutic measures for the mentally enfeebled."

Hygienic and Home Department.

THE IMAGINARY FEARS OF CHILDHOOD.

THOSE of us who have reached middle-age, and have passed through the great experiences of life—love, marriage, and parenthood—are apt to look back at childhood through a rosy haze. We imagine it to have been a golden period, free from care and unhappiness. Yet the first decade of a child's life is not always so unclouded as we would fain persuade ourselves. The constant desire of all children to reach maturity proves this, for where there is perfect satisfaction and content there is no demand for alteration. Children are but men and women in miniature, and the ratio of unhappy lives amongst them is much in proportion to that of their elders, depending greatly upon circumstances and upon temperament. Naturally children of delicate organization, sensitive and intellectually active, are less likely to pass through life comfortably than their more phlegmatic and pachydermatous brothers and sisters.

One of the most fruitful sources of childhood's suffering is fear, especially imaginary fear, dread of the darkness, of the unknown, of supernatural influences. What a child cannot understand usually holds for him some element of awe; whilst on the other hand, by some quaint juxtaposition of ideas, the most commonplace object will be invested with terror. A boy once told me, as we passed a house, the steps of which were adorned by a couple of stone lions, that until he reached the age of five those ornaments were objects of dread to him. He had heard them called "lions," and in his childish mind associated them with the tales of fierce fights in jungles with

the king of beasts, in which his elder brothers delighted. "I never passed them in my daily walk with my nurse," he said, "without a feeling of great fear, thinking we were running a terrible risk, and wishing I dare get close enough to see the bones of those whom the lions had sprung upon and devoured, scattered about." It was a very silly mistake to make, perhaps; but most of childhood's fears have as little basis. Yet, what moments of horror the little fellow must have silently borne, and what an amount of courage must have been daily called up, to pass, without outward evidence of fear, those passive, but, to his mind, ferocious beasts.

Unconsciously parents raise up bugbears for their children by a thoughtless manner of speaking about ordinary things, or by the use of curious expressions unintelligible to the little listeners. It was the custom of a certain minister when praying with his children to entreat the Almighty to deliver them from "Satanic influence." It was a much-debated question among the little flock what was the substance or shape of this dreaded enemy. One day, on the road leading to their school, was opened a building, with the inscription carved over its door, "Mechanics' Institute." At once the question was settled—this was the "thing" father prayed they might be delivered from; and until they were quite big children, neither lads nor lasses passed the building without inward fear and dread of the unknown danger which might at any time assail them.

Darkness and loneliness are dreaded by children because at such times these fears assail them most. Mrs. Jameson, in her autobiography tells us, "The fear of darkness and of supernatural influences was to me, from earliest days, a source of suffering, acute, permanent, and always acknowledged. As long as I remember anything, I remember these horrors of my infancy." The ghost of Hamlet's father, a picture of which she had seen in a large volume of Shakespeare, was the phantom which haunted her, following her up and down stairs, pacing her bedroom, "exorcised only by the blessed light." To Sara Coleridge also this ghost of Hamlet's father was a nightly visitant, making the hours of darkness hideous. The hateful representations of Apollyon, with which some editions of "Pilgrim's Progress" are illustrated, haunt many a child's lonely hours.

Oliver Wendell Holmes confesses to "terror, which lasted very long," of ships. "I used," he says, "to hide my eyes from the sloops and schooners that were wont to lie at the end of the pier." One other cause of childish fear he had, of more fearful significance. "There was a great wooden hand,

a glovemaking's sign, which used to swing and creak in the blast as it hung before a certain shop, a mile or two out of the town. Oh, the dreadful hand, always hanging there ready to catch up a little boy, who would come home to supper no more, whose porringer would be laid away empty henceforth, and his half-worn shoes wait until his smaller brother grew to fit them."

Much of the suffering of children from imaginary fears is absolutely needless. Many of the terrors could be evaporated by a little explanation, by a firm hand brushing away the cobwebs of childish ignorance. With nightly horrors and dread of darkness it is more difficult to deal; yet, let mothers, be they ever such sticklers for the observance of certain rules and regulations, be ready to break through them, to do anything to spare their little ones the agony of nocturnal fears. Go to your children, and if they are lying wakeful and feverish, perhaps with the perspiration of silently-borne terror damp on their head and hands, do not think it waste of time to stay beside their beds, or foolish indulgence to brighten their room with the blessed light. "Our children are healthy, and without a trace of such morbidness," you say; "such cases as those are rare." It is comfortable to take child-life in this taken-for-granted way; but I know that such cases do exist, and we who have care of young children do well to watch them and note any signs of the existence of such fears.

We must not wait for the little victims to complain. On no subject, unfortunately, are children more inclined to be reticent. It is an instinct with sensitive children "to make a *cache*, and bury therein their doubts, dreams, hopes, and terrors." Mrs. Jameson says of her sufferings from fear, "They were never revealed. I had heard children ridiculed for such fears, and I held my peace." From dread of banter, joke, and ridicule, children will bear in silence much that it would be inexpressibly helpful to talk about, and bear in company with another. Let us be very careful that by no careless word or thoughtless laugh we repress a childish confidence, and doom our child to bear alone a burden of imaginary fear.

ISABEL STUART ROBSON.

In the Anthropological Section of the British Association many interesting papers were read and discussed. Professor Macalister (President) gave a valuable address on Anthropology, in which he referred to the labours of George and Andrew Combe, whose home was in the city where the meetings were being held.

Notes and News of the Month.

DAILY phrenological examinations from 10 to 5, and in the evenings from 7.15 to 9.15.

From Punch to Padan Aram is the fanciful title of a quaint little volume by Alfred T. Story. It contains a dozen or more of papers on men and things, telling in felicitous fashion some of the thoughts that come to a rambling philosopher. Published by Elliot Stock.

WE have just received a copy of the second edition of *How to Improve the Memory*, by G. H. J. Dutton. It is a valuable little work, and we recommend it, as a preventive as well as a restorative of memory.

THE *Review of Reviews* contains this month its usual quota of readable matter.

OWING to the pressure of interesting scientific communications which have been given at the recent Congresses and Association Meetings, we propose in next month's issue to mention a number of anthropological investigations that have come before our notice.

IN the *Church Reformer* there appears a report of the recent gymnastic competition (by an expert) which explains the tendency of the School Board to lean towards the military teaching in preference to Swedish drill. We trust, after the excellent training of the Swedish teachers, the old, but less scientific method, will not be adopted, which S. D. Headlam hints is possible, for no system of gymnastics could be introduced which would be more conducive to the health of the children than that of Swedish drill.

THE *Phrenological Annual and Register*, for 1893, formerly edited by James Coates, of Glasgow, will form a Supplement to the December number of the *Phrenological Magazine*. The contents will be varied and interesting. A Phrenological and Scientific tale: Field Notes of What Phrenologists are Doing; the Register of Practical Phrenologists, Physiognomists, and Specialists; the Year's Work at the Fowler Institute, the British Phrenological Association, the American Institute, and the Tasmanian Phrenological Society; Special Articles by Rev. J. Parker, D.D., John Lobb, Editor of *Christian Age*, M.L.L.B., H. Snowden Ward, Editor of *Practical Photographer*, and Mrs. Charlotte Fowler Wells.

THE December number of the *Phrenological Magazine* will contain character sketches of leading scientists, authors, &c., and special articles by Nelson Sizer, of New York, N. Morgan, J. Webb, Mrs. Ormiston Chant, A. T. Story, and Bernard Hollander.

PRIZE OFFER (No. 1).—The one who obtains the largest number of subscribers for the *Phrenological Magazine* (over twenty-five) will be given a course of phrenological instruction at the Fowler Institute or by correspondence. Prize offer (No. 2).—A life membership will be given to the member of the Fowler Institute who gains ten new members by March, 1893. A Home Exerciser will be given to any member who gains five new members to the Fowler Institute by March, 1893.

SCIENTIFIC experiments now show that during profound sleep a noise not sufficient to awaken the sleeper produces a perceptible rise in the brain and head temperature.

To be perfectly proportioned a man should weigh twenty-eight pounds for every foot of his height.

Correspondence.

To the Editor of "THE PHRENOLOGICAL MAGAZINE."

SIR,—I have read with much interest the report of the proceedings of the British Medical Association, which was held in Nottingham, and especially the speech of the President. As Dr. White observed, "we have reason to be proud of and thankful for the recent achievements in surgery," but in expressing our gratitude let us be careful not to overlook the work of earlier physiologists and psychologists. In referring to the localization of brain function, the President stated, "About four years ago, after our last meeting in Nottingham, it was observed by Broca that in cases of paralysis, attended by loss of speech, this aphasia depended upon some lesion in a limited area of the brain surface about the third frontal convolution, and that, therefore, in this limited area was the seat of the 'faculty' of articulate language. This important revelation foreshadowed others of equal significance. *Up to that time the view held by physiologists was that all parts of the cerebral cortex had the same value, and this discovery of Broca was the first step towards the localization of its function.*"

Now, sir, it is the words of the President which I have italicised that I wish to call the attention of your readers as not being in accordance with facts. Dr. Gall, who was born at Triftenbrunn in 1757, and died in Paris in 1828, founded the system known as phrenology, the fundamental principles of which he declared to be—

1. That the brain is the organ of the mind.
2. That it consists of a congeries of organs or faculties.

The first proposition is now universally admitted. The second has been disputed until recently, when the experiments of Mr. Victor Horsley and Professor Ferrier have done much towards proving the truth of Dr. Gall's deductions. It is, therefore, unfair to that distinguished metaphysician to say that it is only 31 years since localization of function was discovered.

I am, sir, &c.,

G. H. J. DUTTON.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope, and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

MR. JOHN ALLEN has just held his tenth swimming contest in connection with his Kilgrimol school.

THE second of a series of lectures on Phrenology was given on Monday evening at the Congregational School-room, by Mr. Richards Gray, Ph. D. The lecture-room was well filled with an attentive audience. In a most clear and comprehensive manner, Mr. Gray expounded several phases of the question, and dealt at length on the necessity of parents and teachers generally studying the aptitude and inclination of their children and pupils by the aid of the science.—*The Folkestone Chronicle*, August 13th.

BRIDLINGTON QUAY.—Mr. Joseph Dyson, of Sheffield, has devoted a month to Phrenology at this interesting Yorkshire sea-side resort. During that time he has delivered fifteen lectures on “Systematic and Concomitant Phrenology,” in the United Methodist Free Church School-room, Promenade. The lectures have been illustrated by about 100 portraits of eminent persons. The audiences have been very select and appreciative.

PROGRESS OF PHRENOLOGY AT BOURNEMOUTH.—Alex. Davies, M.F.I., writes : Phrenology is gradually being adapted as the primary mortar by most of the public and private schools, both high and middle-class, in Bournemouth. Many of the principals of the more advanced educational establishments here have found their way to my consulting room with one or more of their pupils, and, considering the intelligent questions put to me during their interesting examinations, prove the latent power, and anxious spirit that must in the near future manifest itself, which is saying a great deal for the progress of the science.

MADAME PATENALL writes that she is leaving for America and wishes to dispose of her well-established business. Terms on application to 8, Trinity Street, Hastings, or the Office of the Magazine.

Book Notices.

Hygienic Treatment of Consumption (by M. L. Holbrook, M.D.)—This work is written on lines which bring it within the easy comprehension of all. Avoiding technicalities, it presents a great deal of valuable information in a very readable form. We welcome contributions of

this kind ; they are the means of spreading useful knowledge among the population at large, and of educating both patients and attendants to a fuller apprehension of their duties. Consumption, we are constantly told, is the scourge of our land, and yet many bright lives die out for want of a little education in these matters, on the part of mothers and parents generally. It is well to be forewarned, to know how to prevent the advance of this insidious disease by effectual measures in its early stages ; and if this book advances parental and popular education but one step upon this path, it will have justified its existence. There is no mention of medicine throughout its pages. Nature, we are told, will cure if we will but let her. Physical exercises, voice training, judicious selection of climate and house, diet and baths, combine to crowd out the mere physicing doctor. The pages on "Food and Drink" are interesting. Some wholesome advice is given, but we wish it could have been more truly hygienic. The author halts doubtfully at vegetarianism ; and although evidently inclined favourably towards it, hesitates to include it as an essential principle of his dietetic treatment. Endorsing as we do so much of his present production, we rather regret this hesitation on his part ; but Dr. Holbrook is progressive, and we may hope for a firmer recognition of the benefits of a pure diet as a preface to the next edition of the book. In the concluding chapters we have mentioned some of the advantages of psychic force upon the vitiated body. The student of psychology will not perhaps gain much ; but the introduction of will power and the influences of environment into a popular work of this kind, as a factor in the production of health, is decidedly a welcome innovation. We wish the book success on account of its many excellent features.

Everybody's Pocket Cyclopædia.—An enlarged edition of this work has just been issued, containing 226 pages of matter, including 16 coloured maps. Its aim is to give the busy person an opportunity of knowing something, more or less, of most subjects under the sun. It deals with facts of political economy, and dispenses physiological advice, while phrenology is discoursed on with as much ease, though not accuracy, as the early history of the human race. As far as phrenology is concerned, we must be thankful for small mercies. The writer of the article has not, evidently, bestowed too much attention on the subject, and the information he has to give is somewhat antiquated, without possessing the merit usually attaching to old age. He entirely ignores some half-a-dozen or so of the faculties, but we could bear this reduction of our mental powers calmly ; we are not roused to wrath even when we read that phrenology was "*invented* by Dr. Gall," but when we are told once more that "phrenology attempts to estimate the intellectual faculties and moral character of the individual by the magnitudes and forms of the several parts of the skull," without so much as a bare mention of "brain," we have a strong desire to debate the subject with him. The book will, undoubtedly, meet with a ready sale among certain classes of people, it is not intended for the student, and is on the whole fairly accurate. Its price is but 6d., and it is pub-

lished by Saxon and Co., 23, Bouverie Street, Fleet Street, E.C. While recommending it, we certainly do hope that, should another edition be required, the compiler will write to the office of this magazine for a somewhat more correct view of the science of phrenology.

The Employment Bureau.

[The Employment Bureau has been opened by the Fowler Institute to assist people who are seeking employment, and also to aid heads of firms to secure suitable employées. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.]

A FRENCH LADY of ability, who knows English well, desires re-engagements to teach her own language.

A WELL-EDUCATED RUSSIAN gentleman desires to be further employed in literary and secretarial work.

AN ARTIST is wanted who can make pen and ink sketches, and also reduce pictures to 2 × 3 in.

ANY firm who is seeking a capable reliable accountant, or a contractor desiring a practical man for making and giving estimates, can find one by applying at once to the secretary of the above Bureau, Imperial Buildings.

IF an elderly gentleman who is seeking a young gentleman companion ; or a hydropathic establishment that is looking for an assistant ; or a publishing firm in want of a sharp intelligent lad, will communicate with the secretary of the Employment Bureau, they will greatly oblige, and facilitate the usefulness of the above department.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving

a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

“A. R.” (Fife).—The photos of this child indicate a very favourable development of brain power, already there are strong indications of great activity of mind, and care must be taken to avoid overstrain of brain, special attention must be given to developing his body, so as to provide him with a good constitution and to give him vigour and strength to nourish his brain ; his mind must be held back rather than forced. The head is fully developed, and as a whole well rounded out. His character shews active signs of growth, he needs more persuasion and gentleness than authority in his management ; caution must be exercised in guiding him aright. He is rather self-willed, is quickly impressed, and very sensitive to blame or praise. If anything he is too thoughtful, and goes deeper into things than most children ; he is rather forward in understanding what he comes in contact with. There is every indication that he starts the race of life under very favourable conditions and should succeed (debarring accidents) in almost anything he is put to, for he has an available and versatile mind, he is most suited to a professor's chair, to literature, chemistry, or electricity.

“DAISY” (Aylesford).—The photo of this lady indicates a good vital organization ; she should be known for her ardent disposition, and her warm enthusiastic nature. She lives to enjoy, and gets as much out of life as is possible. She is decidedly social and affectionate, makes many friends, and sets considerable store by them. She is very shrewd in her remarks, and quick in forming her opinions on matters of principle. She has an intuitive mind, is quite impressible, and her convictions arise from her feelings, for she feels what she thinks, and has very strong opinions. Her discernment of human nature is a very strongly marked feature of her mind, and she should be a good reader of character. She knows how to get into sympathy with and understand people on first acquaintance ; all her mental estimates are very quickly formed, and can generally be relied on. She is very thorough in all she does, and has no half-and-half fads. She is prudent and careful, and all her actions show forethought and management ; she is an observer, and alive to all that is going on. She is neat and systematic, and has good judgment and a thoughtful, penetrative mind.

WHEN the British Association met at Cardiff last year it was decided that in 1893 it would be at Nottingham. At the present meeting Oxford has been decided upon for 1894. On the motion of Sir Wm. Turner, seconded by Sir George Stokes, Dr. Burdon Sanderson was chosen as President-elect for the Nottingham meeting next year.

THE
Phrenological Magazine.

OCTOBER, 1892.



(From Photo by Elliott and Fry.)

THE RIGHT HON. H. H. ASQUITH, Q.C., M.P.

THIS gentleman has a high degree of the mental temperament. His power is mental rather than physical, yet there is fair harmony between body and brain. He should be noted first for his activity, clearness, and promptness of action. He has great energy and force when it is called for. He is noted for capacity to acquire knowledge, turn off business with despatch, and to communicate what he knows to others. He is a man of method and system, hence makes less mistakes than many, and goes along more rapidly. All his perceptive powers are favourably developed, which introduces him to the external world, and renders him familiar with all kinds of work. He has a strong spirit to overcome obstacles, is rather combative and prepared to defend his position. His executive power is stronger than his prudential, hence he will need to learn prudence rather than to increase courage. Cautiousness may keep him out of danger, but cannot make a coward of him.

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He has strong interest in humanity, is keenly alive to the happiness of mankind, and would labour for the good of others with his whole heart and soul. He is a good judge of character and of truth. His power is intellectual rather than social. He may be interested in friends, but he does not seek society so much for social pleasure as many. Such a man is always busy, has something to do, does not hang around to idle away his time. As a speaker he will be forcible and to the point. His utterances will be clear and distinct. He appears to have a great amount of industry, without having a hard, cruel, censorious spirit. He can be sarcastic when he has a rude opponent. He could excel as a scientific man, or as a statesman; but he shows his character to the best advantage in speech and legislation. His intellectual powers show unusual discrimination, with coolness of judgment and ability to turn off business with unusual despatch.

Few Oxford men of the last decade have made a greater reputation there than Mr. H. H. Asquith, and his later work seems to justify the fine mental material he has to work with, and the excellent preparation he made. Hence it is no surprise for a phrenologist to find that at the bar and in politics he has exceeded the highest anticipations that his friends formed of him. He went to Balliol from the City of London School, took a first in Greats and the Craven Scholarship, and was elected to a fellowship at his college. The hard-headedness and hard work implied in these achievements soon gave him an excellent junior practice at the bar. He was junior to Sir Charles Russell in the Parnell case. It is said that his legal arguments often favourably impressed the judges, whilst his masterly cross-examinations have won for him many golden opinions. As a speaker, Mr. Asquith has shown the phrenological qualities that were so apparent in his University days. The budding orators of a later day were told by the more knowing that the lever of debate was no longer as it was "when Asquith was president." His speeches, both in Parliament, and on the platform, are proof of this. His passage of arms in the House with Sir Richard Webster over the forged letters was commented on as being "very effective." He is an advocate of what is called Home Rule on Federal lines, and he had the independence to pray for more "light." He is just in the prime of his life, being in his fortieth year.

L. N. FOWLER.

ANTHROPOLOGY.

BY ALEXANDER MACALISTER, M.D., F.R.S., PROFESSOR
OF ANATOMY IN THE UNIVERSITY OF CAMBRIDGE.

Paper read before the British Association.

ON an irregular and unfenced patch of waste land, situated on the outskirts of a small town in which I spent part of my boyhood, there stood a notice-board bearing the inscription "A Free Coup," which, when translated into the language of the Southron, conveyed the intimation, "rubbish may be shot here." This place, with its ragged mounds of unconsidered trifles, the refuse of the surrounding households, was the favourite playground of the children of the neighbourhood, who found a treasury of toys in the broken tiles and oyster-shells, the crockery and cabbage-stalks, which were liberally scattered around. Many a make-believe house and road, and even village, was constructed by these mimic builders out of this varied material, which their busy little feet had trodden down until its undulated surface assumed a fairly coherent consistence.

Passing by this place ten years later I found that its aspect had changed; terraces of small houses had sprung up, mushroom-like, on the unsavoury foundation of heterogeneous refuse. Still more recently I notice that these in their turn have been swept away, and now a large factory, wherein some of the most ingenious productions of human skill are constructed, occupies the site of the original waste.

This commonplace history is, in a sense, a parable in which is set forth the past, present, and possible future of that accumulation of lore in reference to humanity to which is given the name Anthropology; at first, nothing better than a heap of heterogeneous facts and fancies, the leavings of the historian, of the adventurer, of the missionary, it has been for long, and alas is still, the favourite playground of *dilettanti* of various degrees of seriousness. But upon this foundation there is rapidly rising a more comely superstructure, fairer to see than the original chaos, but still bearing marks of transitoriness and imperfection, and I dare hazard the prediction that this is destined in the course of time to give place to the more solid fabric of a real Science of Anthropology, in that we are honestly endeavouring to lay a definite and stable foundation, upon which in time to come a scientific anthropology may be based.

The materials with which we have to do are fully as varied as were those in my illustration, for we as anthropologists

take for our motto the sentiment of Chremes, so often quoted, *humani nihil a nobis alienum putamus*, and they are too often fully as fragmentary. The bones, weapons, and pottery which form our only sources of knowledge concerning prehistoric races of men, generally come to us as much altered from their original forms as are the rusty polyhedra which once were the receptacles for biscuits or sardines. The traditions, customs, and scraps of folk-lore which are treasures to the constructive anthropologist, are usually discovered as empty shells, in form as much altered from their original conditions as are those smooth fragments of hollow white cylinders which once held the delicate products of the factory of Keiller or Cairns.

I have said that anthropology has not yet made good its title to be ranked as an independent science. This is indicated by the difficulty of framing a definition at the same time comprehensive and distinctive. Mr. Galton characterises it as the study of what men are in body and mind, how they came to be what they are, and whither the race is tending; General Pitt-Rivers, as the science which ascertains the true causes for all the phenomena of human life. I shall not try to improve upon these definitions, although they both are manifestly defective. On the one side our subject is a branch of biology, but we are more than biologists compiling a monograph on the natural history of our species, as M. de Quatrefages would have it. Many of the problems with which we deal are common to us and to psychologists; others are common to us and to students of history, of sociology, of philology, and of religion; and, in addition, we have to treat of a large number of other matters, æsthetic, artistic, and technical, which it is difficult to range under any subordinate category.

In view of the encyclopædic range of knowledge necessary for the equipment of an accomplished anthropologist, it is little wonder that we should be, as we indeed are, little better than smatterers. Its many-sided affinities, its want of definite limitation, and the recent date of its admission to the position of an independent branch of knowledge, have hitherto caused anthropology to fare badly in our Universities. In this respect, however, we are improving, and now in the two great English Universities there are departments for the study of the natural history of man and of his works.

Out of the great assemblage of topics which come within our sphere, I can only select a few which seem at present to demand special consideration. The annual growth of our knowledge is chiefly in matters of detail which are dull to chronicle, and the past year has not been fertile in dis-

coveries bearing on those great questions which are of popular interest.

On the subject of the antiquity of man there are no fresh discoveries of serious importance to record. My esteemed predecessor at the Leeds meeting two years ago, after reviewing the evidence as to the earliest traces of humanity, concluded his survey with the judgment, "On the whole, therefore, it appears to me that the present verdict as to tertiary man must be in the form of 'Not Proven.'"

Neither has the past year's record shed new light on the darkness which enshrouds the origin of man. What the future may have in store for us, in the way of discovery, we cannot forecast; at present we have nothing but hypothesis, and we must still wait for further knowledge with the calmness of philosophic expectancy.

I may, however, in this connection refer to the singularly interesting observations of Dr. Louis Robinson on the prehensile power of the hands of children at birth, and to the graphic pictures with which he has illustrated his paper. Dr. Robinson has drawn, from the study of the one end of life, the same conclusion which Mr. Robert Louis Stevenson deduced from the study of his grandfather, that there still survive in the human structure and habit traces of our probably arboreal ancestry.

Turning from these unsolved riddles of the past to the survey of mankind as it appears to us in the present, we are confronted in that wide range of outlook with many problems well-nigh as difficult and obscure.

Mankind, whenever and however it may have originated, appears to us at present as an assemblage of tribes, each not necessarily homogeneous, as their component elements may be derived from diverse genealogical lines of descent. It is much to be regretted that there is not in our literature a more definite nomenclature for these divisions of mankind, and that such words as race, people, nationality, tribe, and type are often used indiscriminately as though they were synonyms.

In the great mass of knowledge with which we deal there are several collateral series of facts, the terminologies of which should be discriminated. In the first place there are those ethnic conditions existing now, or at any other point in time, whereby the individuals of mankind are grouped into categories of different comprehension, as *clans* or families, as *tribes* or groups of allied clans, and as *nations*, the inhabitants of restricted areas under one political organization. This side of our subject constitutes Ethnology.

In the second place, the individuals of mankind may be

regarded as the descendants of a limited number of original parents, and consequently each person has his place on the genealogical tree of humanity. As the successive branches became in their dispersion subjected to the influences of diverse environments, they have eventually differentiated in characteristics. To each of these subdivisions of the phylum thus differentiated the name "race" may appropriately be restricted, and the sum of the peculiarities of each race may be termed race-characters. This is the phylogenetic side of anthropology, and its nomenclature should be kept clearly separate from that of the ethnological side. The great and growing literature of anthropology consists largely of the records of attempts to discover and formulate these distinctive race-characters. Race and tribe may be terms of equal extension, but the standpoint from which these categories are viewed is essentially different in the two cases.

There is yet a third series of names in common use in Descriptive Anthropology. The languages in use among men are unfortunately numerous, and as the component individuals in each community usually speak a common language, the mistake is often made of confounding the tribal name with that of the tribal language. Sometimes these categories are co-extensive; but it is not always so, for it is a matter of history that communities have been led to adopt new languages from considerations quite independent of phylogenetic or ethnic conditions. These linguistic terms should not be confounded with the names in either of the other series, for, as my learned predecessor once said in a presidential address, it is as absurd to speak of an Aryan skull as it would be to say that a family spoke a brachycephalic language.

We have an excellent illustration of the confusion resulting from this disregard of precision in the case of the word Celtic, a term which has sometimes been employed as an ethnic, sometimes as a phylogenetic, and sometimes as a linguistic species. In the last-named sense, that to which I believe the use of the name should be restricted, it is the appropriate designation of a group of cognate languages spoken by peoples whose physical characters show that they are not the descendants of one common phylum in the near past. There are fair-haired, long-headed families in Scotland and Ireland; fair, broad-headed Bretons; dark-haired, round-headed Welshmen; and dark-haired, long-headed people in the outer Hebrides, McLeans, "Sancho Panza type"—men obviously of different races, who differ not only in colour, stature, and skull-form, but whose traditions also point to a composite descent, and yet all originally speaking a Celtic tongue. The

use of the word Celtic as if it were the name of a phylogenetic species has naturally led to hopeless confusion in the attempts to formulate race-characters for the Celtic skull—confusions of a kind which tend to bring physical anthropology into discredit. Thus Retzius characterises the Celtic crania as being dolichocephalic, and compares them with those of the modern Scandinavians. Sir Daniel Wilson considers the true Celtic type of skull as intermediate between the dolichocephali and the brachycephali; and Topinard figures as the typical Celtic skull that of an Auvergnat, extremely brachycephalic, with an index of 85!

Our traditional history tells that we, the Celtic-speaking races of Britain, are not of one common ancestry, but are the descendants of two distinct series of immigrants, a British and a Gaelic. Whatever may have been the origin of the former, we know that the latter are not homogeneous, but are the mixed descendants of the several Fomorian, Nemedian, Firbolg, Tuatha de Danaan, and Milesian immigrations, with which has been combined in later times a strong admixture of Scandinavian blood. It is now scarcely possible to ascertain to which of these component strains in our ancestry we owe the Celtic tongue which overmastered and supplanted the languages of the other tribes, but it is strictly in accordance with what we know of the history of mankind that this change should have taken place. We have instances in modern times of the adoption by conquered tribes of the language of a dominant invading people. For example, Mr. Hale has lately told us that the speech of the Hûpas has superseded the languages of those Californian Indians whom they have subdued. In like manner, nearer home, the English language is slowly but surely supplanting the Celtic tongues themselves.

But we want more than a perfect nomenclature to bring anthropology into range with the true sciences. We need a broader basis of ascertained fact for inductive reasoning in almost all parts of our subject; we want men trained in exact method who will work patiently at the accumulation, verification, and sorting of facts, and who will not prematurely rush into theory.

The present position of our subject is critical and peculiar; while on the one hand the facilities for anthropological research are daily growing greater, yet in some directions the material is diminishing in quantity and accessibility. We are accumulating in our museums treasures both of the structure and the works of man, classified according to his distribution in time and space; but at the same time some of the most interesting tribes have vanished, and others are rapidly disap-

pearing or becoming fused with their neighbours. As these pass out of existence we, with them, have lost their thoughts, their tongues, and their traditions ; for even when they survive, blended with other races, that which was a religion has become a fragmentary superstition, then a nursery tale or a child's game, and is destined finally to be buried in oblivion. The unifying influences of commerce, aided by steam and electricity, are effectually effacing the landmarks between people and people, so that if we are to preserve in a form fit for future use the shreds which remain of the myths, folk-lore, and linguistic usages of many of the tribes of humanity, we must be up and doing without delay. It is on this account that systematic research such as that which Mr. Risley has advocated with regard to the different races of India is of such pressing and urgent importance. It is for this reason likewise that we hail with pleasure the gathering of folk-lore while yet it survives, and welcome such societies for the purpose as the Folk-lore Congress recently inaugurated.

I have said that in the department of Physical Anthropology our facilities for research are increasing. The newly-founded anthropometric laboratories are beginning to bring forth results in the form of carefully compiled statistical tables, embodying the fruits of accurate observations, which are useful as far as they go. Were these extended in their scope the same machinery might easily gather particulars as to the physical characters of the inhabitants of different districts, which would enable the anthropologist to complete in a systematic manner the work which Dr. Beddoe has so well begun. I would commend this work to the consideration of the provincial university colleges, especially those in outlying districts.

Of all the parts of the human frame, the skull is that upon which anthropologists have in the past expended the most of their time and thought. We have now, in Great Britain alone, at least four collections of skulls, each of which includes more than a thousand specimens, and in the other great national and university museums of Europe there are large collections available for study and comparison.

Despite all the labour that has been bestowed on the subject, craniometric literature is at present as unsatisfactory as it is dull. Hitherto observations have been concentrated on cranial measurements as methods for the discrimination of the skulls of different races. Scores of lines, arcs, chords, and indexes have been devised for this purpose, and the diagnosis of skulls has been attempted by a process as mechanical as that whereby we identify certain issues of postage-stamps by counting the nicks in the margin. But

there is underlying all these no unifying hypothesis, so that when we, in our sesquipedalian jargon, describe an Australian skull as microcephalic, phænozygous, tapeino-dolichocephalic, prognathic, platyrrhine, hypselopalatine, leptostaphyline, dolichuranic, chamæprosopic, and microseme, we are no nearer to the formulation of any philosophic concept of the general principles which have led to the assumption of these characters by the cranium in question, and we are forced to echo the apostrophe of Von Török, "Vanity, thy name is Craniology."

It was perhaps needful in the early days of the subject that it should pass through the merely descriptive stage; but the time has come when we should seek for something better, when we should regard the skull not as a whole complete in itself, nor as a crystalline geometrical solid, nor as an invariable structure, but as a marvellously plastic part of the human frame, whose form depends on the co-operation of influences, the respective shares of which in moulding the head are capable of qualitative if not of quantitative analysis. Could measurements be devised which would indicate the nature and amounts of these several influences, then, indeed, would craniometry pass from its present empirical condition and become a genuine scientific method. We are yet far from the prospect of such an ideal system, and all practical men will realise the immense, but not insuperable, difficulties in the way of its formulation.

In illustration of the profound complexity of the problem which the craniologist has to face, I would ask your indulgence while I set out a few details to show the several factors whose influence should be numerically indicated by such a mode of measurement.

The parts composing the skull may be resolved into four sets: there is, first, the brain-case; secondly, the parts which subserve mastication and the preparation of the food for digestion; thirdly, the cavities containing the organs of the senses of hearing, sight, and smell; and, fourthly, those connected with the production of articulate speech. If our measurements are to mean anything, they should give us a series of definite numbers indicating the forms, modifications, and relative size of these parts, and their settings with regard to each other and to the rest of the body.

To take the last point first, it needs but a small consideration to show that the parts of the skull are arranged above and below a certain horizontal plane, which is definite (although not easily ascertained) in every skull, human or animal. This is the plane of vision. The familiar lines of Ovid—

Pronaque cum spectent animalia cetera terram,
 Os homini sublime dedit ; cœlumque tueri
 Jussit, et erectos ad sidera tollere vultus—

are anatomically untrue, for the normal quadruped and man alike, in their most natural position, have their axes of vision directed to the horizon. Systems of measurement based upon any plane other than this are essentially artificial. There are at the outset difficulties in marking the plane accurately on the skull, and it is to be deplored that the anthropologists of different nations should have allowed themselves to be affected by extraneous influences, which have hindered their unanimous agreement upon some one definite horizontal plane in craniometry.

The Frankfort plane drawn through the upper margins of the auditory foramina and the lowest points of the orbital borders has the advantage of being easily traced, and differs so little from the plane of vision that we may without substantial error adopt it.

The largest part of the skull is that which is at once the receptacle and the protector of the brain, a part which, when unmodified by external pressure, premature synostosis, or other adventitious conditions, owes its form to that of the cerebral hemispheres which it contains. *Speaking in this city of George and Andrew Combe*, I need not do more than indicate in this matter that observation and experiment have established on a firm basis certain fundamental points regarding the growth of the brain. The study of its development shows that the convolutioning of the cerebral hemisphere is primarily due to the connexion, and different rate of growth, of the superficial layer of cells with the underlying layers of white nerve fibres ; and that so far from the shape being seriously modified by the constraining influence of the surrounding embryonic skull, the form of the soft membranous brain-case is primarily moulded upon the brain within it, whose shape it may however be, to some extent, a secondary agent in modifying in later growth. We have also learned that, although in another sense from that of the crude* phrenology of Aristotle, Porta, or Gall, the cerebrum is not a single organ acting as a functional unit, but consists of parts, each of which has its specific province ; that the increase in the number of cells in any area is correlated with an increase in the size and complexity of pattern of the convolutions of

* Instead of being "crude," we consider the works of Gall to have been too comprehensive and exhaustive to be readily accepted by anatomists of his day.—
 ED. P.M.

that area ; and that this in turn influences the shape of the enclosing shell of membrane and subsequently of bone.

The anatomist and the physiologist have worked hand in hand in the delimitation of these several functional areas, and pathology and surgery have confirmed what experimental physiology has taught. The topography of each part of the cerebrum, so important to the operating surgeon, should be pressed into the service of the anthropologist, whose measurements of the brain-case should have definite relation to these several areas.

(To be continued in our next.)

MEN AND WOMEN OF OUR TIMES.

SIR CHARLES RUSSELL, Q.C. (Attorney-General).—This gentleman has a mind that moves comparatively slowly and regularly. He is not so brilliant as he is sound and sensible. He will do as a lawyer and succeed in keeping others on the



SIR CHARLES RUSSELL, Q.C.

track. He does not need other people to regulate him, but he is the regulator of others. What he says is remembered and put into practice by others. He is not so copious a speaker, but is characterized for intelligence, sound judgment, power to think before he speaks, and when fairly awakened to a subject he is eloquent, and specially given to fun and wit, but he says things in so sensible a manner as to arrest attention and please his audience. He is a man of method ; his work is arranged beforehand. He thinks more of telling the truth than simply entertaining company by pleasing them. His is not the head

that indicates a character like Sheridan's. He would be better fitted to be a judge than anything else.

Sir Charles Russell, Q.C., is an Irishman, and one of our most distinguished living English barristers. He is a nephew of the late Dr. Russell, President of Maynooth College, of whom Cardinal Newman speaks, in his "Apologia," as the "dear friend to whom, under heaven, I am indebted for my conversion." He was born in 1833, in County Down, and was educated at Trinity College, Dublin, and sat for Dundalk in the 1880 Parliament. He was called to the bar, Lincoln's Inn, in 1859, and is so well-known in his public work to need no further detail here. He has figured in nearly every cause *célèbre* since "Saurin *v.* Starr." His conduct of the Irish case before the Special Commission was masterly, and ensured him a place on the illustrious roll of "Advocates for Liberty." He can do with a remarkably small amount of sleep. His forensic power in the House of Commons is remarkable. He has made more political speeches during the last year than any other man in the same space of time.

LORD HOUGHTON, (Lord Lieutenant of Ireland).—This gentleman has a very strong hold on life. He comes from a



LORD HOUGHTON, *Lord Lieutenant of Ireland.*

stock not easily exhausted. The ears are located low in the head, which indicates strength and power to resist disease, and will enable him to live to be old. He will be able to hold his own because he has more health and

power to labour than the majority of men. Everything indicates that nature works easily, and that he has had but little trouble all through his life with reference to his health ; he is compactly constructed, and that means a great deal. He has harmony of mind. He works, thinks, and lives with comparatively little chafing. His head, face, and body appear to be harmoniously developed. He enjoys all kinds of mental and physical exercise, hence he can lift longer, and work harder with his brain and feel less exhaustion of vitality than most. Compare him with any number of men, and they will not show the perfect clearness, distinctness, and harmony of organization that he does, and his mind is open and free. He has good powers of conversation, and knows how to speak his mind freely. He does not chafe at anything, but lives as he goes along and enjoys all he can. His organization is favourable for a speaker ; he has good powers to illustrate his ideas. He is quite intuitive, has strong imagination and a decidedly strong will. He may, or may not, be specially religious in the ordinary sense of the term, but is not wanting in moral power, and is quite capable of exerting a strong moral influence over men.

MR. P. MACDERMOT, Q.C. (Attorney General for Ireland).
—This gentleman has an organization which indicates a very



MR. P. MACDERMOT, Q.C., *Attorney General for Ireland.*

high degree of nervous susceptibility. He is very intense in all his mental operations. He throws his whole soul and body into everything he does, and may overdo at times in order to gain his end. He is a hard opponent to conquer. He is on the look out, and is a guarded man, rather secretive and wary

in his movements. He is not hopeful in what he is going to say and do, in other words he does not commit himself. He has more than ordinary ability in various ways, but the leading feature of his character is energy, force, spirit, resolution; the next is tact, management, and power to get the advantage of circumstances. He has more of a business and executive cast of mind than he has one to philosophize, and men come more to him for advice than for sympathy. He is most thoroughly a worldly man, or takes worldly views of subjects. He knows how to take care of property. He would make a good financier. He does not commit himself easily. He would do better for a statesman or lawyer than for a preacher or teacher. He is not content to use only forcible language, but has to use that which is extravagant. His mind covers a great deal of ground.

Mr. MacDermot is an Irishman, was born in 1859, and educated at Deroober School, Co. Galway. He took an active part in the fight against Lord Clanricarde.

ORION.

HOW ARE GREAT MEN MADE OR DEVELOPED?

BY L. N. FOWLER.

PHRENOLOGY teaches us in the broadest terms to define the greatness of mind over matter, and with its aid we are able to account for many of the inconsistencies of so-called great men and women.

Phrenology is as necessary an aid in understanding the mind as the compass is to the mariner, or the lighthouse is to the captain, or the safety-lamp is to the miner.

Genius is a puzzle to most people, so is greatness of character. The chemist, the zoologist, the biologist, and the anatomist, cannot, by themselves, explain the reason why one man is great in one thing and another is great in many; why one is clever in one kind of work, and another is a universal genius. But a phrenologist ought to be a chemist, zoologist, biologist, and anatomist combined, and when this is the case he can trace the cause and effect, the fundamental principles on which character is based, and account for the results produced in the lives of men, as no other art, science, or boasted philosophy has been able to predict or find out.

A definition of greatness to suit all conditions of so large a term must be broad enough to include those who are great in body, great in mind, great in spirit, great in discipline. Great

men are not born great, but are developed into greatness in various ways and from different causes by discipline and the use of their powers. Few are equally great in every way; many are great in certain ways. Many have the qualities to be great, but have not the opportunities to develop their powers nor the scope to act.

There are as many and probably more immatured great men who possess the elements of greatness, as there are those who have matured into greatness.

When peace prevails and all are well off, and there is no special enterprise on hand, there are not many great men in such a community. Let there be a war or a great political occasion for effort, or a great trouble or enterprise on hand, and men who were not known to be great before then prove themselves to be so.

Man proves his greatness by the abilities shown in the labours he has to perform in order to accomplish a given end.

Birth and parentage give qualities and advantages, but not discipline and education. Very few are so gifted as to excel without special education. Many with a good education make but little headway afterwards. A man is made when he makes himself.

There is not a greater variety of any created species to be found on earth than man. And yet one man represents the whole race in make, shape, organs, functions, mental faculties, origin, and destiny, as well as design in creation and authorship.

Dr. Schlieman, by his great industry, energy, and perseverance, and by following up his strong impulses, brought to view Old Troy and many of its treasures, and thus gave us an insight into its state of civilization. He also discovered the tomb of the renowned King Agamemnon, with all the treasures that were buried with him, thus throwing much light on history.

The greatest men of this world have not been its greatest scholars. Men have ruled well who have had limited book knowledge, and were born in the back woods. Education helps one to write a biography, but a strong mind well drilled in hard work and the school of adversity gives a man a biography worth writing.

For worldly success a trained mind in business is of more importance than one well schooled in book learning. Very learned men are as dependent on others in some things as are ignorant men. More experience and less learning is more valuable than more learning and less experience. Men of great genius often fail for the want of practical knowledge,

which results in common sense, and that is as important as any other sense. It is action and contact with other people that give common sense. It is unfortunate to be educated at the expense of action and experience, or contact with society.

A practical pilot will get a ship out and into the harbour better than a professional astronomer. A practical miner will do better than a theoretical mineralogist. Stanley, on the spot, knew the geography of a part of Africa better than the wise geographical students of London.

A high brain gives high thoughts and aspirations, and if heeded will lead to a high spiritual life.

Each one must take note of his organization, and especially of his brain, and compare it with his tone of mind. See where he is in the scale. Some die as low as they were born.

General Steedman, who served under the late General Thomas, said in his eulogy of him, that he was the most modest man he ever saw; also prudent, reserved, wise in council, careful in all the details in preparing for a battle. But once in the fight he was as furious as General Jackson. He lacked nothing to make a well-balanced man. No man ever imparted so much enthusiasm to his troops, and he never had a commander who could hurl at an enemy the entire force of his army with such violence as General Thomas. He was a model man in body, mind, and behaviour. Men who have not the elements of greatness or varied genius in them do not feel force of the situation, or see the opportunity or the way to relieve themselves or the country of a difficulty.

A man with limited abilities can go to the bank and settle a bill, and take up the note if he has the money in his pocket, but could not get the money.

Some men are more perfect mediums or recipients of foreign influences than others. Some are like sponges, easy to receive and easy to give. Others are like a porous stone that easily receives, but any amount of squeezing will not get a drop out. Some are like cork, always on the surface receiving and giving nothing, yet light and pliable. Others are like lead, that are heavy and solid, but are repulsive and found at the bottom. Some who are truly great and do the service do not get the credit of it till they are dead. Others walk in the shadow of greatness, and get the credit of being great.

John Bright was one of the first orators in England at one time, because he studied night and day. Rev. Ed. Pain brought God and heaven so near by his prayers that the place he spoke in felt sacred and holy. Washington always com-

manded respect because he never trifled. Raamses II., better known as Miamin, was a great man in whose reign Moses was born ; he started on a journey of general conquest in the North and East. His army consisted of 600,000 foot soldiers, 24,000 horse soldiers, 27,000 chariots of war ; 400 sail in his fleet. He made great preparation before he left.

Within a few months of each other three remarkable inventions and discoveries were made. The reduction of the telephone to practical use on the telegraph lines. The discovery of the phonograph. The liquidation of hydrogen and oxygen gases. Edison is a great man, of a pale, studious physiognomy, and clear blue eyes, dreamy aspect and chestnut locks ; although very deaf, yet he is the inventor of the telephone, and has not yet heard distinctly the voice of his invention. His phonograph is his 158th important patent taken out. The greatest man of his day was John Milton. He was the first scholar of his time, he was the first theologian of his time, he was the first statesman of his time, he was the first poet of his time.

Human nature was created as low in the scale as it was possible, to be human. While life has sprung from the arboreal man and continued to ascend through the reptilian man, the amphibian man, the ascidian man, the prevertebrate man, the unicellular man, the inorganic man. But as man is made up of wants, he therefore cannot remain low, but must get up to the astral plane, and look off into his higher possibilities.

George Dawson, John Bright, Ernest Jones, Disraeli, Earl Derby, Cobden, were all great men who have worked themselves up by studious habits and great perseverance. Some people are great in size only. There were five women in one ward in Easton Pa weighing 1,560 lbs. Four brothers and three sisters in Salem weighed all together 1,500 lbs., averaging $214\frac{1}{2}$ lbs. each. One of the largest women in America weighs 420 lbs. One of the greatest women in America weighs 75 lbs. Two acorns may be equally good, but one is put into poor soil in an earthen pot by the door, the other is dropped into native rich soil in the open field and in time becomes a great oak, while the other cannot be more than a bush. Two colts may appear equally strong, but if one is fed on poor, insufficient food continually, the other on good, the result in a few years' time will be very different.

William Cullen Bryant was great in many ways. His moral brain had the ascendancy. Free thought gives truth. Free thought gives wealth. Free thought will multiply more important inventions, do away with the slavery of fashion,

and take off many fetters from human thought and conscience.

It was the two dreams of Joseph that were the cause of his being sold into Egypt. It was the interpretation of the two dreams, of the butler and baker, that brought him before King Pharaoh, and it was his interpretation of his two dreams, of plenty and famine, that led Pharaoh to exalt him.

It was a gentle tap on the shoulder, with a kind invitation to attend a temperance meeting, that led Gough to go and sign the pledge. It was a drunken frolic, and almost a murder, that arrested the attention of Murphy, and he signed the pledge, and went to lecturing on Temperance, and closed the drinking saloon. It was the kindness of the keeper of the prison at Wakefield that led Fidler Josh to think of his past life—repent, and reform, and do a vast amount of good. It was Leo X.'s great want of money to finish St. Peter's, that led him to grant indulgencies, and give Tetsel the power to sell them without stint, that awoke the moral energy of Luther, which was the commencement of the Reformation.

PHYSICAL DEVIATIONS FROM THE NORMAL AMONG CHILDREN.

DR. FRANCIS WARNER recently made some "Observations as to the Physical Deviations from the Normal as seen among 50,000 Children." Taking all cases of deviation from normal development, the percentage on the 50,000 children was for boys 13.4, for girls 9.6. It was noteworthy that the distribution of these cases in certain districts appeared to vary much; their relative percentage frequency was for English children 10.8, Irish 19.9, Jew 7.5; among the upper social class 11.5, falling to 10.2 among poorer children. Among these "development cases" the power of resistance was low, many becoming thin with disordered nerve-system. Of the 50,000 children 7.3 per cent. were reported by teachers as dull; and of the 5851 "development cases," 40 per cent. were dull at lessons. The most important defects were found to be those of the cranium as indicated by the proportion among them delicate, dull, and with nerve disorder or weakness; many of these cases were doubtless due to rickets. Small heads were specially common among girls, the only defect to which they seemed specially liable. The palate came next in frequency and importance. The import of defects of internal ear and

other parts was shown. It was seen that all forms of defectiveness in development of visible parts of the body had a significance ; they were commoner among boys than girls, but deviations from the normal development were accompanied by more weakness of constitutional power among girls. The greatest amount of defectiveness did not occur in the poorer districts. In the wealthier districts of London $12\frac{1}{2}$ per cent. showed deficiency, while in the poor districts only 7 per cent. showed defects. They did not know the cause, but something was causing a greater proportion of ill-development among children of the upper classes than among the poorer classes. The conditions of defective development had points of social importance. They were less common in the average day school, they became more common in the resident institutions, more common still in the poor-law schools, and most common in certified industrial schools of the criminal classes. Low class development tended to feebleness of mind and body and strength, and tended towards criminality if not protected. All defects of the nerve system were increased by taking children from the home and putting them into institutions, and to the extent of 2 per cent. they grew duller. Defectiveness of nerve system, when it possibly could be dealt with by the day-school system, was more effectively dealt with than when the child was taken away from the world and put into an institution. What was wanted was to get some real idea of the conditions of the child material. A great deal was said about what should be done for the children, but at the same time very little trouble had been taken to ascertain the actual conditions of childhood, which they were trying to alter and improve by matters educational.*

Hygienic and Home Department.

DIET IN RELATION TO HEALTH AND DISEASE.

BY ELLEN LOUISA HART.

THE doctrine has been already formulated that "by physical reformation alone mankind can be chiefly benefited;" in a temporal sense this is very true, for even a superficial observation reveals the existence of a need for a clearer conception of

* There is a great deal of practical truth in what Dr. Warner says regarding the health of the children of the poor and the rich ; and the facts appeal to common sense that the loss of many of the so-called advantages of the rich which are coveted by those who are deprived of them is nevertheless made up by superior health results.—ED. P.M.

the laws that govern the physical, mental, and moral health of the body, obedience to which would conduce to the wealth and prosperity of the nation through the individual well-being of each member of society.

“We can serve man,” says the late J. Cotter Morison, “firstly, and perhaps chiefly, by improving ourselves, and that physically, mentally, morally; without a high standard of health, duties become difficult or impossible to perform.” And we are assured further, “that a vigorous old age is able to accomplish out of all proportion more than several careers, however brilliant, cut short in youth.

The Total Abstinence Movement, a grand and noble work, has given overwhelming proof that in the young lies our main hope for the future betterment of the world. The confirmed dyspeptic, like the confirmed drunkard, will seldom change his mode of life, however fair the prospect of ultimate good. The habits that were first like cobwebs have become cables, and so we must turn to those whose palates are untainted and whose minds are receptive and open to reason and right guidance. We have societies for the study of disease, medical schools, hospitals and dispensaries, where sorrowful lessons are hourly presented to the thoughtful student of human nature, and over the portals of some of these abodes of pain is written that saddest of all sad sentences, “No hope!”

“Prevention is better than cure.” It is a well-worn saying, but it will bear repetition, for often prevention is the only cure. And surely it is a noble aim to teach mankind how to prevent and anticipate disease, so far as humanly possible, to study nature’s laws, and live according to them, thus rendering their bodies proof against the insidious seeds of premature decay and death.

Much good work has been done, and continues to be accomplished, and the signs of the times undoubtedly point to the fact that the public are slowly being awakened to some sense of their responsibilities in matters of health and diet.

The Vegetarian Society has done much towards bringing before the thinking public the advantages of a return to a simple and more healthy dietary, and the practical illustrations in the form of vegetarian restaurants are a great boon.

We advocate the total abolition of white flour foods and the extension of the knowledge that the whole grain of wheat should in one form or another be the staple dietary of the people.

“Absurd!” “Quixotic!” “Impossible!” some will exclaim, and declare that the use of white flour can never be abolished,

and that white bread has too long held sway ever to be ousted from the English table. To puny comprehensions indeed it may seem long since bread made of the flour of wheat came into vogue, but evils ere this have been remedied after existing twenty times as many years. And would you urge the venerableness of age in its favour? That was the argument used by the supporters of the slave trade, and that called such burning sarcasm to the lips of George Channing.

Ah, no, your strongest arguments are weak when pitted against the facts we can adduce. Look at the condition to which the youth of our great cities are reduced. Stunted, emaciated, demoralised, life drags itself wearily out, in many cases giving up the attempt at the outset—in nearly all prematurely. Laughter-loving childhood, of which the poets have delighted to sing, seems to have fled the earth. How seldom we see the old age “frosty but kindly,” of which Shakespeare speaks. Even manhood has lost much of the charm that in olden times hung around its possession. And womanhood? There are women, “or what had been those gracious things,” who, by their evil habits, bring contempt upon the sacred attributes of their sex. Many have been taught to regard the drinking and smoking habits of the people the cause of this degeneracy, and though their existence is a terrible fact, those who look deeper recognise that they are but the natural outcome of a still greater evil.

We prove that the use of white flour is one of the most direct causes of the decreased moral power and lowered vitality amongst all classes, that for want of the proper elements in the food we eat, our bodies are imperfectly nourished, and the wheels of life are unable to perform their allotted tasks with the ease and regularity necessary for the maintenance of perfect health and vigour.

The “Blue Book for 1878” contains this remarkable paragraph, viz.: “It should be more generally known that bad, indigestible bread, devoid of flavour and nutriment, begets a craving for alcohol.” And we contend that until it is known and generally accepted as a fact that all white bread is bad and indigestible, and most utterly devoid of flavour or nutriment, efforts for reforming the condition of mankind must fall short of complete success.

We must strike at the roots of the diseases that afflict society before any effectual remedy can be applied. A physical religion for the preservation of the body is as necessary as a spiritual religion for the salvation of the soul; if our bodies are to be the “temples of the living God,” they

must be as free from all taint of disease as it is in our power to keep them, and we are mainly responsible to ourselves, besides being our brother's keeper, in this respect as in others.

To a large extent it is somebody's fault every one is not healthy, and instead of looking upon disease and premature death as dispensations of a Divine Providence, we should remember they are often the result of disobedience to natural laws. Christ, before He said "Go in peace," laid His hands upon the people and healed their bodies, and it is useless to teach in the churches and Sunday schools the lessons of love and peace and joy, whilst the people are suffering the ills to which flesh is erroneously supposed to be heir.

It was never intended our inheritance should be other than the blessings of health and vigour. Though the gospel of health is not yet preached from the pulpit, the time will come when it will be recognised as part of a true minister's curriculum. That hydra-headed monster, Intemperance, will never be successfully combated until it is recognised that the use of white flour is its primary cause and most active agent; its use has been truly characterised as "one of England's greatest misfortunes," and "a standing disgrace to our civilization." Most assuredly smoking and drinking, with all their attendant ills, will continue to curse our land while white bread remains the staple article of diet.

Nature, who is absolutely unerring, has given us the very food best suited for the requirements of the body. First amongst her gifts are the golden grains; they contain, in great abundance and exact proportions, those substances in organic combination that are needed to supply the wastes and build up the tissues of the human frame.

Year by year the earth yields the beautiful wheaten grain, the Queen of Cereals, designed by an all-wise Creator to be the perfect food for man. The human body is known to be composed of some fifteen elements (as shown by chemical analysis), all of which are found in common wheat. Not "only was man made upright," but the very food containing all that is needed for his perfect health and development was given. Truly "he hath sought out many inventions." For this same wheat is largely stripped of its nutritive qualities, mutilated by an intricate system of bolting, dressing, and sifting, whereby the principal part of the grain is removed as unfit for human food, and the inner portion only retained.

We deliberately take away in a large degree certainly no less than twelve of the fifteen elements, and reduce the remainder to a white starchy substance containing only three

of the ultimate elements, carbon, oxygen, and hydrogen. Nor is this all. The bakers once more subject it to a process of adulteration, mixing chemicals and other foreign ingredients, and fermenting the whole. Thus bread which, as our staple food, should be the most complete and perfect, is rendered an impoverished, deteriorated, and unwholesome article.

Dogs fed solely upon it, as practically demonstrated by Dr. Majendie, died in 40 days. How can men and women expect to enjoy a healthy condition of body, or their lives to extend to the appointed span ; or how can we hope to rear children with strong bones, teeth, hair, eyes, and nerves, when the rich supplies of silica, sodium, sulphur, phosphorus, calcium, nitrogen, and other elements necessary for their formation and proper development are almost entirely excluded from their diet ?

In children every tissue and organ is growing and increasing in strength, every element which belongs to those tissues and organs should be contained in the food they eat and in their normal proportions. Feeling in some sort of way conscious of the need of more health-giving products, the self-defrauded public attempt to supplement their loss in a foolish and well-nigh useless fashion, swallowing certain substances that are little less than proximate principles or elements derived from the foods proper. Hence we have gluten and germ breads, besides a host of so-called food preparations, many of which are positively hurtful, but none able to take the place of the food itself.

Some persons resort to drugs and patent medicines. There is quite an army of advertisers, with their chemical foods, blood mixtures, and other concoctions wherewith to satisfy the fashionable taste and be in seeming accord with the old time custom of "taking something."

The late R. T. Trall, M.D., of America, has said, and his remarks are especially appropriate here, "That those who would prepare healthful food, and those who desire to 'eat to live' should ever bear in mind that no one of the alimentary principles is capable in itself of properly nourishing the body, none of them in the proper sense is food, but merely a constituent part of food, hence the futility of all the multitudinous experiments for feeding human beings on a constituent part of an aliment, instead of on the aliment itself. Such experiments only show the physiological ignorance of the experimenters."

In their eagerness to pander to a depraved taste, and still further, what may be, in their opinion, the principles of food reform, it will be seen many have fallen into error, and reference may be made in this connection to the formation of

a company which all true friends of food reform view with regret, for it seeks to introduce a bread into general use which supplies only certain constituents of the wheat instead of the wheat itself. The promoters advertise in order to gain credence for their experiment and the support of an awakened though not fully enlightened public, that white bread starves the frame." This is very true, but, on the other hand, they say, "whole-meal bread is indigestible." This is untrue and most misleading. There are, undoubtedly, persons who will tell you that brown bread disagrees with them; the fault lies in themselves. As already stated, there is nothing better adapted to the needs of the body, than the wheaten grain, and those who call it indigestible are mainly those whose digestive organs have been weakened and practically ruined by years of improper diet.

It is to be deplored that of late years there has been no standard of excellence whereby to test the various preparations sold as "whole meal."

Those who have felt persuaded of the ill effects of white flour foods have been at a disadvantage in consequence of the many varieties and qualities of the meal advertised, and have often been disgusted with the inferiority, and sometimes spurious, nature of what is sold.

Brown or whole-meal bread has also fallen in disrepute with some, by reason of the want of uniformity in its manufacture. What is wanted is a wholesome, healthful, nourishing, universal wheat bread made of the whole grain, and containing every one of the fifteen elements in their normal proportions reduced to an evenness of condition most favourable to digestion and assimilation.

Whole-meal proper has not had a fair chance. Comparatively few persons have any conception of the immense advantage gained by substituting it in every instance where white flour is used; it soon becomes a necessity by reason of its satisfactory results, and creates a positive antipathy to any other mode.

It has been stated by an American writer that "The human animal in the present day is drenched with starch and destroyed by it; that the mills which are now engaged in pulverising wheat, and sifting from it its most valuable constituents, ought to be classed with the distilleries of the land as shorteners of human life, and that the extermination of the one is not more to be desired than the annihilation of the other." This is strong language, but nevertheless true. Our war is not with men, but with false dogmas and principles, which are none the less false because supported by the custom and public opinion of the day.

Our endeavour is to combat the errors and falsities that have crept into our system of everyday life and practice ; to set before all, as far as possible, those laws of right living that have been written across the broad face of nature since time began ; to remove, in some degree, the burdens under which humanity labours ; to remedy, in some measure, the fearful evils which mar our country's fame, so that instead of being the manufacturers of our own misery, we may be, from a physical standpoint at least, equipped for life's battles and fight them bravely, believing that right results must ever spring from right doing, and that it behoves all true men and women to live up to the highest point of perfectibility of which they are capable.

In other words, to accept as their motto the inspiration contained in the lines—

“Think truly, and thy thoughts shall the world's famine feed ;
 Speak truly, and each word of thine shall be a fruitful seed ;
 Live truly, and thy life shall be a great and noble creed.”

BRAIN WORK HEALTHFUL.—Brain work is needful if one would be healthful. Activity is necessary to health, but it must be in accordance with the laws of health. The twenty-horse engine must not be run with twenty-five horse-power. Over-pressure, undue anxiety, violent passion, worry, without needful rest and fresh air, always mean a premature wearing out of the machine. A brain, under such disadvantages, will not live out half its days. To appreciate our danger in this respect, let us look at our school studies. In some of the more advanced classes we find that from fifteen to eighteen studies are required in five days of every week, not to speak of Sunday schools. Take school hours, and add to them, say, two hours of evening or morning study, and we have for close mental application as many hours as are needed to do the daily work of a robust adult mechanic. To state this is to show the folly of our system of education, when exercised on the young and tender brains of the coming race. The disgust for studies in adult years arises largely from our school work being forced upon us in nauseating doses, and also the choice of such as is uncongenial to our taste. Were I to formulate the prominent natural features of the mind which need education, I should say : Quality (tone), quantity (power), tension (endurance), variety (scope), control (habit). These are given to us as legacy, and to no two alike ; but proper training increases them to a wonderful degree, if guided with wisdom and discretion.—
 DR. DANIEL CLARK, in *Herald of Health*.

LESS MEDICINE, MORE EXERCISE.—It is remarkable how people welcome any medicine that promises great cures. Even though they may not need it, they take the keenest pleasure in its discovery, and, if their imaginations are abnormally active they easily persuade themselves, that a dose or two would do them good. It is an age of medicine, an

era of prescriptions, a season of individual experiments. The general craze of cures of ills real, and ills imagined, supports a dozen drug stores where one formerly struggled, builds up enormous fortunes for patent medicine proprietors, and makes millions of invalids out of people who ought to be healthy. There is a great need for a change in the popular mind. The craze for cures should cease to monopolize everything and ally itself with the gospel of prevention. In other words, the people should take less medicine and more exercise, should give up some of their doses and substitute allopathic allowances of fresh air. Already there is a noticeable improvement manifested especially in our best schools and colleges. Common sense is having a say in the cut and arrangement of clothing. More attention is being paid to out-door sports. Men and women are beginning to see the tremendous importance of physical soundness, and to appreciate its absolute necessity as an element of domestic happiness. The young man of to-day wants a healthy wife, and the young woman wants a healthy husband. Invalidism is becoming less fashionable and less popular than what it was, and the woman of to-day is trying to grow pre-eminently vigorous. The more she succeeds in maintaining health the more men appreciate her, and the more she likes the change herself. Exercise, of course, is not all. There are rules of health, simple but rigid, that must be observed. Wholesome food, regular hours, moderation and perseverance are essential. Spasmodic efforts will not supply the demands of health any more than spasmodic eating will supply the demands of the stomach. The people are improving in these things, however, and the tendency is, undoubtedly, in the direction of more common sense. It will take some time to counteract the craze for cures, but the work has been begun and its work grows constantly. It is gradually teaching the people that it is better to keep from being sick, than to get sick and depend upon cures.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., OCTOBER, 1892.

HUMAN OSTEOLOGY.

AT the recent Parliament of Science in Edinburgh, Dr. Garson opened a discussion on Human Osteometry. He described the methods of measurement of the different parts of the human skeleton in a manner to indicate its zoological and racial character. He dealt first with the measurement of the long bones, and afterwards with the skull, following to a great extent the methods of Broca. Sir William Turner dealt

with the various ways of measuring the inner capacity of the skull, and showed that Broca's method very much over-measured that capacity. He explained how such variations arose ; the stuff used and the method of pouring it into the skull being proved as the cause of variation. Sir William Turner then explained his own method. It was to use a standard skull, the capacity of which was first found in water. The skull he exhibited was found to contain 1,570 centimetres of water. He filled his standard skull with small shot in view of testing his method. On the contents being poured into a glass metro-measure, it was found that Sir William's method gave an accurate result.

BRAINS, SKULLS, AND FACIAL CHARACTERS.

PROF. MACALISTER recently exhibited at Edinburgh two male and female heads from Mobanga, Upper Congo, and were the first that had been exhibited in Europe. They had been boiled in oil and were much discoloured. The first of the specimens of the preserved facial characters of the ancient Egyptians which he showed, was over 4000 years old ; supposed to be a representative of the medical profession. The next face to be noticed, the learned Professor described as "rather a pretty head." It was the head of a young lady who had lost her "Premiere Jeunesse." He confessed to having been somewhat unsuccessful in dressing her coiffure, but at any rate she was presentable. Everyone present, however, thought how wonderfully natural every feature of the face and hair of the head had been made to look, and by the applause that greeted the explanations, it appeared that everyone inwardly congratulated him with the success he had attained. The two samples were remarkably uniform in type, and it is singular how little variety was to be found in the heads of these ancients. The hairs of the eyebrows were small, and that on the head was not woolly, but wavy. The nose was well-formed, usually prominent, rather high-bridged and narrow. The nostrils were narrow, and very rarely was there much of a moustache. Egyptians must have had a very bad time with toothache, he thought, as ten per cent. of the skulls in his collection showed decayed teeth. The chin was narrow and tapered. There were no traces of holes in the lobes of the ear, which showed that Egyptians were not barbarous enough to decorate their ears with rings.

Professor Sayce, in the course of a few remarks, pointed

out that in the modern Egyptian the teeth were exceptionally good. He could only explain the fact that the teeth in the skulls examined by the President were bad either by supposing that these skulls belonged to mummies who were embalmed in the Roman age, or else that these particular mummies were mummies of the upper classes, and that in ancient Egypt, as in the modern society of Europe, the teeth of the upper classes showed a tendency to decay.

GROWTH OF THE BRAIN.

THE brain comes to maturity on an average five years later than the body, and therefore, this mental instrument is comparatively younger than the other parts, and is more tender and susceptible in youth than the muscular system. The full-limbed and chubby-faced baby who squalls and kicks with vigour, and eats enormously as it performs gymnastics on its mother's lap, is the picture of physical health; but its semi-fluid brain grows slowly, as it is used but little at this stage of life. The brain gets behind in the race of life until the muscular system develops somewhat, and thinking is needed for self-preservation. This conservation of brain force is a wise provision, when taken in conjunction with comparative growth and decay. It enables us to possess vigorous brains and strong minds long after our bodies have become old and infirm. It is this that renders old age tolerable. If one does not preserve his brain, but injures it by early dissipation, his old age will be one of mental as well as physical decrepitude and a cause of pain to himself and his friends rather than happiness to all.

INFLUENCE OF MIND ON BODY.

IN a recent article, by Dr. Dale, on the "Influence of Mind on Body," he illustrated on the one hand the production of disease by psychical disturbance, and on the other the cure of what may be called morbid conditions by some profound mental effect. The efficacy of strong emotion in producing, or in helping to produce, such conditions as diabetes, chorea, and epilepsy is well recognised, and we venture to say undoubted; but it is always difficult to estimate correctly the influence of such accidents, or to say how much may be due to them and how much to an underlying instability which such a disturbance merely makes evident. That a depressed

physical and mental condition also renders the bodily organs more susceptible to the influence of some poison, such as that of the specific fevers, is well recognised, and when the inseparable connexion between mind and body and the profound alterations which fear or joy bring about, are taken into account, it is not surprising that violent emotions should open the door for many toxic influences.

It is an interesting question how much of the general—but by no means invariable—immunity which medical men enjoy from infectious disease is due to the calmness and unconcern with which they regard such diseases in relation to themselves. They forget to be afraid, or hush their cautiousness, and so they are clothed with an invisible and often an invulnerable cloak. The influence of mental effort in overcoming diseased conditions is not so well authenticated. The instances which Dr. Dale adduces are for the most part so-called hysterical conditions, and it is open to doubt how much such conditions have underlying them any actual change in structure. Of the efficacy of music and the “influence of sweet sounds” in producing that feeling of restfulness and comfort which is so conducive to recovery from any morbid state Dr. Dale has a high opinion, but he enters a judicious *caveat* against allowing it to assume the garb of quackery or mystery. The consideration of the whole matter leads to an eminently rational view of the duty of the physician in relation to the mental attitude of the patient. That duty is to instil by means of faith and hope a courage which will enable him to bravely resist his foes, and Dr. Dale is of opinion that nothing more than this is to be expected from the influence of the mind in the removal of bodily diseases.

EXPRESSION.

ALL things have an expression, from a blade of grass to a star in the firmament. Animated nature is more expressive than things that are inanimate; the expression of a tiger is ferocious, but a rock—well, it looks as “solid as a rock.”

A lion never had the expression of a lamb, nor did ever a jelly-fish look like a herring; and the higher we ascend in the scale of animal creation the greater is the expression of character.

Those who make a constant study and practice of character reading, upon coming into the presence of other people,

largely perceive the amount of mental culture they have received by the expression of their countenances.

It is an easy matter for a phrenologist, who studies expression for the love of it, to tell almost how his subject has been raised, whether he (or she) has been nursed on the lap of luxury, or had to force the way through great obstacles.

The circumstances and environment of a man's life are written on his head and face.

LITTLE WEAKNESSES OF BIG BRAINS.

ALL great people have had their follies, which is another way of saying that all have had their weak points. Tycho Brahe, the great astronomer, had a terrible fear of hares and foxes. If by any chance he saw one, it mattered not whether it was dead or alive, he grew pale and his legs trembled under him.

The great Dr. Johnson, with all his philosophy, was not without a superstition. He was very careful not to enter a room with his left foot foremost; if by chance he did so he would immediately step back and re-enter with his right foot foremost. He was terribly afraid of death, too, and would not suffer it to be mentioned in his presence.

Julius Cæsar, to whom the shouts of thousands of the enemy were but sweet music, was mortally afraid of the sound of thunder, and always wanted to get under ground to escape the dreadful noise.

Queen Elizabeth, despite her bloody nature, trembled at the sound of the word "death;" and Talleyrand shivered and changed colour at the same.

Marshal Saxe, who loved to look upon the ranks of opposing armies, fled and screamed in terror at the sight of a cat.

Peter the Great could scarcely be persuaded to cross a bridge, and whenever he placed his foot on one he would scream in terror. Like the great man that he was, he tried to overcome his weakness, but he was never quite able to do so. Byron would never help anyone to salt at table; nor would he be helped himself, and if any salt were spilled he would immediately get up and leave.

INSOMNIA.

DOCTORS say that insomnia is on the increase among us, and many of them attribute the difficulty experienced in wooing sleep to the habit of late hours and abbreviated slumbers into

which so many fall in this age of breathless haste and dash. An American physician asserts that nine hours out of the twenty-four should be passed in sleep by adults, though less are needed by the old. A cup of hot milk, sweetened and flavoured with freshly-grated nutmeg, is recommended as a sedative. The same authority reminds us that the senses do not fall simultaneously into slumber. After the eyelids have closed the sight, the sense of taste is the next to disappear, after which follow in their order smell, hearing, and touch. The sense of smell is the last to awake, hearing being the earliest after touch to regain consciousness. As regards the muscles, the slumberous influence begins with the feet, and gradually works its way up to the centre of nervous action—a fact which explains the often experienced impossibility of sound sleep when the feet are cold or uncomfortably warm.

Fowler Institute.

MEMBERS' NOTES.

“*Whatever that he which thinks, which understands, which wills, which acts, it is something celestial and divine, and upon that account must necessarily be eternal.*”—CICERO.

THE first meeting after the vacation was held on Monday, Sept. 12th, when a large number of members and friends—among whom was a gentleman examined by Mr. Fowler twenty years ago— assembled to listen to the paper on “Thoughts on Theosophy.” Both our President and Vice-President were present. Mr. Brown presided, and opened the evening with a capital address.

Mr. Ward’s “thoughts,” though somewhat brief, were very concise, and created a long and animated discussion, in which he replied to the many questions in a masterly and comprehensive way. He first quoted the statement of Louis Figuier, that phrenology had been abandoned because the people who enquired into it found that if its teachings were proved it would mean the overthrow of modern philosophy, because the facts of phrenology were irreconcilable with the theories of ordinary theology or ordinary science. Mr. Ward pointed out that the teachings of phrenology as to the extent to which a man is bound and fettered by his innate character, if logically considered in connection with the theory of God giving a soul to each individual at birth, must necessarily lead to the conclusion that God was either hopelessly incompetent, or unjust and tyrannical. On the other hand, the materialistic theory that mind is a product of matter, and that innate character is the result of heredity modified by atavism, was shown to be inconsistent with the facts in the cases of great

genius in most ordinary families, and most emphatically in the case of twins, who, although they were absolutely the result of "like causes acting under like conditions," were often totally unlike in their innate powers and character. Mr. Ward then advanced the theory of re-incarnation as a possible basis, not only for phrenological theory, but also for other theories of life and man; and contended that this old doctrine, which had been held by the greatest philosophers of the world, fully met all the difficulties of phrenology.

Mr. Brown asked how the theory of re-incarnation explained why one man was better than another?

Reply: The theory of re-incarnation holds that the character of one man is the consequence of his experience in another life is quite conceivable, because man is capable of development, and perfect man must be many sided in his capabilities. Therefore, when a man is highly developed, the notion that he has lived before, that he has in his previous life progressed upon certain lines, explains that. If this is the first life we have experienced, we have great difficulty in explaining any rule of Divine justice, when one man comes into the world so different from another. But if our characteristics are the result of previous works, we have a fair basis in theory. We expect differences, we know people who are living now are making different characters from those with which they came into the world. As people vary in their progress in this life, the experience they have had in a previous life throws some light on the different characters people have when born.

Mr. Brown was unable to accept this explanation, and regarded the difference in character due to the condition and quality of the organs through which the mind manifests itself.

Miss Fowler: Is it not possible for one to be re-incarnated into an idiot? also, has one any choice in the matter?

Reply: On the theory of re-incarnation, it is quite possible for a spirit to be re-incarnated in the body with the brain of an idiot. In the case of an absolute idiot, that could have no effect whatever, because inasmuch as the divine part of man would have no power, I should consider you had a case of a spirit and a body without the rational soul, which is a connecting link. Therefore, what occurred in the body would not affect the immortal spirit. Whatever exists now must have been decided at the time when we, or the Divinity, had all knowledge, and we have no recollection of having chosen our present environment. We have the power of choice, because by striving for the ideal, we eventually become it, therefore we have the choice of re-incarnation.

Mr. Tovey: If the central ray of man is divine, why is it necessary that this ray of divine light must form a circle throughout the world? It must have had this light before it started on its course?

Reply: The same objection will be found in every scheme of the universe. We must claim that our knowledge is greater than that of the Divine, or we must admit there are many things we cannot explain now, but are necessary because they are the will of the Divine.

Mr. Brown: Where is the spirit if it is in activity before it passes into the idiot?

Reply : I take it that the question refers to the period between one incarnation and another. A theory which is largely held by people of various nations is to the effect that the spirit is always potential ; it is difficult to speak of the spirit in its highest attribute in terms of matter. It would be absurd to say it requires rest or sustenance. I cannot conceive the spirit being limited by space or time, because it is infinite, and consequently eternal. If man has descended from the Divine he can have no limitation.

Messrs. Samuel, Smith, and Overall, also Miss Moseley joined in the discussion.

UNDER the auspices of the Aberavan Phrenological Society, Miss J. A. Fowler gave a very successful course of lectures on Sept. 7th, 8th, and 9th, the subjects chosen being "The utility of Phrenology," "Brain, Mind, and Body," and "The talent of love," which lectures embraced respectively the practical, the scientific, and popular side of phrenology. Mr. Wm. Williams, Hon. Sec. to the above-named Society, —whose members by the way have just become affiliated with the Institute—writes in glowing terms of the very enthusiastic manner in which the lecturer's remarks were received by the large and distinguished audiences at the Public Hall. It is evident they believe in the equality of the sexes in Wales, the lectures being presided over by ladies on each occasion, viz., the Mayoress Mrs. Welsh, Mrs. Lewis, and Mrs. Smith respectively.

THE President, Rev. T. G. Dyke, in moving a vote of thanks to Miss Fowler, on behalf of the Society, said how grateful he was "for the efficient and pleasing manner in which she had raised phrenology to a higher standard in the public mind." Mr. Thomas, the treasurer, seconded the motion.

THE inhabitants of Bournemouth are fortunate in having so successful and competent an exponent of mental science as Prof. Alexander Davies, who has resided in that town for more than three years. There are few who can boast of having been trained from boyhood as a phrenologist, and to have followed no other pursuit, but this has been the case with our fellow member, Mr. Davies. His organization is naturally sensitive and sympathetic, so that when examining an individual, he gets into actual contact and sympathy with the head and character at once. The cerebral force exerted from various parts of the brain of the subject is sufficient to convey the influence to the examiner's hands placed around the head, and from thence to his brain, therefore it matters little whether he be blindfolded or not. To test his remarkable power still further, a letter was placed between his hands, and gradually the character and figure of the writer was described by him with wonderful precision. This psychometric power has been described as our sixth sense, and one become depraved by our mode of living. Moderation in diet and elevation of thought are two essentials for its cultivation, both of which are observed by Mr. Davies. Judging from

his examinations, so materially aided by sensitiveness, the very mind can be reached, and oftentimes the innermost thoughts revealed.

Apropos of the loss of weight during racing, mentioned recently in these notes, a friend records the fact that after a twelve hours' bicycle ride, in which time 148 miles were covered, he scaled $5\frac{1}{2}$ -lbs. less than just before starting. This ride was performed after strict vegetarian diet for some months, and had the effect of changing the laugh of his fellow club-men to a look of surprise, the majority of cyclists still preferring to rely upon beef-tea during such feats.

DR. BINKLEY published some details in a recent number of the *Philadelphia Medical News*, of a case in which "the removal of depressed bone from the skull in a case of traumatic epilepsy, some years after the injury, was followed by a most satisfactory result." The patient, a man of thirty-seven, had been struck by a hatchet sixteen years previously, about four inches above the left orbital margin, over the pre-frontal convolutions; after temporary unconsciousness, the man resumed work in a day or two. From this time, he became a sufferer from epileptic fits, which gradually increased in frequency, until during the four months previous to the operation, he had from two to four daily. A piece of depressed bone two inches in diameter was removed, and the skull was trephined over the site of the injury, which afforded immediate and complete relief, not a single occurrence of the fits having taken place during the seven months, from the time of the operation to the date of when the case was published.

THE cholera scare seems to be spreading at a greater rate than the cholera, but M. Pasteur has availed himself of this opportunity to introduce his "anti-choleraic vaccine." Why this mania for inoculation? Surely the results of Kochism and Pasteurism cannot be said to have been very successful so far, unless annual cerebral derangement is not objected to. A man was detained last August by the police authorities in Paris for taking a carriage and horse that did not belong to him, whereupon he made the following statement, which was afterwards found to be correct:—"I was formerly bitten by a mad dog, here is my certificate signed by Pasteur, and every year at the same time I go out of my mind."

MR. H. H. DOMMEN will read a paper on "Evolution and Phrenology" at the next monthly meeting, October 10th.

Paragraphs from members are earnestly solicited for this column.

G. B. COLEMAN.

DR. PIERSON declares that the late Mr. Spurgeon once defined "gumption" to be "not making any greater ass of yourself than you are by nature."

THE SENSIBILITY OF MEN AND WOMEN.

AN interesting communication was recently forwarded by Signor Lombroso to the Psychological Congress on the above subject.

The difference between the weight of a woman's brain and that of a man had been noted, but without sufficient allowance for the difference in the weight of the body; taking that into account, the difference in the two brains was very small. The professor had scientifically tested the relative sensibility of men and women to touch and to pain, and his verdict was that, with the exception of girls, whose sense of touch was fine, women had considerably less sensibility than men. There was a correspondence, however, between an obtuse sense of touch and a debased physiognomy, and the latter was much more common with men than with women. The professor cited practical authorities. Bilioth preferred to try a new operation on a woman, because of her great power of endurance. Carle had assured him that women submitted to surgical operation with the most extraordinary readiness, almost as if the operations were on other people rather than on themselves. Giordano's testimony bore out the statement of Balzac that women apprehended evils more than men, but bore them better. Dr. Martini, a distinguished dentist of Berlin, expressed astonishment at the superior courage and willingness of women in regard to dental operations. Mela found that men fainted from pain more frequently than women. All this resulted, said Professor Lombroso, from women having a less degree of sensibility. On this account they recovered better than men from suffering and injury and lived longer. The period of woman's greatest sensibility was from three to twenty years of age, and that was the period of the greatest mortality. She had a longer middle age than man.

FLUCTUATION OF BRAIN FORCE IN CHILDREN.

WE all know that our bodily forces differ at different times, and so does our brain force. There are days when the brain refuses to act vigorously, but lies fallow, so to say. This is, no doubt, due partly to the force of habit, but not altogether to this cause. Dr. Burgenstein, of Vienna, has made some studies concerning the working curve of the hour in order that he might demonstrate the fluctuations of the brain power. He took two classes of girls and two of boys, between

eleven and twelve years old, and gave them easy sums in mental arithmetic for periods of ten minutes, with five-minute intervals of rest. Then the results of the work, the calculations, and the errors were carefully tabulated and compared. The total number of calculations made by all the children amounted to, roughly speaking, 4,000, 3,000, and 4,000 in the second, third, and fourth periods respectively. During the third period of ten minutes, the amount of work done was not so great as during the other periods. The number of mistakes also increased, roughly speakly, 450, 700, 350 in the different periods. During the third period, the quality of the work was poorest. "It would appear, then," says Dr. Burgenstein, "that children of the ages mentioned become fatigued in three-quarters of an hour; that the organic material is gradually exhausted; that the power of work gradually diminishes to a certain point during the third quarter of the hour, returning with renewed force in the fourth quarter of the hour. This experiment, he claims, demonstrates that continuous work for school children of these ages, even though the tasks are not difficult, should not last longer than three-quarters of an hour without a considerable period of rest, in order that force may be stored up for work."

Notes and News of the Month.

PHRENOLOGICAL examinations daily from 10 a.m. to 5 p.m. Saturdays 10 a.m. to 6 p.m. Evenings from 7 to 9.15 p.m.

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As announced in the July issue of the *Phrenological Magazine*, Mr. James Coates has handed over to me, as Editor and Publisher of the *Phrenological Magazine*, the entire control and all rights of the *Phrenological Annual and Register* which will in future be published in London.

* *

THERE is no need for us to enter into the past history of the *Annual*, which has been so ably edited by Mr. Coates, and met with so great a success, but suffice it to say, that we intend to increase the usefulness of the coming issue, and, if possible, deepen its attractiveness, and introduce into it all items of universal phrenological interest.

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IT will be our aim to meet and carry out as far as practicable the suggestions of those most interested in phrenology and kindred subjects. We have reason to believe, by placing the *Annual and Register* in the hands of subscribers, advertisers and the trade at an early date (November 25th), it will be of benefit to all and meet with as large, if not a larger sale, than any previous issue.

THE *Phrenological Annual and Register* for 1893 will contain the only authorised list of names and addresses (corrected up to date) of phrenologists both in England and other countries, and popular and scientific articles on phrenology will be contributed by well-known writers; articles have already been promised by Joseph Parker, D.D., John Lobb, Editor of *Christian Age*, M.L.S.B., H. Snowden Ward, Editor of *Practical Photographer*, and Mrs. Charlotte Fowler Wells, President of the American Institute, Nicholas Morgan, President British Phrenological Association, Jas. Webb, Ex-President, and others.

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THE "REGISTER OF PHRENOLOGICAL PRACTITIONERS AND LECTURERS."—No name will be entered upon this register unless the persons possess a satisfactory phrenological standing. Full particulars should be sent in as early as possible.

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ADVERTISERS of Books, Health Appliances, Magnetic Batteries, Belts, Vapour Baths, and Hydropathic Homes and other establishments, will find *The Annual* a most excellent medium of bringing their goods and specialities before the best class of buyers.

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THE December number of the *Phrenological Magazine* will be full of interest, and will contain articles by the following authors:—Nelson Sizer, of New York, Mrs. O. Chant, Bernard Hollander, &c. Also Character Sketches of leading scientists.

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THE December number of *The Phrenological Magazine* including *The Phrenological Annual* will be sent post free on receipt of 1s.

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PRIZE OFFER (No. 1).—The one who obtains the largest number of subscribers (over twenty-five) to the *Phrenological Magazine* will be given a course of phrenological instruction at the Fowler Institute or by correspondence. Prize offer (No. 2).—A life membership will be given to the member of the Fowler Institute who gains ten new members by March, 1893. A Home Exerciser will be given to any member who gains five new members to the Fowler Institute by March, 1893.

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WE have just received a consignment of Dr. Foote's "Plain Home Talk," and shall be pleased to book all orders as early as possible. Price 6s.

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"IN answer to numerous inquires for Mr. Coates' new book "How to Thought-Read," we have now heard that Messrs. Hay, Nisbet & Co. promise to have it ready in January, 1893. Mr. Coates' illness has been the cause of the delay. We can now book orders.

* * *

DRINK AND INSANITY.—Doctor Brouardel has read to the Academy of Medicine in Paris a paper by Doctor Paul Garnier on the effects of the alcohol sold in Paris upon the nervous symptoms of those who consume it. Since 1877 the number of madmen has increased threefold upon that of the preceding thirteen years.

ACCORDING to Mr. Stead, Cardinal Manning was a great admirer of Oliver Cromwell. On one occasion he said :—"I have always regarded Oliver Cromwell as the greatest man ever produced by the English race. No other ruler before or since has united in equal degree such faith in the Imperial destinies of England abroad and such passionate concern for the welfare of the common people at home."

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SPIDERS are not always solitary and selfish, as some naturalists have asserted. Dr. McCook, an authority on the subject, has told the British Association that "there really are cases in which the male and female spiders live in amicable relations for a considerable period."

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KOSSUTH'S NINETIETH BIRTHDAY.—Although Kossuth, the Hungarian patriot, from reasons of health, expressly desired that no deputation from Hungary should visit him this year on his 90th birthday, the Independent Party has named a deputation to go to Turin on the 18th of September. Monster meetings and a torchlight procession will take place in Buda-Pesth in his honour, and more *fêtes* will be held after the deputation's return from Turin.

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CHICAGO makes no pretention of sentiment over the erection of its Columbus Tower. It is a pure business enterprise, based on the experience gained with the Eiffel Tower at Paris. Its projectors ask no help from anybody, but expect to spend \$2,000,000 in the construction, and to get twice that amount back again during the Exhibition. The tower is to be a permanent attraction. The drawings show a handsome structure 480 feet in diameter and 500 feet high, capped by the tower, which rises to a total height of 1,500 feet. The lower part will furnish a music-hall or assembly room with floor space for 30,000, and a hotel with 4,000 rooms.

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CHOLERA.—During the last epidemic of cholera in England it puzzled the sanitary inspectors of a northern town to understand why the inhabitants of one cottage in a certain row were not affected by the disease, which was raging among their neighbours. Finally (says the *Hospital*) it became noticed that a net of onions were suspended in the fortunate house, and on examination these were all found to be diseased. It is also related that during a former outbreak of infectious fever in Somerstown and St. Giles's, the French priests, who constantly used garlic in all their dishes, visited the worst cases in the dirtiest hovels with impunity, while the English clergy, who were similarly engaged, but who did not eat onions in like fashion, caught the infection, in many instances and fell victims to the disease. Raw onions contain an acrid volatile oil, sulphur, phosphorus, alkaline earthy salts, starch, and free uncrystallised sugar.

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AN INFANT PHENOMENON.—She has been discovered at Plaisance, a suburb of Paris, in the person of a little girl, called Jeanne Eugénie Moreau, aged only five, but endowed with a most extraordinary memory.

She is a walking encyclopædia on all matters appertaining to the history of France, and especially of the great Revolution; is an adept also in natural history, and at the same time answers without hesitation or error practical questions about cooking, gardening, and household management. The youthful prodigy was born in Paris in January, 1887, her father, Philippe Moreau, being a humble labourer, but descended from a Revolutionary hero whose name figures in the annals of 1789, and who was decorated by General de La Fayette after the taking of the Bastille.

* * *

MRS. FRANCES HODGSON BURNETT is one of those few literary ladies who have the courage to be conventional in dress, and studiously "follow the fashion." Mrs. Burnett is one of the best dressed women in London, or the "Hub of the Universe." She is noticeable also among literary ladies for the excellence of her complexion, which has something of the bloom of the rose combined with the softness of the peach. Mrs. Burnett is the wife of a Washington physician. Dr. Burnett is as literary in his tastes as his wife, but his enthusiasm runs wholly towards the literature of Greece and Rome. Mrs. Burnett is a practised traveller, caring nothing for the terrors of the ocean, but Dr. Burnett could not venture to accompany his wife. Hence, Mrs. Burnett does her journeyings alone.

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CANON WILBERFORCE is one of the most active philanthropists in the Anglican Church. His Christianity is practical as well as doctrinal—rather more the former than the latter. Nor does he confine his energies to his own country. He has been travelling in the East, and British India will be none the worse for his enquiries into the temperance question in that land. If Anglican Churchmen were eligible to seats in the House of Commons, Canon Wilberforce, in alliance with that "genial ruffian," Mr. Caine, might do some good to the great dependency. He endorses to the full Mr. Caine's account of the progress of intemperance in British India, and especially of the most fatal form of intemperance—opium eating. His slumming expeditions into the native towns have inspired him with fresh horror of the opium traffic.

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WHAT A LAUGH DOES.—Dr. Greene says that there is not the remotest corner or little inlet of the minute blood vessels of the human body that does not feel some wavelet from the convulsions occasioned by good, hearty laughter. The life principle of the central man is shaken to the innermost depths, sending new tides of life and strength to the surface, thus materially tending to insure good health to the persons who indulge therein. The blood moves more rapidly and conveys a different impression to all the organs of the body, as it visits them on the particular mystic journey when the man is laughing, from what is done at other times. For this reason every good, hearty laugh in which a person indulges tends to lengthen his life, conveying, as it does, new and distinct stimulus to the vital forces.

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IT is worth noting that Miss Philippa Garrett Fawcett, whose great success at Cambridge was recorded in *The Echo*, inherits her

mathematical talent from her father. Professor Fawcett is always thought of as a Political Economist. Few are aware that he was one of the most distinguished mathematicians of his day at Cambridge, and that his failure to head the list of wranglers was attributed by many Cambridge men to a merely physical accident at the time of examination. Professor Fawcett, however, figured high up in the list. Another point, perhaps, worth noting is that Miss Fawcett has won high distinction at the ordinary age of Senior Wranglers—from 21 to 22. Thirdly, while Miss Fawcett appears to inherit her intellectual force from her father, she inherits her *morale* specially from her mother. Her complete coolness and self-possession during the examination period have been remarked. This reminds one of Mrs. Fawcett.

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PROLIX VERBOSITY.—A correspondent in York, Pa, tells a little story of how a father cured his son of verbal grandiloquence. The boy wrote from college, using such large words that the father replied with the following. Although somewhat circumlocutory, hyperbolic and superbombastic in his language, the father is somewhat of a *phraseur* himself. Here is the letter :—“ In promulgating your esoteric cogitations, or articulating superficial sentimentalities, and philosophical or psychological observations, beware of platitudinous ponderosity. Let your conversation possess a clarified conciseness, compacted comprehensibility, coalescent consistency and a concatenated cogency. Eschew all conglomerations of flatulent garrullity, jejune babblement and asinine affectations. Let your extemporaneous descantings and unpremeditated expatiations have intelligibility, without rhodomontade or thra-sonical bombast. Sedulously avoid all polysyllabical profundity, pompous prolixity and ventriloquial verpidity. Shun double entender and prurient jocosity, whether obscure or apparent. In other words, speak truthfully, naturally, clearly, purely, but do not use large words.”

* * *

AN INTERVIEW WITH KOSSUTH.—When passing through Turin recently (writes a correspondent) I called upon the aged Hungarian patriot Kossuth, who lives there in modest and comfortable circumstances. A diminutive brass plate on the door of the first étage bears the simple inscription “Kossuth.” I was surprised to see him rise to greet me with the ease of a man of seventy or less. Kossuth is now ninety years old, reads and writes without spectacles, is not deaf, still takes his daily walks, and speaks England’s English as he did when delivering eloquent lectures on Hungary forty years ago. Throughout life Kossuth has, in diet, lived simply, and his moderation now has its reward in an old age full of elasticity and vigour. It is surprising. For about an hour and a half we conversed, many subjects being dwelt upon. Kossuth continues a consistent Freethinker, and is more pronouncedly Republican than in 1848, considering Presidents of Republics as needless, and as but an imitation of Monarchy. The social question, he considered, and the question of capital and labour, would become aggravated as years went on, and culminate in a frightful convulsion. That was another

certainty. "I have quitted humanity," said Kossuth, "left it at a distance." There is no wonder at this, considering the universality of hypocrisy and ingratitude, the littleness of the public mind, the ignorance of the masses, and the debauched state of the world's political press. "La société moderne est une grande bête." Kossuth continues writing the voluminous memoirs of his eventful and historical life. There will be a dozen volumes in all, of which three have already appeared. He recollects with gratitude the honour accorded him in America after quitting Europe. During the six months he was there he delivered 600 speeches. He says he never reads books printed about him, nor notices in the newspapers.

* * *

DR. JAMES CUMING says:—Whatever verdict may ultimately be passed on hypnotism there can be no reasonable doubt that certain facts have been elicited which show that in the hypnotic condition profound and extensive modifications occur in the sensory and motor functions of the brain. Now admitting much that has been urged against hypnotism; granting that it is likely to attract the attention of men who have a liking for the marvellous; that it can be practised by men possessed of no scientific training and incompetent to deal with the most refined activities of the nervous system, and that it thus lends itself easily to charlatanism and imposture; granting that it may be attended with danger of a formidable kind, and also that its field of therapeutic usefulness is likely to be at best a very restricted one, and its effects probably only transitory; still it is a subject eminently deserving of careful and profound scientific investigation conducted under the most rigid precaution so as to exclude intentional or involuntary deception. We do not need to be much concerned about whether, as has been stated, we have in hypnotism a condition akin to natural sleep, or whether it is in reality a pathological state related to hysteria. What is at present wanted is a clear account of the phenomena which are capable of being produced under its influence. If, as numerous statements aver, hypnotic suggestion can be shown to in any degree affect processes of nutrition and the reaction to irritants, then some points of the very highest interest as regards the influence of psychical on physical processes will have been established. Most of us have been inclined to read with a considerable degree of scepticism the accounts of instances in which obvious physical changes have been stated to have resulted from nervous influence, especially when these changes have occurred in a rapid manner. Should the statements on this subject which have been made so positively and on the faith of apparently cautious and trustworthy observers prove to be authentic, we shall certainly be compelled to reconsider our position with reference to them.

LIFE is a mission: duty, therefore, its highest law. In the comprehension of that mission and the fulfilment of that duty lie our means of future progress.—MAZZINI.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope, and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

UNDER the auspices of the Aberavon Phrenological Society, Miss J. A. Fowler, Lecturer and Instructor of the Fowler Institute, London, has just given a very successful course of lectures on Phrenology, on September 7th, 8th, and 9th. The following ladies presided on the various evenings:—Mrs. Walsh (Mayoress), Mrs. Lewis, and Mrs. Smith. The attention and continual applause of the audiences, which were composed of the intellectual cream of Aberavon, testified to the interest and truthfulness of the subjects dealt with, and the public examinations given at the close of each lecture. A vote of thanks from the revered President, seconded by Mr. Thomas (treasurer), was given to Miss Fowler for kindly accepting the invitation to visit their town, and for putting Phrenology on a higher pedestal than any previous phrenologist had succeeded in doing.—*Aberavon News*.

WE learn that Mr. Dutton has nearly concluded, in the Pier Saloon, his third season in Skegness, which has been a most successful one. His lectures have been well attended, and the examinations, both public and private, have given great satisfaction.—*Skegness Herald*, Sept. 16th.

MR. J. DYSON, of Sheffield, lectured on “Man, as a Social Being.” Mr. Dyson treated the object of his discourse in a thoroughly enlightened manner, the view taken being a phrenological one; the salient features of the science were plainly and strongly laid before the audience, being agreeably interspersed with anecdotal remarks. The aim of the discourse was to show how, by proper cultivation of some faculties and judicious repression of others, man would attain a much higher standard of moral and social life, and reap a corresponding reward of happiness. The earnest remarks of Mr. Dyson, no doubt, thrilled many a sympathetic chord during the evening. At the close of the lecture the heads of a lady and gentleman were examined and reported on for the benefit of those assembled, the subjects being strangers to Mr. Dyson, yet known to the majority of the audience, thus giving them an opportunity of judging as to how the manifestations of phrenology agree with the actions and demeanour of those that exhibit them.—From *Bridlington Quay Observer*.

Book Notices.

Higher Medical Culture, by W. R. Dunham, M.D.—This book, intended for the physician and student, contains another attempt to explode some of the theories of the older, and perhaps generally accepted, school of medicine. Striking straight at the root of the matter, the

author disclaims most emphatically the existence of any such power as "active medical property," and holds with the modern hygienists that the vital instinct of the organism, directed and assisted by the intellectual powers, which he collects under the term "sensibility," is an all-sufficient remedy for the "ills that flesh is heir to." Dr. Bostock says, "Every dose of medicine given is a blind experiment upon the vitality of the patient;" while Professor Barker considers "that the drugs which are administered for the cure of scarlet fever and measles, kill far more than those diseases do." However, if we accept the axiom that the recognition of error is the first towards amending it, medical men must acknowledge that the multitude of similar testimony which has been borne to the inefficacy of the common methods of medical treatment, is so much actual evidence to the truth of more hygienic measures. Friends of the temperance cause, too, will recognise with gratification the attack which Dr. Dunham makes upon the so-called "stimulating properties" of alcohol, and advanced thinkers in the domain of more natural healing will find in it a confirmation of their views, arrived at through a different channel. P. T.

The Employment Bureau.

[The Employment Bureau has been opened by the Fowler Institute to assist people who are seeking employment, and also to aid heads of firms to secure suitable employées. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. or J. A. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.]

A FRENCH LADY of ability, who knows English well, desires re-engagements to teach her own language.

A WELL-EDUCATED Russian gentleman desires to make further lecturing engagements for the winter months; refer to Secretary for subjects.

AN ARTIST is wanted who can make pen and ink sketches, and also reduce pictures to 2 × 3 in.

ANY firm who is seeking a capable reliable accountant, or a contractor desiring a practical man for making and giving estimates, can find one by applying at once to the Secretary of the above Bureau, Imperial Buildings.

IF an elderly gentleman is seeking a young gentleman's companion; if a hydropathic establishment is wanting an assistant; if a publishing firm is in want of a sharp intelligent lad, and wish to be put in communication with suitable clients, the Secretary of the Employment Bureau will be pleased to facilitate the employment of thoroughly competent persons.

A REFINED and desirable young lady desires the position of companion to a lady. She would not mind travelling, or take a position in a home where there are one or two children. The lady is a well-qualified

dressmaker, but her health will not permit her to follow that occupation continuously.

E. M. desires six to eight hours daily employment ; a good knowledge of book business.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 3s., for six months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

WARD DE ZERA.—The photograph of this gentleman indicates a high order of constitutional power. He is full of life and animation. He is well qualified by nature to do his own work and make his mark in the world. He is wide awake to all that is going on around him. He is quick of observation, has a good practical judgment ; takes stock of everything he sees, and is capable of enjoying himself continuously. Such a man ought to be in some responsible position where he has much to attend to. He may not be fond of hard work, but when it is necessary for him to do it he goes through it like a hero. He is not governed so much by his philosophical talent as by his perceptive and practical intellect. He can tell what he knows to a good advantage, especially in social conversation or in a business way. He is very fond of excitement, delights to be where there is much going on. He enjoys music highly and can easily become much interested in theatrical performances and social excitement generally. His natural talent turns to political or theatrical life. He enjoys travelling very much. He is social when amongst his friends, but readily changes from one to the other if necessary.

J. A. S. (South Shields).—The photos of this young lady indicate a fairly developed, but good quality of organization. Her mind predominates over her body. She needs special care in the training of her mind, which must not be forced. She must not be given too much to do at one time ; she needs to be worked by easy stages, and the groundwork constantly revised. The action of her mind is slow, and all her education must be made interesting to attract and impress her. She has a strong will and is inclined to be stubborn. Is prudent, cautious, and of a reserved nature, and needs to be drawn out in order to be understood. She is particular, nice and neat in her ways, and will be systematic in her habits. She is strictly conscientious and circumspect, and is full of thoughts and ideas ; but there is not enough action and energy to enable them to show to a good advantage. She is ambitious and sensitive and will show her abilities to a much better advantage as she grows older. She is too reserved and needs to be thrown more into the company of those of the same age as herself ; she is not of so youthful a disposition as she should be, but is in advance of her age and needs more suavity to modify her character.

THE
Phrenological Magazine.

NOVEMBER, 1892.



(From Photo by Fradelle, Regent Street.)

THE ARCHBISHOP OF CANTERBURY.

THE likeness of this gentleman indicates health, strength, long life, and great power of endurance. All his features are prominently developed, and the whole make and build indicate self-control, presence of mind, and balance of power. His face indicates long life,

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joined to great ardour, earnestness, and thoroughness. His nose denotes penetration and capacity to probe into and find out all that he has encountered. The whole of the face is rather large, which indicates that all the animal forces are strongly represented. The base of his brain is also comparatively large. He is not behind in the discharge of his duties, though not so spontaneous and enthusiastic as he is thoroughly persevering and tenacious. His great powers of mind are in his forehead and coronal brain. He enjoys society, but is more inclined to take the place of a teacher than as a companion socially. His interest in other people is connected largely with his benevolence and love of mankind to stimulate him to a higher level; to encourage him in the perfection of his character would be the *forte* of his mind. He is a natural teacher. His forehead being high and broad gives him a grasping mind; all kinds of knowledge are acceptable to him. He would go out of the way to get a new truth and make the most of what he had. His order is specially large, everything must be done with thoroughness whether of importance to himself or someone else. He is methodical in his life, and cautious. He is not wanting in general preceptive power, but he is particularly observing where his duty allows, and discharges every known duty promptly. His memory as applied to the ordinary news and doings of the day is ordinary, but whatever he studies up and takes thought of he never forgets. His real talents lay in his philosophy, his thought and power of understanding. He is quite at home in the investigation of new subjects, in analysing and applying new principles, and seeing the bearings of truth. He is specially intuitive in his judgment, and quick to take a hint with reference to ideas that are thrown out. He has a sense of the mirthful, and enjoys it highly. His top brain is decidedly large; all the moral faculties appear to stand out quite fully. Of the two, he is inclined to rely upon laws and facts rather than upon faith or mere learning, but he is large in veneration, which gives reverence for the sublime and the superior, and is not given to trifling. He is not extravagant in hope, but treads a new path carefully, and measures and weighs his whole subject. He does not speculate, but follows his intellect quite steadily. His firmness is connected with his adherence to truth and to principles. He has barely self-esteem enough to give him reasonable dignity without being proud or assuming. Love of family is quite a marked quality. He is interested in the domestic condition of society, and will be likely to put forth considerable effort to raise the family

standard higher than it is, but his real gifts are connected with his study of human nature, discernment of character, his sense of arrangement and love of order, his power to explain himself and his subject, and his general disposition to raise the standard of humanity. He is not a genius as a mechanic ; does not deal much in extravagant language nor immoderate, but deals in plain, simple, useful truths, such as others can be benefited by accepting.

The Archbishop has a stately, dignified face, with a classic outline, and possesses a clear resonant voice, with a manner full of earnestness. His Grace makes an excellent chairman as was proved at the late Church Congress.

L. N. F.

MENTAL ACTIVITY.

*Notes of Dr. Cuming's Address given at the
Medical Association.*

I THINK we should avoid, at least for the present, the more ambitious philosophical attempts which have exercised during many generations a powerful influence on some of the highest intellects of our race. We need not attempt the great metaphysical questions of substance, reality, the nature of consciousness, the ontological nature of space and time, the essence of casual action and the like. The domain of the clinical and pathological observer is a humbler, but, we may fairly congratulate ourselves, a more fruitful one. Just as biology concerns itself with the manifestations of life, and puts aside all theories regarding its nature and origin ; just as, in fact, all sciences have to resolutely set aside at the beginning a certain number of unsolved questions, so we may fairly relegate these problems to other and more competent authority. Nor do I think we should gain much at present by attempting to form any wide generalisations. A working hypothesis is no doubt of the highest utility in an experimental science, even if it ultimately comes to need to be corrected or to be altogether abandoned ; and, if the facts which come before us were capable of being called into existence or of being modified at pleasure, such a hypothesis might be necessary for our guidance. But we have to deal only with phenomena not susceptible of voluntary modifica-

tion, and what we have to do is simply to observe them with accuracy and to record them with fidelity. In these observations the materialist, who regards mind as a form of motion in the brain cells, and the spiritualist, who looks on it as an immaterial principle underlying the phenomena of consciousness although acting through the nervous system, can work together in perfect harmony, as the problem is to observe and analyse the phenomena brought before them. Even in this task there are limits set to our observations which it is not easy to surmount or evade. Physiologically it seems improbable that we shall ever be able to identify or to accurately estimate the results of mental activity in the shape of oxidation products of brain substance. The weight of the brain is about 2 per cent. of that of the body, and we can hardly doubt that in mental processes only a small portion of the cerebrum is employed at any given time. Besides, we have no measure of the relative degrees of intellectual exertion, and consequently cannot express them in terms of potential energy.

The nerve-cell must doubtless be accepted as the ultimate unit of the nervous mechanism and the nerve-fibre plexus as containing or constituting the channels of communication between these elementary units of cerebral activity. *When we come to localisation of function, with the exception of the motor areas and Broca's convolution and some further fairly definite areas concerned in disturbances of language, we have little which is well ascertained.** If, as is hoped, we can make out that in the brains of the insane special areas are differently and disproportionately affected, it is not unreasonable to suppose that these areas may ultimately be ascertained to be connected with special functions. Charlton Bastian long ago expressed the opinion that the posterior lobes of the cerebrum are the most important for intellectual purposes, and this view has received the high sanction of Hughlings Jackson. On the other hand, Bevan Lewis † lays down without hesitation the following principle regarding insanity. He states that while acute insanity may be regarded as a very general implication of the sphere of mind, and hence of a widespread disturbance of the cerebral cortex, its morbid results on the brain are decidedly concentrated on the *motor*

* The words, "Some further fairly definite areas concerned in disturbances of language we have little which is well ascertained," refer to the working hypothesis of the modern physiologist, psychologist, and anthropologist; and if the doctor will look carefully into the experiments that have been made, he will find that the fairly definite areas are no longer a vague hypothesis, but an actual reality.—
ED. P. M.

† A Text-book of Mental Diseases, p. 489.

*or fronto-parietal section of the hemispheres.** We learn from these conflicting opinions how little is definitely ascertained regarding the most important developments of cerebral activity. If I might indicate some definite lines on which medical observation might be of the greatest value in elucidating some unsettled problems, I should be inclined to name among others the aberrations and decay of memory. For this species of observation no apparatus is necessary and the opportunities are daily offering themselves and most abundantly to the busiest practitioner. Have we as yet any sufficient number of facts to justify the dissolution view of the decay of memory—that is, that in the decay of memory there is a certain definite sequence of events? The law of regression, as it has been formulated by Ribot, corresponds to the general principles of dissolution as a reversal of evolution which have been enunciated by Hughlings Jackson with his usual force and ability. The process of decay would then go on in a regular gradation, from the complex to the simple, from that which has been least thoroughly organised or incorporated into the brain to that which has been most so, from the least to the most automatic of our acquisitions, so that we first forget recent events, then intellectual acquirements, then the impressions which belong to the domain of the feelings, and, finally, how to perform automatic acts. All this, of course, depends upon a supposition that a physical modification of some of the very many millions of cells of the cortex of the brain takes place originally in connexion with the mental process which memory revives, this modification constituting the organic basis or anatomical substratum of memory. It is suggested that it is in this way that we can best comprehend the retention of impressions which are for a time absent from consciousness, just as it is the intercommunication of the cells which enables us to conceive how the impressions can be revived. But is this law fairly established? When we reflect on the enormous number of instances in which memory suffers notable, and, so to speak, pathological decay in age, it would seem easy to collect and classify such a number of facts as would put this doctrine on a secure footing. But I think this is far from being the

* We are glad to note that Dr. Cuming further states that, "If, as is hoped, we can make out that in the brains of the insane special areas are differently and disproportionately affected, it is not unreasonable to suppose that these areas may ultimately be ascertained to be connected with special functions." He would point out that Dr. Voisin, of Paris, has made observations among the mentally defective in that city, especially regarding the centre for cheerfulness (or hope), and it is this part that Bevan Lewis lays down as a principle, without hesitation, regarding the fronto-parietal section of the hemisphere of the insane.—ED. P. M.

case, and the number of exceptions seems to be so great that we may fairly regard this law as at present in this important sphere, unestablished. I have recently had the opportunity of witnessing a curious disturbance of memory in a young medical man, in whom multiple neuritis had arisen in consequence of much and premature exposure to cold after an attack of influenza. Besides the usual paralytic symptoms his memory became greatly impaired. He gradually reached the point of forgetting the year and the month, became hazy about his personal identity, and was doubtful who his wife was, and where he himself was residing. *Nec domus nec placens uxor* was retained in his memory, but he still had a very fair recollection of the leading diagnostic and therapeutic facts about his profession. He had forgotten a great deal, but the platysma myoides was fresh in his recollection, and the differential diagnosis of fluid in the pleura from consolidated lung was retained firmly. These facts, I cannot but think, to the no small credit of his teachers, were so organised in his brain that they resisted dissolution.

The phenomena of aphasia, which have been so much studied and about which so many curious facts have been ascertained, bring us in contact with a most interesting problem, the relations of thought to language. It is, I think, doubtful whether without words any continuous reasoning can be carried on, and it is pretty certain than in the absence of the symbol no abstract reasoning could take place. According to the fine illustration of Sir William Hamilton, all considerable progress in thought must be accompanied by a corresponding development in language. "You have all heard of the process of tunnelling through a sandbank. In this operation it is impossible to succeed unless every foot—nay, almost every inch—in our progress be secured by an arch of masonry before we attempt the excavation of another. Now, language is to the mind precisely what the arch is to the tunnel. The power of thinking and the power of excavation are not dependent on the words in the one case or the mason work in the other; but without these subsidiaries neither process could be carried on beyond its rudimentary commencement. Though, therefore, we allow that every movement forward in language must be determined by an antecedent movement forward in thought, still, unless thought be accompanied at each point of its evolution by a corresponding evolution of language its further development is arrested." Now, when we find that a special damage in one situation makes us lose the power of reviving the recol-

lection of the word, although we recognise it when heard ; that damage in another region so affects us that the sight of the word does not call up its mental representation, although we see the word plainly ; and that lesions in a third region have as their result that the sound of a word will not call up the corresponding idea, although we hear the sound of the word distinctly ; it is impossible not to recognise that here we have got a good way in making out the very mechanism of this potent instrument of thought, and it is difficult to see in what other way we could have arrived at a similar comprehension of these complex and refined activities. We learn from facts like these how great a part the observation of the dislocations and derangements of important functions can play in enabling us to better understand the scope and nature of the function itself. Few things are more noticeable in connection with this subject than the amount of research which is being conducted on the subject of experimental psychology. In this direction much of the best work has been done in the Leipsic psychological laboratory by and under the direction of Wundt, but kindred investigations are being made by various observers. The researches on the intensity and the time relations of sensation and of motor response to stimuli are of the highest interest. They have enabled us to ascertain the time occupied by mental acts, by the reproduction of impressions, by acts of association and by logical judgments. The amount and quality of work done in this direction justify the hope that psychology as a natural science will take its place beside physiology, and that the physical basis of mental activity will be more and more understood and elucidated. I have dwelt, at perhaps undue length, on this aspect of my subject, partly because it has a direct bearing on the relation of medical science to other branches of knowledge, and partly because it furnishes a convincing proof of the claim of medicine to take a leading part in the elucidation of important psychological problems.

Again, to take an instance of how medical experience can correct psychological speculation, we may, even if it be a little ungracious, select an example from the writings of a great thinker to whom many of us are under deep intellectual obligation—Herbert Spencer. This eminent psychologist attributes an importance to the circulation in the brain which physicians would be inclined to regard as excessive. He states that quickening of the circulation in the brain causes a rush of unusually vivid ideas, and makes the memory more distinct than usual. He contrasts the illusions of delirium as exemplifying the extreme vividness with which revived feel-

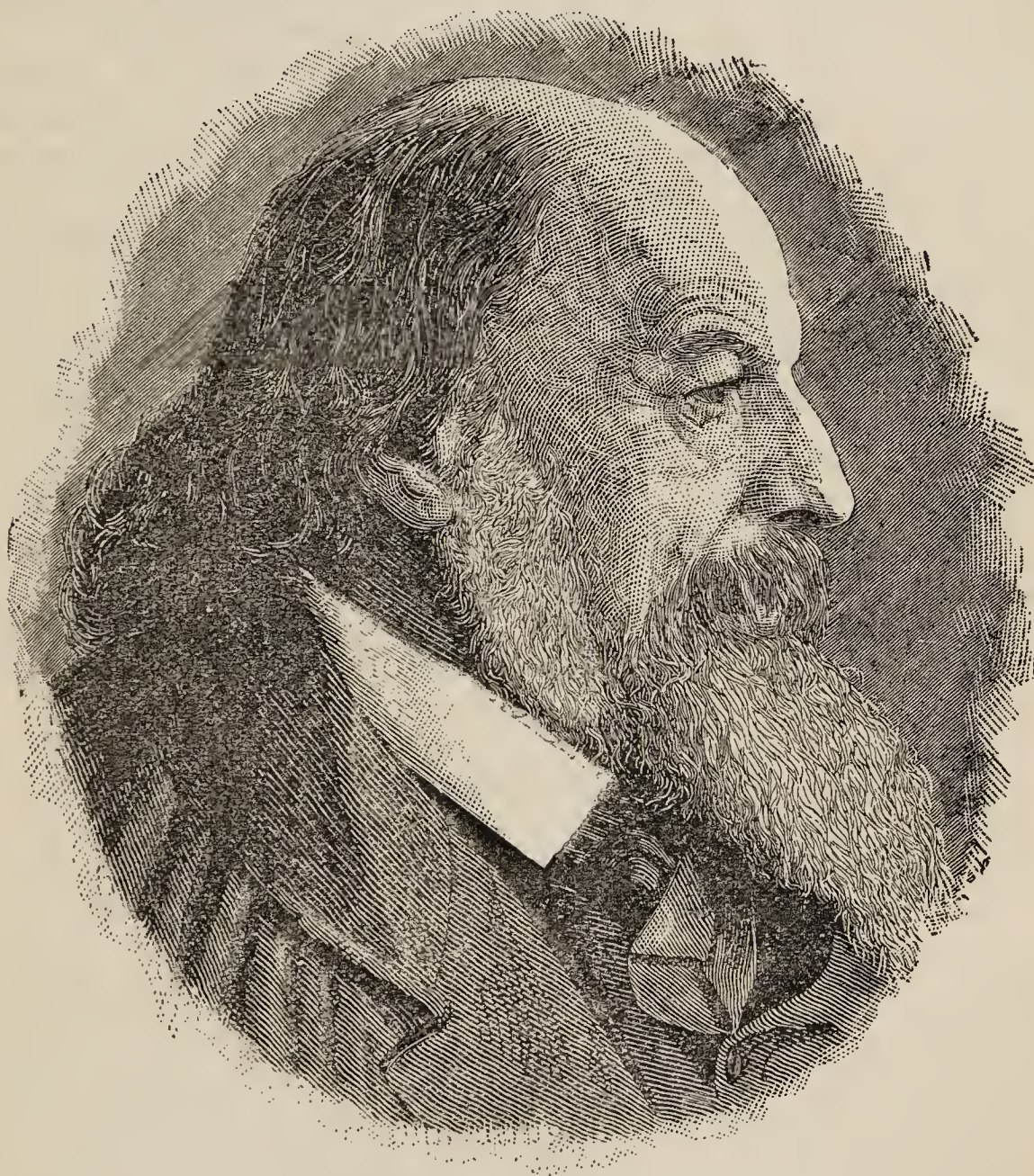
ings may rise when the cerebral circulation is excessive, and the loss of consciousness caused by cerebral anæmia as exemplifying the converse result. Now we have ample opportunity of knowing that anæmia is a fertile source of delirium, as the term "inanition delirium" indicates, and while there is much that is doubtful in that most obscure chapter of pathology which deals with hyperæmia of the brain, we know that it is at least as likely to produce somnolence and coma as it is to produce illusions. If the rapidity of the blood-current were so potent as Spencer supposes, physical exercise ought to heighten the receptivity of impressions, and there would be even a perceptible increase in the erect as compared with the recumbent position. As a matter of ordinary observation it is found to be difficult to collect our thoughts when the circulation is much accelerated by rapid exercise,* and hardly possible to carry on a train of reasoning requiring any considerable effort of memory. It has been urged by Schroeder van der Kolk that a free communication exists between the arteries and veins in the pia mater, so as to allow a considerable portion of the blood, when the circulation has been quickened, to pass away over the cortical substance without entering its tissue at all, thus avoiding the disturbance which its rapid passage through the capillaries of the brain would cause. In this way, as he has put it, the storm sweeps over the brain without our perceiving it.

MEN AND WOMEN OF OUR TIMES.

THE LATE ALFRED, LORD TENNYSON (Poet Laureate) had a marked outline of head and face, which indicated a distinct and individual character joined to aristocratic power. The organization as a whole was quite unique or individual. One of the prominent features of his face was his nose, which was long and protruding, and much might be said about it by those who give their attention to that feature. He had the power to choose words, to express himself, and to present his ideas in a great variety of forms. The organ of language with his intellect made him a great verbal critic, as well as enabled him to express himself in the best and varied style. Language

* Much depends upon the kind of exercise taken, when the circulation is much accelerated by rapid exercise of the body, the cerebral circulation is reduced; but if intellectual activity is supported by an emotional stimulus, and the brain works freely, easily, and rapidly, then the circulation will be noticeably poor in the extremities and the body generally.—ED. P. M.

was a very marked feature connected with his face. He had very prominent eyes, both large and full, which indicated that he was able to state all that he knew, and to use language in a free, full, correct style. He also possessed an unusually good verbal memory, as well as being a correct one. His intellect was of the perceptive practical kind. He had great power of observation, great memory of what he saw. He was able to criticise physical phenomena with great accuracy.



ALFRED, LORD TENNYSON (Poet Laureate).

(From Photo from "Cameron Studio.")

He had the qualifications for being a scholar, and of understanding both his own and foreign languages. He had a good eye for proportions, and had an excellent memory of place. He must have been extremely fond of geography, astronomy, travels, and so forth. His memory of what he saw, where he went, and what was going on around him was extraordinary. Sense of order was another prominent feature, giving method,

system, and disposition to be practical in what he did. He could not leave anything half done. His moral brain was decidedly good. His head was high, which indicated an elevated tone of mind; and his sources of enjoyment must have been refined. He was very steady, rather slow, firm, and persevering. He was manly, comparatively proud, and high-minded. He had a strong social nature. He was friendly, domesticated, and capable of drawing friends around him and of keeping them. There was nothing to indicate a low cast of mind or tendency to vulgarity. He may not have been perfect in every respect, but compared with men generally there must have been more uniform correctness of conduct in his life and actions, more circumspection, consistency of conduct, than is common among men. His poetry and poetical talents came from his strength of susceptibility, intensity of mental action, extensive powers of observation, expression, arrangement, rhythm, comparison, and intuition, and from the elevated and refined tone of his mind, joined to his great patience, perseverance, and good general memory.

Last month, England breathed its tender and reverent farewell to one of its "few supreme men" of poetic gift. He was born on August 5th, 1809, at Somersby, Lincs., and was one of twelve children. The Tennysons were of ancient and honourable descent, tracing their pedigree to the Plantagenets, through the old Norman family of D'Eyncourt. Alfred Tennyson's father was the Rev. George Clayton Tennyson, LL.D., Rector of Somersby, and Vicar of Grimsby, who married Elizabeth Fytche, daughter of the Vicar of the neighbouring town of Louth. For heredity's sake it will be interesting to take a look at the parents of so gifted a man. Dr. Tennyson was a man of a decidedly philosophic bent, but, like so many with great minds, he forgot the slight detail of giving his sons an object in life. He was tall, and remarkable for great strength, accomplished in many ways, "Something" it is said "of a poet, painter, architect, and musician, and also a considerable linguist and mathematician." The mother was a woman of considerable intellect, highly poetical and devoted to good and charitable deeds; a sweet, gentle, and most imaginative woman; so kind hearted, that it had passed into a proverb, and the wicked inhabitants of a neighbouring village used to bring their dogs to her window and beat them, in order to be bribed to leave off by the gentle lady, or to make advantageous bargains by selling her the worthless curs. She was intensely, fervently religious. The poet's own loving remembrance of her is revealed in the "Princess":—

One
 Not learned, save in gracious household ways,
 Not perfect, nay, but full of tender wants,
 No Angel, but a dearer being, all dipt
 In Angel instincts. . . .

It was from the mother, seemingly, that the sons inherited most of their poetic disposition.

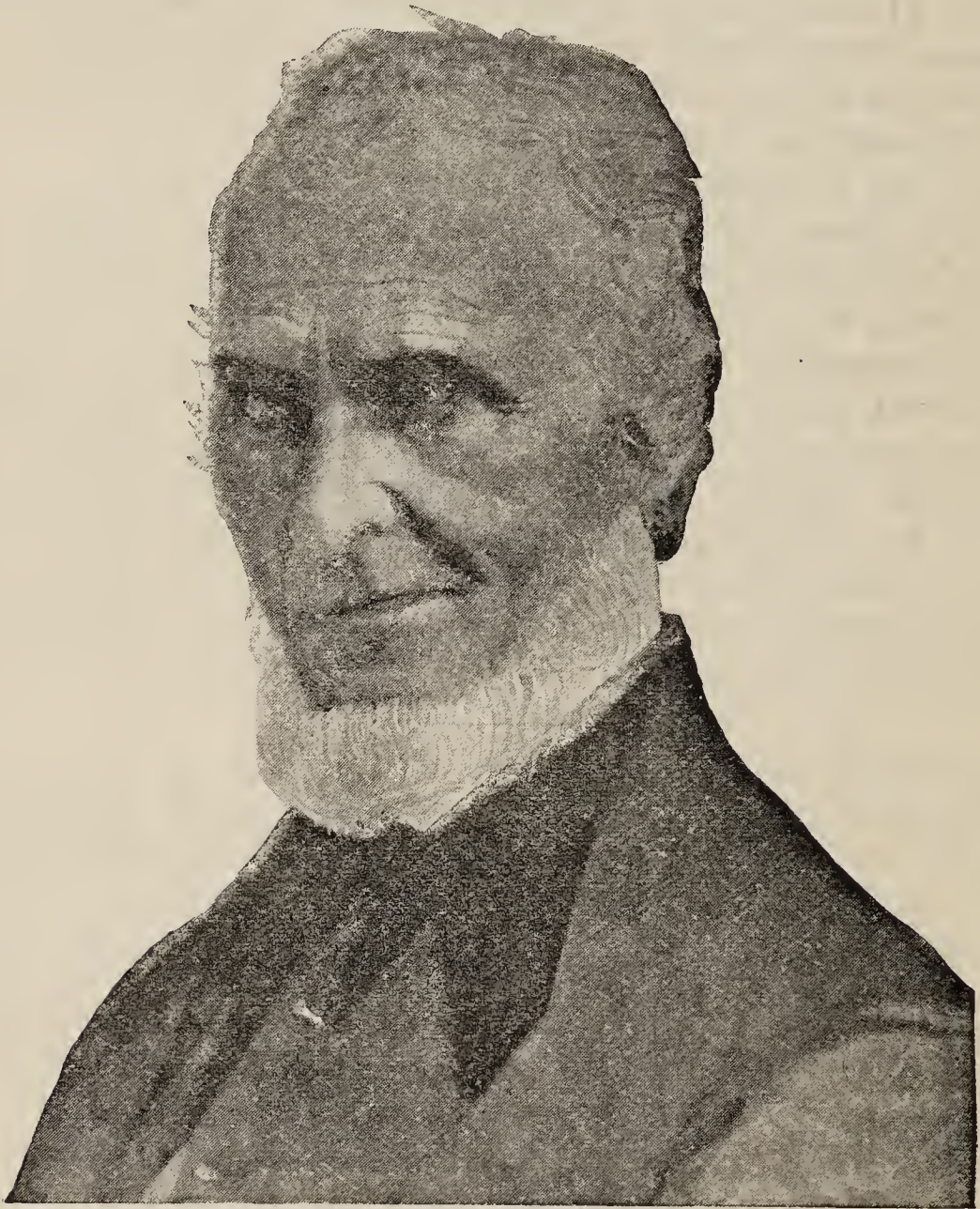
Bayard Taylor says of Tennyson, that he is very unlike the published portraits of him. He is tall and broadshouldered as a son of Anak, with hair, beard and eyes of southern darkness. Something in the lofty brow and aquiline nose suggests Dante, but such a deep mellow chest-voice never could have come from an Italian.

Mrs. Carlyle, writing to her husband, said, "He is a very handsome man, and a noble-hearted one, with something of the gipsy in his appearance, which for me is perfectly charming."

Carlyle, writing to Emerson of Tennyson, said, "He is one of the finest-looking men in the world. A great shock of rough dusty-dark hair, bright laughing hazel eyes, massive aquiline face, massive yet most delicate, of sallow-brown complexion almost Indian looking, clothes cynically loose, free and easy, smokes infinite tobacco. His voice is musical metallic, fit for loud laughter and piercing wail and all that may lie between; speech and speculation free and plenteous. I do not meet in these late decades, such company over a pipe."

THE LATE JOHN GREENLEAF WHITTIER had a marked motive mental temperament, which indicated industry and desire for constant employment. He never had time to fritter away or waste; few had a more industrious organization. He must have been constantly employed. He was no idler in the neighbourhood. He was remarkable for the power of his brain, and tenacity of life. He had no surplus fat to throw away or to spend in mere physical animal pleasure. He had so much of the motive power that he could not sit still unemployed, and so much of the mental temperament that he was continually throwing off new ideas. His head was large, and unusually high, the moral brain being exceedingly prominent. His natural love of mind must have been very elevated and refined. He probably was never known to use slang in his stories, or to sit and listen to it. All the moral faculties appear to have been large, giving a high tone to his mind, and whatever his religion was, there was no cant in it. He was not boisterous in disposition, and did not talk religion for the sake of attracting attention. He was singularly strongly marked in the superior brain. His

sympathies were wide awake for all mankind. His imitation helped to give versatility of manner, and enabled him to accommodate himself to circumstances. His consciousness of the spiritual was a very marked feature of his character. Veneration being large, made him universally respectful even to those who might be considered inferiors. His mind was not one that trifled with persons lower than himself. He may have been slow in making up his mind, but was



THE LATE JOHN GREENLEAF WHITTIER.

exceedingly tenacious and persevering. He could be relied upon in all that he intended to do. He would do what was right even if it were to his disadvantage, and would keep his word if he lost by it. He was very particular to mind his own business, and not interfere with others. He carried himself with dignity and self-respect. Approbativeness must have been rather large also. He was characterized for perceptive power, knowledge of men and things, and was a close observer. He

must have been a judge of character and motives. He was not a forward talker, but used very appropriate language. He was remarkable for his order, method and system, and must have had a superior judgment as applied to works of art. Weight was large, enabling him to walk with ease, carry himself straight, and balance himself in all his movements. Colour was large, and would be likely to show itself more particularly in appreciating flowers and colours in nature. He was a worshipper of nature. As a writer he had perception of wit, and a lively perception of the ridiculous, though he carefully restrained it. His imagination took a moral direction, hence he was not so extravagant in his language as he was elevated and refined. All things considered, his was one of the most marked heads for a phrenologist to dwell upon. A short verbal description only begins to tell what his real character was.

John Greenleaf Whittier, the well-known American poet, who passed homeward on September 7th, in his eighty-fourth year, was born on December 17th, 1807, at Haverhill, Mass. Like most other American men of mark, the blood of the Pilgrim Fathers was in his veins, his first ancestors having emigrated from England in 1638. His family had long been of the Quaker persuasion, and it was as a Quaker that he lived and died. His early years were passed in work upon his father's farm, and he received but a simple education. He proved to be a very prolific writer. From 1831 he produced something like forty volumes. Surely Whittier was right in deeming love the one thing needful, the one thing most worth giving. As he gave he has received. The love of a great people is his monument.

MISS CATHERINE WEED BARNES, of New York.—This lady possesses an exquisite organization. She has more than ordinary susceptibility of mind and quality refinement, tone, and exaltedness of thought. Hers is a mental temperament with hardly enough of the vital to give her all the energy she would like, hence she will be liable to overtax her strength in order to accomplish all her plans. Her brain is well filled out, particularly in the intellectual and moral qualities, and unusually active. She is not, however, wanting in the energetic, forcible, and executive elements of character, and she knows how to make them subservient to her intellect. She has a highly sensitive nature joined to a masculine strength, which she must have inherited either from her father, or else her mother must have been a very capable woman, and inherited combined energy and refinement from the

masculine side of her family. She is particularly gifted in artistic and literary qualities, which should fit her to enter into the enjoyment of those studies that require keen perception of beauty, critical knowledge, and intuitive analysis of subjects and objects. Ideality, spirituality, intuition, and benevolence are particularly large. She must show unusual sympathy for mankind, and a desire to elevate and improve the conditions of those less fortunate than herself. Her persevering spirit is remarkable. She never lets the bars down or leaves her work half finished. Though capable of doing many and varied kinds of work, she nevertheless knows



MISS CATHERINE WEED BARNES.

(Kindly lent by the *Photographic Review of Reviews*.)

how to put enthusiasm, ardour, and spirit into everything she undertakes. As a teacher, speaker, or lecturer, she would be elegant in the expression of her thoughts, logical in the arrangement of her ideas, aspiring in her plans of work, and accurate in her technicalities. She does nothing by halves, and will spare neither time, expense, or energy in perfecting her work. After dictating these and many more details of her character, she told us that she was one of the editors of the *American Amateur Photographer*; that she edits a special department in *Outing*, and writes photographic articles for *Frank Leslie's Weekly*.

Speaking of her speaking abilities, she said she had read papers before the New York literary and photographic societies, and had lectured before several clubs in London. She was just completing an extensive tour in England and the Continent, and had over sixteen hundred undeveloped plates to take home with her for future editorial use. We had heard of Miss Barnes by repute, and of her endeavours to interest women in her favourite profession, and were particularly pleased to be able to place our hands on her head without knowing whom we were examining.

ORION.

HOW TO MAKE THE MOST OF ONE'S INTELLECTUAL FACULTIES.

CONSIDERING the ever-widening spheres of the arts and sciences, the imperative calls of social and political life, the ever-increasing demands of education, and the inadequacy of our days, the problem, how to make the most of one's intellectual faculties rises daily in significance. As Ruskin puts it: "Life is really too disgustingly short; one has only got one's materials together by the time one can no more use them."

How to do, then, the maximum of intellectual work with the minimum expenditure of energy, is a question of special interest to brain workers. The Americans have always been known to place great value on time, to live faster, *i.e.*, to accomplish more than we do in a limited space of time; moreover Americans are no lovers of mere theory, but appreciate those results of scientific research best which they can put into practice. No wonder that Americans have endeavoured to solve this problem of economy in intellectual work. Let us see how one of them, Mr. W. H. Burnham, has accomplished the task.

He assumes the fundamental postulate of physiological psychology—"that every mental process is the correlative of a physical process"—and "that those processes of thought, which are the physical aspect of thought, involve the dissipation of energy." Granting that, it is evident that most people waste energy by habits of mental prodigality. "Unessential ideas should be excluded from consciousness." This is the first truth, but it requires an illustration. Everyone has noticed how the child, learning to write, moves not only its hands, but its tongue, the muscles

of the face, and sometimes even those of its feet. When it has mastered the art, there is the proper association in the nerve-elements corresponding to the motive organs, and unessential movements are excluded. A similar lack of co-ordination occurs in the intellectual activity of the untrained. The unessential ideas that enter consciousness are of all kinds and of all degrees of intensity, from those that result in trivial ideomotor acts—as, for example, when one engaged in conversation automatically picks up a scrap of paper from the floor—through all sorts of whims, pedantries, and distractions, to the anarchy of mind seen in some pathological cases. Undue self-consciousness, pessimistic anxiety about the future, extreme persistence in one kind of activity from mere force of inertia, indecision, pedantic attention to trivial things—all are modes of spendthrift activity by which nervous energy is wasted. Let me give a further illustration, a more familiar example, of my own frequent experience. A student is passing an examination; he is ill-prepared and nervous. The question he is answering, or the problem he is solving, occupies the focus of consciousness, but in the background are such distracting ideas as the fear of failure, the thought that there will not be time enough to answer all the questions, the query whether it were not better to omit this particular question, the self-conscious fear lest he is growing nervous, the sound of the footsteps of the examiner or his assistants, the scratching of a neighbour's pen, and the like. Most pupils know the waste caused by such distracting ideas. Even if by an effort of will these inharmonious elements are kept strictly in the background, still there is some loss of energy, and the effort of will demanded to repress them also takes energy. The first principle of economic mental activity, then, is expressed in the truism that “unessential ideas should be excluded from consciousness.”

Mr. Burnham next speaks of “unconscious psychic processes.” The first thing to notice is that a very large part of our daily activity is performed automatically or unconsciously, and that all acts so executed are done with the minimum expenditure of energy. Whenever we have to think what to do, energy for both the thought and the act is required. When we perform an act unconsciously, energy for the act only is demanded. Fortunately it is a law of our activity that consciousness tends to desert those processes where it is no longer needed.

There is reason to credit still higher work to our unconscious processes. I need only call attention to the well known phenomenon of “trying to recollect” some name or

event. Sometimes no effort of the will can do it, but we wait, and by and by, when we are engaged in something else, the desired idea springs up out of the unconscious. Our decisions in great matters as well as in small show how we trust our unconscious processes. Life would be too short for the humblest activities if we must bring into consciousness all the arguments, *pro* and *con*, for an act, and consider its bearings and results. A large part of our daily activity is governed by motives and processes that never rise into clear consciousness. Consciousness not only blunders, but it is too slow. The man who has to think of his manners is not always polite; for he does not think quickly enough. The man whose morality has not become automatic will sometimes be surprised in a fault. Even in the most important matters in life we distrust consciousness. We wish to sleep over a matter, not only that our conscious processes may be clearer, but that we may have the help of that unformulated knowledge, which, at most, can be said to be only in the background of consciousness. In important matters we often feel confident that a certain course is the right one—as we know an absent road or a face without being able to describe it—but cannot formulate the grounds for our decision in words.

“Economy demands conformity to the laws of our unconscious cerebral processes.” We know very little of these laws, but both experiment and common observation show that a tendency to rhythmic activity is a law of our nature. Many handicraftsmen keep time at their work. A careful ear detects the rhythmic articulation of our ordinary speech. There is probably a physiological ground for all this. As heart and lungs have a well defined rhythmic action, so probably the brain acts in rhythmic periods of stability and instability. A good rhythm in our intellectual work is an economic device. If we have a regular hour for study or for work upon any particular subject, soon at that hour the unconscious favours us. It is largely in one’s power to establish a good rhythm by regularity in one’s activity.

“An unconscious preparation is necessary to enable consciousness to re-act advantageously upon a subject.” A certain preparation is necessary, in order that anything new may be comprehended. If you would be understood, your hearer must already know something of what you would tell him. If your experience is utterly different from his, you may talk till you faint, or you might as well speak in an unknown tongue; for your hearer has no data by which to interpret what you say. Economy demands not only that there shall

be an unconscious preparation for each new impression, but that each subject of study shall be undertaken at just the time when the learner's growing brain is ready for it. As Dr. James has said : " There is a happy moment for fixing skill in drawing, for making boys collectors in natural history, and presently, dissectors and botanists, then for initiating them into the wonders of physical and chemical law. Later, introspective psychology, and the metaphysical and religious mysteries, take their turn ; and, last of all, the drama of human affairs and worldly wisdom in the widest sense of the term." To detect the moment of the instinctive readiness for the subject is, then, the first duty of every educator.

" Economy demands that there shall be no unessential elements in our unconscious processes." A large part of what is now in the unconscious was once in consciousness. All our conscious activity modifies what is unconscious. The study of memory furnishes an excellent illustration of the unessential elements in our unconscious processes. One learns a poem, and a year afterwards has forgotten it ; but a certain hidden skill or unconscious power persists. If the poem be learned anew, much less time will be required than was necessary at first, or than would be required to learn a similar poem of equal length that has not been studied. This unconscious skill is very valuable. Yet, anything unessential that has been learned leaves an unconscious element that—apart of course from any possible training of the mind that may have resulted—represents so much useless power. If a boy learns all the notes and exceptions in a Latin Grammar, he will probably be fortunate enough to forget them, but the unconscious skill that would make it easier for him to learn those particular notes a second time, is, for most boys, an unessential element in the unconscious. A practical inference would be that studies that both train the mind and leave a persisting element valuable in itself, are preferable to those that merely train the mind and leave an unessential element in the unconscious.

Now we can see why it is so important that unessential elements should be excluded from consciousness. It matters comparatively little for to-day whether a child focuses its attention, learns its lesson in an hour, and then has time to play, or dreams and idles over the lessons for two hours. But the way the clearly focused attention modifies the nerve centres of the brain is of the utmost importance. The child that concentrates its attention when it works will soon have the principles of economic activity wrought into the very fibres of its brain.

Granting that the presence of unessential ideas in consciousness causes loss of energy, the question arises, How can one help it? We know nothing of these ideas until we are conscious of them, and then the mischief is done. True, but let us seek the cause of these unessential ideas. The cause is an unstable condition of the attention. What is then the condition of a stable attention? Ribot, Horwicz, and others, maintain that spontaneous attention is the basis of all attention, and have attempted to show that this is dependent upon the feelings or emotions. The animal crouching for its prey, the child gazing at a common-place spectacle, the assassin waiting for his victim, the mathematician studying a problem, are attentive, because the prey, the spectacle, the thought of the victim, the problem to be solved, arouse in them an intense and durable emotion. Without emotion there would be no attention, but while emotion lasts so does attention.

“Intellectual activity,” then, “is natural and economical when one works with the support of an emotional stimulus.” The economy of working with an emotional stimulus may be illustrated by what is familiar to everyone. Not only do we see that the man who works for love, for revenge, for an ardent ambition, can do more work than his neighbour who has no all-absorbing aim, but in the common-place matters of daily life the same principle is illustrated. Why is it often so much easier to learn a lesson, or write an address, when the task must be finished to-day, than when it need not be completed for a month? Simply because the emotional impulse is concentrated, and there is little chance for unessential ideas to enter consciousness. From what has been said, it follows of course that we do our most economical work in studying and investigating those subjects in which we have a spontaneous interest. Again, other things being equal, we do our most economical work when in the mood for it. A high ideal or manly ambition are great stimulants to activity. But the emotion should not be violent, for, as is well-known, purely intellectual over-pressure seldom leads to insanity, but among the most frequent causes is over-strain of the emotions. The question: “How to make the most of one’s intellectual faculties?” may be answered then in two sentences. It can be done by regular and repeated attempts to turn the attention to any particular subject, and concentrating one’s attention by the aid of an emotional impulse.

BERNARD HOLLANDER.

“The individual withers, and the world grows more and more.”

TENNYSON.

ANTHROPOLOGY.

BY ALEXANDER MACALISTER, M.D., F.R.S., PROFESSOR
OF ANATOMY IN THE UNIVERSITY OF CAMBRIDGE.

Paper read before the British Association.

(Continued from page 407.)

THE second factor which determines the shape of the individual skull is the size of the teeth. That these differ among different races is a matter of common observation; thus the average area of the crowns of the upper-jaw teeth in the male Australian is 1,536 sq. mm., while in the average Englishman it is only 1,286 sq. mm., less than 84 per cent. of that size.*

It is easy to understand how natural selection will tend to increase the size of the teeth among those races whose modes of feeding are not aided by the cook or the cutler; and how, on the other hand, the progress of civilised habits, assisted by the craft of the dentist, interferes with the action of selection in this matter among the more cultured races.

For larger teeth a more extensive alveolar arch of implantation is necessary; and as the two jaws are commensurately developed, the lower jaw of the macrodental races exceeds that of meso- or microdental races in weight. Thus that of a male Australian exceeds that of the average Englishman in the proportion of 100 : 91.

To work this heavier jaw more powerful muscles are needed. In the average well-developed Englishman with perfect teeth the weight of the fleshy portion of the great jaw muscles, masseters and temporals, is 60 grammes, while the weight of those as ascertained in two Australians was 74 grammes.

Correlated with this greater musculature a sharper definition of the areas for the attachments of the jaw-muscles is required. The muscular fascicles are approximately of uniform size in both microdents and macrodents, as the range of motion of the jaw differs little in different races; but when the skull is smaller on account of the smaller size of the brain which it contains, the temporal crest ascends higher on the side-wall. In the average Englishman the temporal crests at their points of greatest approximation anteriorly across the brows are 112 mm. apart, but in the Australian they are only separated by 103 mm.: the interstephanic distances in these two are respectively 132 and 114 mm.

The more powerful stroke of the mandibular teeth upon

* These and the succeeding averages are from my own measurements, taken from never less than ten individual cases.

the anvil of the upper jaw teeth in macrodents renders necessary a proportionally stronger construction of the bases of support for the upper alveolar arch. In any skull this arch requires to be solidly connected to the wall of the brain-case to which the shock of the impact is ultimately transmitted, and in order to protect from pressure the delicate intervening organs of sight and smell, the connexion is accomplished by the reversed arches of the infraorbital margins with their piers, malar and maxillary, founded on the frontal angular processes. These foundations are tied together by the strong supraorbital ridge, so that the whole orbital edge is a ring, made up of the hardest and toughest bone in the skeleton.

A twofold modification of this arrangement is required in the macrodent skull. The bony circum-orbital ring becomes stronger, especially along its lateral piers; and also as the alveolar arch is longer, and consequently projects farther forward, its basis of support must be extended to meet and bear the malar and maxillary piers. But macrodents are often microcephalic, and therefore the frontal region of the skull must be adjusted to form a foundation for this arch. In the average English male skull, held with its visual axes horizontal, a perpendicular dropped from the anterior-surface of the fronto-nasal suture will cut the plane of the alveolar arch between the premolar teeth or through the first premolar. In an Australian skull the perpendicular cuts the horizontal plane at the anterior border of the first molar teeth.

It is obvious, therefore, that to ensure firmness, the piers of the arches must be obliquely set; hence the jaw is prognathous, but it is also needful that the supraorbital arcade should be advanced to meet and bear these piers, as the mandibular stroke is always vertical.

But the inner layer of the skull is moulded on the small frontal lobes of the brain, so this forward extension must affect only the much thicker and tougher outer table of the skull, which, at the period of the second dentition, here separates from the inner table, the interval becoming lined by an extension of the mucosa of the anterior ethmoidal cell. In this way an air space, the frontal sinus, is formed, whose development is thus directly correlated to the two factors of brain development and size of teeth. If the frontal lobes are narrow in a macrodent skull, then the foundations of the outer or malar piers of the orbital arch must be extended outwards as well as forwards, the external angular process becoming a prominent abutment at the end of a strong low-browed supraorbital arch, whose overhanging edge gives to the orbital aperture a diminished vertical height.

The crania of the two most macrodont races of mankind, Australian and African, differ in the relation of the jaw to the frontal bone. In the microcephalic Australian, the maxillæ are founded upon the under side of the shelf-like projection of the outer table of the frontal, which juts out as a buttress to bear it. On the other hand the nasal processes of the mesocephalic negro ascend with greater obliquity to abut on the frontal, and have, by their convergence, crushed the nasal bones altogether, and caused their coalescence and diminution.

The crania of the two most microcephalic races present distinctive features of contrast along the same lines. The Bushman's skull is usually orthognathous, with a straight forehead and a shallow frontonasal recess, while the Australian skull is prognathous with heavy overhanging brows. These conditions are correlated to the mesodontism of the Bushman and the macrodontism of the Australian respectively.

In the course of the examination of the relations of brain development to skull growth, some interesting collateral points are elicited. The frontal bone grows from lateral symmetrical centres, which medially coalesce, union taking place usually between the second and sixth years of age. It has been noticed by anthropologists that metopism, as the anomalous non-union of the halves of this bone has been termed, is rare among microcephalic races, occurring only in about 1 per cent. among Australian skulls. Increased growth of the frontal lobes as the physical accompaniment of increased intellectual activity interposes an obstacle to the easy closure of this median suture, and so in such races as the ancient Egyptian, with a broader forehead, metopism becomes commoner, rising to 7 per cent. In modern civilised races the percentage ranges from 5 to 10. In following out the details of this enumeration, I have spoken as if the microdontal condition had been the primary one, whereas all the available evidence leads to show that the contrary was the case. The characters of all the early crania, Neanderthal, Engis, and Cromagnon, are those of macrodents. The progress has been from the macrodont to the microdont, as it probably was from the microcephalic to the macrocephalic.

The effects of the variations in size of the teeth are numerous and far-reaching. The fluctuation in the weight of the jaw depending on these variations has an important influence on the centre of gravity of the head, and affects the set of the skull on the vertebral column. This leads to a consequent change in the axes of the occipital condyles, and it is one of the factors which determines the size of the neck-

muscles, and therefore the degree of prominence of the nuchal crests and mastoid process.

As the teeth and alveolar arches constitute a part of the apparatus for articulate speech, so these varieties in dental development are not without considerable influence on the nature of the sound produced. The necessarily larger alveolar arch of the macrodont is hypseloid or elliptical, more especially when it has to be supported on a narrow frontal region, and this is associated with a more extensive and flatter palatine surface.

It is worthy of note that the five sets of muscular fibres, whose function it is to close laterally the flask-like air-space between the tongue and the palate, are much less distinct and smaller in the tongues of the Australians which I have examined than in the tongues of ordinary Europeans.

There is a wide field open to the anatomical anthropologist in this investigation of the physical basis of dialect. It is one which requires minute and careful work, but it will repay any student who can obtain the material, and who takes time and opportunity to follow it out. The anatomical side of phonology is yet an imperfectly known subject, if one may judge by the crudeness of the descriptions of the mechanism of the several sounds to be found even in the most recent textbooks. As a preliminary step in this direction we are in urgent need of an appropriate nomenclature and an accurate description of the muscular fibres of the tongue. The importance of such a work can be estimated when we remember that there is not one of the 260 possible consonantal sounds known to the phonologist which is not capable of expression in terms of lingual, labial, and palatine musculature.

The acquisition of articulate speech became possible to man only when his alveolar arch and palatine area became shortened and widened, and when his tongue, by its accommodation to the modified mouth, became shorter and more horizontally flattened, and the higher refinements of pronunciation depend for their production upon more extensive modifications in the same directions.

I can only allude now very briefly to the effects of the third set of factors, the sizes of the sense organs, on the conformation of the skull. We have already noted that the shape and the size of the orbital opening depend on the jaw as much as on the eye. A careful set of measurements has convinced me that the relative or absolute capacity of the orbital cavity is of very little significance as a characteristic of race. The microseme Australian orbit and the megaseme Kanaka are practically of the same capacity, and the eyeballs

of the two Australians that I have had the opportunity of examining are a little larger than those of the average of mesoseme Englishmen.

The nasal fossæ are more variable in size than the orbits, but the superficial area of their lining and their capacity are harder to measure, and bear no constant proportion to the size of their apertures, because it is impossible without destroying the skull to shut off the large air sinuses from the nasal fossæ proper for purposes of measurement. Thus the most leptorhine of races, the Esquimaux, with an average nasal index of 437 has a nasal capacity of 55 c.c.m., equal to that of the platyrhine Australian, whose average is 54.5, and both exceed the capacity of the leptorhine English, which average about 50 c.c.m. There is an intimate and easily proved connection between dental size and the extent of the nasal floor and of the pyriform aperture.

These are but a few of the points which a scientific craniometry should take into consideration. There are many others to which I cannot now refer, but which will naturally occur to the thoughtful anatomist.

In this rapid review of the physical side of our subject the study of these race-characters naturally suggests the vexed question as to the hereditary transmission of acquired peculiarities. This is too large a controversy for us now to engage in, but in the special instances before us there are grounds for the presumption that these characters of microdontism and megacephaly have been acquired at some stage in the ancestral history of humanity, and that they are respectively correlated, with diminution of use in the one case, and increase of activity in the other. It is a matter of observation that these qualities have become hereditary, and the point at issue is not the fact, but the mechanism, of the transmission. We know that use or disuse affects the development of structure in the individual, and it is hard to believe that the persistent disuse of a part through successive generations does not exercise a cumulative influence on its ultimate condition.

There is a statement in reference to one of these characters which has gained an entrance into the text-books, to the effect that the human alveolar arch is shortening, and that the last molar tooth is being crowded out of existence. I have examined 400 crania of men of the long, and round-barrow races, Romano-British and early Saxon, and have not found among all these a single instance of absence of the third molar or of overcrowded teeth. On the other hand, out of 200 ancient Egyptian skulls 9 per cent. showed displacement or disease, and $1\frac{1}{2}$ per cent. show the want of one molar tooth.

Out of 200 modern English skulls there was no third molar tooth in 1 per cent. So far this seems to confirm the current opinion.

Yet the whole history of the organism bears testimony to the marvellous persistence of parts in spite of contumely and disuse. Take, for example, the present position of the little toe in man. We know not the condition of this digit in prehistoric man, and have but little information as to its state among savage tribes at the present day, but we do know that in civilised peoples, whose feet are from infancy subjected to conditions of restraint, it is an imperfect organ—

Of every function shorn
Except to act as basis for a corn.

In 1 per cent. of adults the second and third joints have ankylosed, in 3 per cent. the joint between them is rudimentary, with scarcely a trace of a cavity, in 20 per cent. of feet the organ has lost one or more of its normal complement of muscles. But though shorn of some of its elements, and with others as mere shreds, the toe persists, and he would be a bold prophet who would venture to forecast how many generations of booted ancestry would suffice to eliminate it from the normal man.

Nevertheless, although it is difficult to demonstrate, in the present imperfect state of knowledge, the method whereby race-characters have originated, I think that the most of our anthropologists at least covertly adopt the philosophy of the ancient proverb, "The fathers have eaten sour grapes and the children's teeth are set on edge."

But there are other branches of anthropology of far greater interest than these simple problems upon which we have tarried so long. The study of man's intellectual nature is equally a part of our subject, and the outcomes of that nature are to be traced in the tripartite record of human progress which we call the history of culture. It is ours to trace the progress of man's inventions and their fruits in language and the arts, the direct products of the human mind. It is also ours to follow the history of man's discovery of those secrets of nature to the unfolding of which we give the name of science. The task is also ours to enquire into that largest and most important of all sections of the history of culture, which deals with the relation of human life to the unseen world, and to disentangle out of the complex network of religion, mythology, and ritual those elements which are real truths, either discovered by the exercise of man's reason, or learned by him in ways whereof science takes no account, from those adventitious and invented products of human fear and fancy which

obscure the view of the central realities. In this country it matters less that our time forbids us to wander in these fascinating fields wherein the anthropologist loves to linger, as the munificent benefaction of Lord Gifford has ensured that there shall be an annual fourfold presentation of the subject before the students of our Scottish universities. There is no fear that interest in these questions will flag for want of diversity in the method of treatment or of varieties in the standpoints of the successive Gifford lecturers.

From the ground of our present knowledge we can but faintly forecast the future of anthropology, when its range is extended by further research, and when it is purged of fancies, false analogies, and imperfect observations. It may be that there is in store for us a clearer view of the past history of man, of the place and time of his first appearance, of his primitive character, and of his progress. But has this knowledge, interesting as it may be for its own sake, any bearing on the future of mankind? Hitherto growth in knowledge has not been accompanied with a commensurate increase in the sum of human happiness, but this is probably due to the imperfection which characterises even our most advanced attainments. For example, while the medical and sanitary sciences, by their progress, are diminishing the dangers which beset humanity, they have also been the means of preserving and permitting the perpetuation of the weaklings of the race, which, had natural selection exercised its unhindered sway, would have been crushed out of existence in the struggle for life.

It is, however, of the essence of true scientific knowledge, when perfected, that it enables us to predict, and if we ever rise to the possession of a true appreciation of the influences which have affected mankind in the past, we should endeavour to learn how to direct these influences in the future that they shall work for the progress of the race. With such a knowledge we shall be able to advance in that practical branch of anthropology, the science of education; and so to guide and foster the physical, intellectual, and moral growth of the individual that he will be enabled to exercise all his powers in the best possible directions. And lastly, we shall make progress in that kindred department, Sociology, the study of which does for the community what the science of education does for the individual. Is it a dream that the future has in store for us such an Anthropological Utopia?

“Kind hearts are more than coronets,
And simple faith than Norman blood.”—TENNYSON.

TRIP TO WONDERLAND.

Notes of a Lecture given at the Fowler Institute.

AN instructive illustrated lecture was given by Mr. Milligan, F.R.A.S., entitled "Wonderland," or a visit to Yellowstone National Park, U.S., America. The lecturer explained the visit was taken owing to his being a member of the great grandfather of all missionary societies, viz., the New England Company, formed in 1649, and now working amongst the Indians of America, and that he was appointed to visit and report. He pointed out that owing to the triumphs of steam, time was almost reduced to vanishing point, and that it was possible in twelve days to travel from England to the far-off Rocky Mountains. The ocean journey was shown, and a succession of unique views, including 140 fine R.R. Engines, also beautiful upland scenery, fertile valleys, prairies, pine-clad, snow-crowned mountains, wild gorges, mighty waterfalls, Indians and Buffaloes were produced, and one felt as if just returned from an actual tour through the fierce grand beauty of American scenery. The most distant point reached was Vancouver Island, and the journey was by N.P.R.R. The point of interest was the famous Park, which is 6,000 or 7,000 feet above sea level in the Rockies, and covers 3,500 square miles. It has been secured and devoted to the American nation for ever. Everything here is on a large scale. The hot springs form terraces, and showing a fine Pink Terrace of New Zealand, the lecturer referred to the great difference in size. Where the New Zealand were 90 feet high the Yellowstone Park were 900 feet high. Their components are silicas, carbonates, and magnesia; their coloring due to the divers mineral permeates when in solution. From the Mammoth hot springs one could see three square miles of formation. When the formations were damp they hardened; when they became dry aerial denudation took place, and the detritus was carried, as white dust, thousands of miles. This dust caused the watch of one of the party to stop. Within three days a terrace became, when dry, dead, and thousands of tons of matter were blown away. About 75 per cent. of the Park was densely forested, and immense tracts became devastated by fires. The glare from the terraces was like snow, so brilliant was the whiteness of the deposits. The Norris Geyser basin gave out sulphur vapour and carbonic acid gas. Old Faithful was a geyser sending out, like many others, a column of water 200 feet high, at regular

intervals of sixty-five minutes. Others, smaller, were called for obvious reasons, "Minute men." Men had put clothes into these geysers to be washed. Cotton came out all right, but woollen became disintegrated. The surface of surrounding ground was very friable, and persons might fall in and be scalded, so notice boards were put all round. The place abounded with many wild animals. The last of the renowned Buffaloes are there; no shooting is allowed, and all intoxicating liquor is rigorously excluded. Everybody should see this real Fairy-land. Every railway tries to get there. The best artists paint and photograph its beauties, men renew their youth, and women become more beautiful from having breathed its pure air and inhaled the fragrance of its flowers. Boys become wiser, and girls fairer from having visited it. There is but one Park where all nationalities and varied politics put away the sword. Englishmen, Frenchmen, Irishmen, Scotchmen and Germans throw off the prefix and the grand man, the Human, remain to unite together in admiration of the Almighty's pictures so lavishly displayed in this remarkable spot. May it be at once the harbinger of peace and sobriety to the world. The views were shown by oxyhydrogen light, dexterously manipulated by Mr. Milligan, B.W.T.A.

Mr. Milligan is a remarkable man, few get through more philanthropic work than he. He is exceedingly ingenious and fond of everything beautiful and sublime, and delights in putting the finishing touches to whatever he takes hold of. He admitted at the close, that Mr. Fowler had advised him many years ago to take up public work, and he had been able to follow that advice with considerable success. The lucid way in which he described his travels, indicated that he was thoroughly at home with his subject, and enjoyed explaining to others what he has seen, and giving them the advantage of his experience.

A PLEA FOR OUR CHILDRENS' PHRENOLOGY.

WE agree with Dr. Sargent that there is a class of people who suffer from over-worked brains who have no right to suffer. I refer to children under seven years of age, whose parents understand nothing of the laws of physiology, but feel that no time should be lost in getting the child to school. The brighter the child, the harder he is pushed. During the first seven years of life the brain develops very fast. All that is done to crowd it during this time is done to the child's

disadvantage. During this period attention should be given to developing a good constitution, remembering that the brain will go forward fast enough after that age. Parents make a mistake if they send their children to school before they are seven years of age. There is no doubt about this. All physiologists agree on this point, and there is no sound argument against it. Do let us study our childrens' brain capacity more thoroughly.

J. A. F.

Hygienic and Home Department.

WHAT TO TEACH YOUR BOYS.

- TEACH them to be useful.
- Teach them to be truthful.
- Teach them to be manly.
- Teach them to be polite in manners.
- Teach them the value of time and money.
- Teach them to avoid tobacco and strong drink.
- Teach them careful and correct business habits.
- Teach them, by example, how to do things well.
- Teach them to ride, drive, jump, run and swim.
- Teach them how to get the most for their money.
- Teach them the habits of cleanliness and good order.
- Teach them to avoid profane and indecent language.
- Teach them to be neat and genteel in their appearance.
- Teach them to be polite to one another, helpful to the old and weak, and kind to animals.

DRESS OF SCHOOL-GIRLS. — A gifted woman, discoursing on the injurious dress of many young school-girls and their prospects of success in our public schools and colleges, says: "By means of corsets, band, or belt, the school-girl's liver is divided into an upper and lower section, the one forced up to crowd the heart, lungs, and stomach, the other down, to find room as it can where there is no room for it. Every vital organ is displaced or cramped. Blockades are established by tight shoes, tight gloves, tight garters, tight corsets, or, still more murderous, tight skirt bands; and there the blood must run by extra force of pumping every time it passes from the heart to the extremities or back. To study in such a costume is to burn the candle at both ends; but the spirit of the age is upon her; the ages to come press on her; study she must, die she must." Another woman, on hearing a student remark that men have more endurance than women, answered that she would like to see the thirteen hundred young men in the University laced up in steel-ribbed corsets, with heavy skirts, paniers, high heels, and dozens of hair-pins sticking in their scalps, cooped up in the house, year

after year, with no exhilarating exercise, no hopes, aims, ambitions in life, and see if they could stand it as well as the girls. Nothing, she added, but the fact that women have powers of endurance, enables them to survive the present *regime* to which custom dooms the sex.

WORK AND LONGEVITY.—Chauncey M. Depew said, in a recent speech : —“ I have observed that health and longevity are indissolubly connected with work. Work furnishes the ozone for the lungs, the appetite and the digestion which support vigorous life, the occupation which keeps the brain active and expansive. When a man from fifty upward retires, as he says, for a rest, his intellectual powers become turbid, his circulation sluggish, his stomach a burden, and the coffin his home. Bismarck at seventy-five ruling Germany, Thiers at eighty France, Gortschakoff at eighty-one Russia, Gladstone at eighty-two a power in Great Britian, Simon Cameron at ninety taking his first outing abroad, and enjoying all the fatigues as well as the delights of a London season, illustrate the recuperative powers of work. These men never ceased to exercise to the extent of their abilities their faculties in their chosen lines. I have seen Gladstone moving along the street with the briskness of a man of twenty-five. I have heard him at the dinner table discourse for hours upon every living question, as if he would live long enough to solve each one of them. I have sat with him in a box at the opera when the movement upon the stage absorbed him as completely as it did the musical critic in the orchestra chair : but his judgment was moved by the fresh enthusiasm of youth.”

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,

LUDGATE CIRCUS, E.C., NOVEMBER, 1892.

TENNYSON. IT is truly astonishing how near a mind may be to perceiving and accepting a truth, and yet be outside of it. This truism is singularly patent in *The Lancet*, and we quote for our readers the following salient points which refer to Tennyson's character :—“ Tennyson was not only a poet and idealist, but a metaphysician and speculative philosopher. His was not a scientific caste of mind, but the doctrines and discoveries of science nevertheless forcibly impressed him. He was a profoundly religious man, but no sectarian. Reverence, a sense of responsibility, a penetrating insight into the mysteries of this world, conjoined with a firm belief in the unity of purpose and harmony underlying the varied and

complex phenomena of life, never forsook him. Large-minded, tolerant and tender, his belief in the nexus between things seen and unseen, and in the presence of an invisible power in whom we live and move and have our being, was unfaltering. If he were below some of our greatest poets in robust strength, in vigour and originality of conception, and dramatic force, he was above most of them in finished workmanship, in grace and delicacy, and in the proportion and adequacy of expression to conception. His work was always wrought by the hand of genius, sometimes into fancy's flimsiest gossamer, sometimes weighty with a big thought, but always of the true, and never of the baser metal."

In the above description we have the profile of Tennyson's head brought before the eye of our imagination, and through a knowledge of the man and his works depicts him as would a student of mental science without that knowledge.

DO DOCTORS
SUPPORT
PHRENOLOGY? THE query, "Do doctors support phrenology?" has become so generally raised, that many, without thought or consideration, have answered it in the negative. Is it useless to point to the fact that Dr. Gall was an eminent physician in Vienna and Paris; Dr. Elliottson, Professor in the London University; Dr. Vimont, Surgeon in Paris; Dr. M. Broussais, Professor of General Pathology in the Faculty of Medicine in the University of Paris, and first secretary of the Phrenological Society there, sixty-one of whose members were eminent physicians. But to come back to our own land, and the present day, we could mention many honourable names. It may not have struck every reader of Dr. Parkes' works on health, that he favoured Dr. Gall's opinion that different parts of the brain are connected with various difficulties.

In his work "On Personal Care of Health," he says:—"The development of the mental and moral exercise by careful exercise during this period of life is a theme which I cannot pursue. I would merely say that the way in which memory, power of comparison, rapid apprehension of facts, regard to truth, feelings of justice, benevolence, &c., may be cultivated by exercise, is quite as extraordinary as the way in which particular bits of muscles may be developed at will. It would almost support the view that different parts of the brain are connected with these faculties, for how else can we account for their growth so readily as by supposing that exercise produces a more perfect nutritive condition of their material substrata?"

ERNEST
RENAN.

WITHIN a few days of each other The Pantheon, in Paris, and Westminster Abbey, in London, received the mortal remains of two humanists of the highest sense of the word: Ernest Renan and Alfred Tennyson. Both had at heart the good and welfare of their fellow-men, and gave, to the end of their lives, the best of their mental efforts. Each in his own way sought to guide humanity to an "ampler ether, a diviner," which cannot be denied by anyone who was familiar with their works. In Ernest Renan you found the analytic genius; in Alfred Tennyson the sympathetic power was uppermost. In the former there predominated a great love of nature; great power of observation for men and things; perceptive sense of all things relative to science. He tore down only to rebuild in a better form. His head showed the elements of great tenacity of purpose, and perseverance in labour, and a firmness of conviction which nothing could shake. It was to make the world richer that he consigned so much of what it cherished to oblivion. He cut loose from old and fusty notions, and cleared his mental atmosphere for purer conceptions of thought, and for the attainment of a loftier ideal. He believed "Justice will reign, and the virtuous man will find at the end of all things that he will be the best inspired." Does this not correspond with Tennyson's belief that "Good shall be the final goal of ill"?

As in the case of the greatest thinkers and teachers, a glorious unrest made these two teachers of men never satisfied with the proficiency they had attained, but ever to cultivate fields of knowledge beyond and beyond.

Would there were more such writers who shared a kindred sense of deficiency, and who nobly strove to retrieve it like these master humanists of France and England. This is the more important in times like these, when education is so tempted to spurn all but the "learning that pays," when the text-books of the crammer have reached the perfection of arms of precision, enabling those proficient in them to score effectively at the examining board, with the least possible expenditure of individual thought. It has been wisely asked, Is it really opportune for men of science to disparage humanistic culture, to vote a decent burial for the classics, and to concentrate the student's work more and more on what simply appeals to his observation? Is it quite in keeping with the character and claims of a liberal profession to limit the range of study so as to exclude the subjects most conducive to disciplining the imagination, refining the taste and enlarging the sympathies? The answer

has been echoed back to us : "Such has not been either the precept or the practice of the masters of professional skill in times past. Rather would they have sided with the great leaders of humanity, such as those just lost to us, in rejecting no culture which could make the mind a more powerful and more delicate instrument, whatever the field of its exercise ; but in welcoming all learning which enlightens, ennobles, and refines, especially if its subject be man himself, whether in health or in disease." If phrenology is true, it advises an education which shall aim at making man more complete and perfect.

THE
TEMPERATURE
OF THE
BRAIN.

SOME interesting experiments have lately been made by Professor Angelo Mosso, of Turin, on the temperature of the brain. It is a common observation that during prolonged exercise or excitement the head becomes hotter, but Professor Mosso has applied very delicate heat-measuring apparatus to ascertain the effect upon the brain temperature not merely of conscious mental effort, but of various stimulants and irritants. The sensitiveness of the brain may be judged from the fact that during profound sleep a noise produced within the hearing of the sleeper, although not loud enough to cause an awakening, makes a perceptible rise in temperature. The administration of cocaine was observed to cause a rise of more than seven degrees in the brain temperature. One of the effects of opium appears to be to produce a fall in the temperature of the brain before any of the other organs of the body are similarly affected, and indeed while they are yet rising in temperature. Great mental activity produces a condition of the blood which appears to be poisonous, especially to the muscular system.

Fowler Institute.

MEMBERS' NOTES.

Cursed be the social wants that sin against the strength of youth !
Cursed be the social lies that warp us from the living truth !
Cursed be the sickly forms that err from honest Nature's rule !
Cursed be the gold that gilds the straiten'd forehead of the fool !

TENNYSON.

ON Monday, October 10th, Mr. Dommen read his paper upon

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“Evolution and Phrenology.” Mr. Tovey presided. Mr. Dommen remarked :—

“Evolution is that philosophy of the universe that has won now practically universal acceptance amongst scientists, and that states what the universe now is it once was not. That the world as we now see it is the result of gradual development, and that all animate nature, men included, spring from the simplest source.

“Going back to the simplest form of animal life, we find it is a mere speck of jelly without a definite form, continually changing its shape, without organs, without even a membrane ; every part of it does everything, it takes in food and oxygen anywhere, and digests all over its body. In what then does it differ from the inorganic world around ? It is a centre of energy. Matter is passive, yielding helplessly to the forces that act upon it from without. This speck of energy is active, generating energy that it uses for its own purposes, and capable of offering some resistance, and at last, when developed to its highest extent, exerting some control over natural forms. This definition may need some qualification to render it strictly accurate, but we may take it as sufficient for our present purpose. To trace the evolution of mind from this stage to its highest developments is a task that would require far more time than is at our present disposal ; all that I shall attempt is to offer some fragmentary suggestions that may be developed at leisure.

“What, then, is the phrenological correlative to the energy producing power of the Moneron ? We find it in the middle lobe, the organ named destructiveness. And here I would remark that the nomenclature of phrenology has always been a trouble to me, at times failing to suggest any distinct idea, at others ideas that are false. Before we can get a satisfactory nomenclature, the faculties must be studied by the metaphysical method from within as well as from the usual scientific method from without. In their ultimate analysis the faculties will be found far simpler than any definition that I at least have yet met with ; at present, they are defined according to their outward expression rather than their essential action.

To become a thoroughly accomplished Phrenologist it is necessary, as we all know, to study many matters that are not directly related with the conformation of the skull. All this takes time, and one or more subjects are frequently neglected in part, if not totally, thereby weakening the power of the would-be examiner. To be qualified to give reliable advice, which may decide a boy's future course in life, pursuits must be specially studied, *i.e.*, one must have an exact knowledge of the organs that are required to be exercised in the various professions and other occupations, but what is perhaps of more significance is the ideal temperament for a certain kind of work.

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It is of course impossible for any one man to possess a detailed experience in all avocations, and as there are so few works suitable for a Phrenologist to refer to for information upon such a subject, it is important we members of the Institute, should endeavour to become better informed upon this neglected part of our education.

IN order to accomplish this, a table might be prepared that would assist the student in gaining a clearer idea of—1st, the class of work to which a temperament is best suited ; and 2nd, the work most likely to be in harmony with the predominating organs. It is suggested that the pursuits be classified under the temperament or temperaments, viz., the mental, motive, vital, mental-motive, mental-vital, motive-mental, motive-vital, vital-mental, and vital-motive. Under these headings would follow the various occupations, and against each would be required at least three spaces, the first for the essential organs, the second for those next in importance, and the third for quality and other remarks. In such a table we should find the carpenter under a different heading from the cabinet-maker, the latter requiring similar qualities, but a somewhat finer organization, while the cooper again, although like the other two, a worker in wood, necessitating still another classification.

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It would be a difficult and lengthy task for any one member to elaborate a complete table of this kind, but if each and all contributed a detailed account of some business with which they may be conversant, a both useful and valuable adjunct to the Institute could be formed in a comparatively short space of time.

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IF any members should develop a peculiar condition of mind, for which they are unable to account, similar to that described by the immortal Dickens just after he had completed "Hard Times," we may expect a paper of a somewhat unusual character. In a letter to Leigh Hunt, dated May 4th, 1855, he says:—"I am now to boot, in the wandering, unsettled, restless, uncontrollable state of being about to begin a new book. At such a time I am as infirm of purpose as Macbeth, as errant as Mad Tom, and as rugged as Timon. I sit down to work, do nothing, get up and walk a dozen miles, come back and sit down again next day, again do nothing and get up, go down a railroad, find a place where I resolve to stay for a month ; come home next morning, go strolling about for hours and hours, reject all engagements to have my time to myself, get tired of myself, and yet can't come out of myself to be pleasant to anybody else."

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A FRENCHMAN, who evidently takes some interest in the men of letters of his country, has given a series of what he calls momentary photographs, half physiological and half psychological, of their attitudes and habits while writing. "Renan carefully scrutinizes the joints of his left hand, as if he expected to find the necessary words in them. Alphonse Daudet, while in the act of writing, twists his mouth into an expression of mocking laughter. Zola reads aloud his sentence as it flows deliberately from his pen. Edmond de Goncourt moves his jaws as if he were enjoying a good dinner. J. Lemaître incessantly strokes his moustache with his left hand. Coppée breaks off his work every few minutes to light a cigarette. Richepin drums on the table as if he were calling some table-rapping spirit to come quickly to his aid. De Bornier scratches his head like the puzzled schoolboy. Meilhac

throws down his pen between every few sentences, takes his head between his hands, as if to keep his thinking powers steady, and then takes his pen again for a fresh start. Ludovic Halévy steadily contemplates the ceiling. E. Bergerat keeps up a perpetual low whistle. There are other sketches, equally smart, and probably about as true. The photographer seems to have most grudge against G. Ohnet, who, according to his description, looks as if he were thinking of nothing."

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SOME months ago a few statistics appeared in these notes relating to suicides. It appears, however, according to the latest accounts, that in dealing with Europe alone, self-destruction occurs more frequently in Saxony than any other country, there being some 299 per million annually. Denmark ranks next with an average of 258 per million, in England and Wales 69, Scotland 40, Ireland 17, and Spain 14.

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A PAPER, by Rev. W. L. Spooner, on "Comparative Psychology," will be read at the next monthly meeting, Nov. 14th.

G. B. COLEMAN.

Notes and News of the Month.

PHRENOLOGICAL examinations daily from 10 a.m. to 5 p.m. Saturdays 10 a.m. to 6 p.m. Evenings from 7 to 9.15 p.m.

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As announced in the July issue of the *Phrenological Magazine*, Mr. James Coates has handed over to me, as Editor and Publisher of the *Phrenological Magazine*, the entire control and all rights of the *Phrenological Annual and Register* which will in future be published in London.

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THE *Phrenological Annual and Register* for 1893 will contain the only authorised list of names and addresses (corrected up to date) of phrenologists both in England and other countries, and popular and scientific articles on phrenology will be contributed by well-known writers; articles have already been promised by Joseph Parker, D.D.; John Lobb, Editor of *Christian Age*, M.L.S.B.; H. Snowden Ward, Editor of *Practical Photographer*; and Mrs. Charlotte Fowler Wells, President of the American Institute; Nicholas Morgan, President British Phrenological Association; Jas. Webb, Ex-President, and others. Character Sketches of leading scientists will also be given.

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THE "REGISTER OF PHRENOLOGICAL PRACTITIONERS AND LECTURERS."
—No name will be entered upon this register unless the persons possess

a satisfactory phrenological standing. Full particulars should be sent in as early as possible.

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THE December number of the *Phrenological Magazine* will be full of interest, and will contain articles by the following authors:—Nelson Sizer, of New York, Mrs. O. Chant, Bernard Hollander, &c.

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THE December number of *The Phrenological Magazine* including *The Phrenological Annual* will be sent post free on receipt of 1s.

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PRIZE OFFER (No. 1).—The one who obtains the largest number of subscribers (over twenty-five) to the *Phrenological Magazine* will be given a course of phrenological instruction at the Fowler Institute or by correspondence. Prize offer (No. 2).—A life membership will be given to the member of the Fowler Institute who gains ten new members by March, 1893. A Home Exerciser will be given to any member who gains five new members to the Fowler Institute by March, 1893.

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MISS GRAY, who has just passed her final Medical Examination of L.R.C.P. & S., Edinburgh, goes this month to The Victoria Hospital, Benares, to work with Miss Pailthorpe, M.B. London. She is particularly suited to her profession, and has a brilliant future before her.

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THE Pioneer Club is progressing splendidly. It has now 133 members. The Club is publishing a *Pioneer's Christmas Annual*, to be contributed to by Pioneers only. The Tuesday evening debates continue to be most interesting; Miss Conybeare, Miss M. Reed, Mr. George Allen, and Viscountess Harburton among others have spoken well. The address is 180, Regent Street. Ladies who have joined have found there is an oasis in Regent Street, for they can there stimulate their intellectual graces and moral virtues, and at the same time secure the best cup of tea to be had in London.

What Phrenologists are Doing.

[We shall be pleased to receive for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope, and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

ON Tuesday evening, October the 4th, Mr. Nicholas Morgan read a paper before the members of the British Phrenological Association on "How to Read Heads." The lecturer had various illustrations before him, from which he described the various centres and protuberances most prominent. After the remarks, the lecturer examined two heads

in his own peculiar style. A brief discussion brought a pleasant evening to a close.

THE American Institute of Phrenology held its usual session during October, when an interesting series of lectures was given, Mrs. C. F. Wells contributing her share. She is liked as a teacher for her clear, practical style, and for the lucid way in which she answers the enquiries of the students.

MR. SIZER, too, in his lectures, is as racy as ever, bringing illustration after illustration to bear upon all points under discussion. He appears to keep his vigour in a remarkable way, though he has turned the ripe age of eighty.

THE New Zealand Phrenological Society reports an active interest in Phrenology, and from our experience of New Zealanders, when in the bonnie land of the Southern seas, we may expect good results, for the people are sturdy and intellectual.

MR. FOWLER recently lectured on "How Great Men are made and developed," before the Fowler Institute, and on October 19th he lectured on "Mental Growth, Expansion of Mind, and Perfection of Character." Many truisms were uttered in his usual terse style.

MISS JESSIE A. FOWLER has just given the first of a series of four Phrenological lectures. The subject being "John Ruskin—the man and his works," from a phrenological standpoint. The lecture was full of appropriate suggestions bearing on mental science, and the motto, which Ruskin quotes in his works, "Know Thyself," which is the key-note for Phrenologists.

Book Notices.

The Favorite Cook Book. London: L. N. Fowler, price 2s. 6d.—We are constantly hearing of the evils which arise from the unscientific and even unwholesome preparation of food. With the number of works and pamphlets on diet, which have appeared during the last few years, careless housewives and cooks have really no excuse. There is certainly one fault which hinders the usefulness of the majority of cookery books at present before the public, and that consists in the fact that they either are too high-class to be popular with the masses, or too plain and unfastidious to suit the higher classes. With a book, however, which contains something like two thousand recipes, we should imagine the range would be a wide one, and all grades of the community be able to draw practical hints and suggestions. The book is well illustrated, and should sell readily.

The Fall of Adam.—Messrs. Digby, Long, and Co., 18, Bouverie Street, Fleet Street, London, E.C., will shortly publish a work called *The Fall of Adam*, in two volumes, demy octavo, price 32s., by the Rev. Stephen Shepherd Maguth, LL.D. (Emmanuel College, Cambridge.) This forthcoming anthropological, biblical, exegetical, and scientific treatise reveals, for the first time since the creation of man upon this earth, the hitherto occult mystery of the true nature of the Fall of Edenic man, in which evil, in its origin, is extricated from the instigation of a fabulous god of evil, and is demonstrated to have been resultant of natural law, under circumstances which were peculiar to the Edenic period of time. Moreover, this is no idle and baseless speculation, but a profound sequence of inductive and analogical reasonings on Biblical Anthropology, which absolutely solves that unique enigma, the many-sided and conflicting moral and spiritual character of man as he is ; myth and legend, the inevitable accretion of the ages of man are dispelled by its elucidative light ; the momentous ultimatum of man as a physico-psychical and as a psycho-spiritual being is made known by inductive and analogical argument ; and it is a book of vital interest to all sorts and conditions of men, the wide world over, and is written by a man of superior mental gifts and spiritual insight.

The Business of Travel : A Fifty Years' Record of Progress, by W. Fraser Rae. London : Thos. Cook and Son, Ludgate Circus.—It is not always an easy matter to justly apportion the praise or blame which a man earns in this life, or to gauge with accuracy the value of efforts which individuals contribute to the sum of human advancement. There are so many factors in progress, so many various paths, leading to the same height, along which humanity is treading, or, to speak more truly, being led, that it is scarcely to be wondered at if in these busy, stirring times, we should fail to credit or recognise the merit which has been so honestly and hardly earned. It is our belief that out of the many methods of cultivating the broad and liberal spirit, there is none so immediately effective as travel. There was sound sense in the old system which obtained in the beginning of this century, and which provided that no gentleman's education was complete until he had performed the "continental tour." But in those days, we fear, few finished their "education." The unknown is always fearful. Before the days of railways, persons who were about to make a journey, say of one hundred miles, set their house in order, made their wills, and desired all their relations and neighbours to pray for their safe conduct. It appears ludicrous to us to-day ; and why ? We may safely urge two reasons,—the advent of steam, and the organisation of that system of travel which is to-day so intimately associated with the name of Cook. From the 5th July, 1841—when the first excursion train, through the influence of Mr. Thomas Cook, ran from Leicester to Loughborough, carrying 570 passengers—to the present day, the work of education by travel has rapidly progressed. Says Bacon, "Travel in the younger sort is a part of education, in the elder a part of experience." The world has grasped the fact. In 1890, Messrs. Cook and Son issued no fewer than three

and a quarter millions of tickets, the purchasers of which ramified every portion of the globe. Here we see a vivid illustration of the development of the cosmopolitan spirit, the ever-increasing freemasonry between the nations, the gradual abolition of national caste. Let us give honour where honour is due. The great business of Messrs. Cook and Son was, in its initial stages, on a purely philanthropic basis, becoming a commercial concern absolutely by the force of circumstances; and its success has arisen from the fact that it fell in with the broadening desires of an awakening race, and we cannot but feel that its marvellous growth is only another sign of the times, and a favourable one. The book abounds in facts of interest.

P. T.

A WORD OF ADVICE BY A HUMANIST.

M. RENAN has given the students of Paris some sound advice. He says:—

I constantly say, "Happy the young, for they have life before them." Of the two parts of the programme of scholastic life, "work hard and play hard," I have, to tell the truth, known only the first. The time when the others amused themselves was for me a time of ardent study. I was perhaps wrong, for the result has been that in my old days, instead of being, according to the established rule, a rigid Conservative, I am an austere Moralist. I have not been able to defend myself against a certain amount of indulgence, which the Puritans have qualified as moral cowardice. I should, perhaps, have done better to amuse myself when I was young, and to sing in my own way the "Gaudeamus" of the clerks of the middle ages. Joy and work are two healthy things. Work, then, work incessantly, but amuse yourselves too. Do not fatigue yourselves. Let the idea, the thought, come to you in its natural garb, and do not hurry it. Rest yourself from one kind of work by another. Have various subjects of study. In the head full of one subject there are, nevertheless, spaces left which can be profitably filled up by another work. An old Rabbi of the first century said, "One can pour several measures of oil into a barrel full of nuts." How true that is! Yes, one can do very different things at the same time, if care is taken to fill up the spaces between. The time given to work is not simply that which is spent seated at the writing table. It is necessary to manage so that the time of work and repose are not distinct. While you are talking, if the conversation does not greatly interest you, follow the bent of your own ideas. Do the same during your walks, your meals, and all the acts of your life. Be always thoroughly good and respectable young men; if you are not you cannot work well, nor even amuse yourselves well. One must lead a good life to possess gaiety of mind.

Correspondence.

A CORRESPONDENCE on Phrenology is going on in *The Birmingham Weekly Mercury*. We submit the following which have been forwarded to us :—

THE "SCIENCE OF BUMPS."

To the Editor of "The Weekly Mercury."

SIR,—Allow me to suggest the above title for the controversy on Phrenology, now proceeding in your columns, and to disclaim all intention to ridicule. I have the profoundest respect for "fads" of all sorts—the word has been already used in this connection—and for the enthusiasm which makes believers in them regard their particular crazes as sacred. On that account, therefore, I should heartily contemn "Semi-Clericus" for his ill-natured diatribe against the "modern sciences," if it were not that I regard him as a pronounced "faddist" himself. *His* craze is egotism, and the outcome of it, the spleen which he vents upon others. Each to his taste, whether that taste be soured or not. The title I offer, whether acceptable to phrenologists or not, certainly condenses the popular view. I have friendly recollections of the cult, and was happy in professing it until I was disillusionised. I no longer believe in it, because the vast number of bumps which I possess would prove me to be endowed with every extreme quality, good and bad, that the phrenologist has upon his list.

A CONGLOMERATION OF KNOBBLES.

Birmingham.

To the Editor of "The Weekly Mercury."

SIR,—I am very pleased with the quality of the opposition to the truth of phrenology offered by "C. J." His lack of self-esteem allows a freer play to his intellect than would be the case if it were large. He will be all the more willing to learn from any source able to teach, and I expect he will be soon converted from an opponent to an advocate. He will admit that the truth of phrenology depends upon facts and principles, and not upon the displays made by inexperienced, unscientific, and uneducated young men. It is a great regret to me that the scientific spirit should, as a rule, be so conspicuously absent in phrenologists. A great check, if not the greatest, to the general acceptance of phrenology is the fact that it deals so much with personalities. People do not like their characters to be read right through, leaving them no secret cover from which they can pretend to be something different from what they really are. Every step in the march of intellect is checked and opposed when it suggests any teaching contrary to fashionable prejudice. People say, in effect, that they have lived so long in certain ways that it has become part of their nature to be as they are, and if they are wrong

they do not want to be undeceived. Practical phrenology is not concerned whether heads be filled with brains or sawdust ; its only concern is correspondence of exterior with character. "C. J." says thousands of objections can be brought against phrenology—he mentions three or four only. He asks how it is that one hemisphere of the brain can be injured without any mental defect being observed. I would say there is too much made of these cases, and the facts are not properly represented. You cannot injure the brain without injuring mind, though the manifestation will be very different according to the part affected. If "C. J." were to go through our lunatic asylums he would see many patients whose insanity he would be unable to discover. The upper part of the brain is concerned with functions of a regulative character, and could be injured or sliced away without the consequences being very readily seen, and more so if only one side were touched. All the organs are double ; one might be destroyed and the organic function still be in operation. Let both be cut away, however, with the function remaining, then such a case would extinguish phrenology ; or let the base of the brain be damaged, say about the region of the root of the pneumo-gastric nerve, without the vital functions being deranged, and you will have a case. Fowls and pigeons will fly after their heads have been chopped off, and frogs without brains will respond to stimulation ; but all this does not go beyond nervous "reflex action," just as an animal's heart will continue to beat for hours when taken out of the body immediately after it has been killed. I leave Mr. Dillon to feed the opposition.

C. BURTON.

Upper Mary Street, Balsall Heath.

The Employment Bureau.

[The Employment Bureau has been opened by the Fowler Institute to assist people who are seeking employment, and also to aid heads of firms to secure suitable employées. This department has already become of practical value. All letters of enquiry to be directed to the Employment Bureau, Fowler Institute, Ludgate Circus, E.C. Principals requiring special Teachers, Students (certificated) requiring employment either in schools or families. Typewriters, Skilled Artists, Musicians, Literary or Journalistic Workers, Builders, Architects, Decorators, Phrenologists, Shorthand Clerks, Secretaries, good Readers, who have satisfied L. N. or J. A. Fowler as to their abilities, may find a medium through which to be successful in obtaining suitable positions.]

AN ARTIST is wanted who can make pen and ink sketches, and also reduce pictures to 2 × 3 in.

A REFINED and desirable young lady desires the position of companion to a lady. She would not mind travelling, or take a position in a home where there are one or two children. The lady is a well-qualified dressmaker, but her health will not permit her to follow that occupation continuously.

If an elderly gentleman is seeking a young gentleman companion ; if a hydropathic establishment is wanting an assistant ; if a publishing firm is in want of a sharp intelligent lad, and wish to be put in communication with suitable clients, the Secretary of the Employment Bureau will be pleased to facilitate the employment of thoroughly competent persons.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 6s., for twelve months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

B.W. (Bristol).—The photo of this lady indicates natural refinement susceptibility of mind, and considerable nervous energy. She will take hold and plan the work for a large company or business, for her organising powers are unusually good. Sometimes she thinks too much, and her brain becomes too much intense, and her anxiety to have everything go just right makes her worry more than she should. She is very particular over her work, and cannot let a mistake pass unnoticed. She is as severe with herself as with anyone else ; is exceedingly ardent, earnest, and affectionate in her friendships, whole-souled in whatever she undertakes, and conscientious in doing her duty. She expects the same from others, but does not find that all are as anxious to do as they agree as she is. She is constitutionally a critic ; is quick to see differences in qualities, materials, or in dissecting thoughts, plans, theories, or principles. She likes to appear to a good advantage, but if she were married she would centre her ambition on her husband and children, and push them forward. She will be proud of her home, and take considerable pains to have things nice. Love of the beautiful is strong, which will show itself in artistic work and music. She could make herself proficient in either. She must avoid feeling slights and injuries, or the criticisms of others so much, and let her mirthfulness play an important part in chasing away disappointments. She is a capable woman, and possesses a well balanced temperament. She is a keen student of character, and quickly makes up her mind about

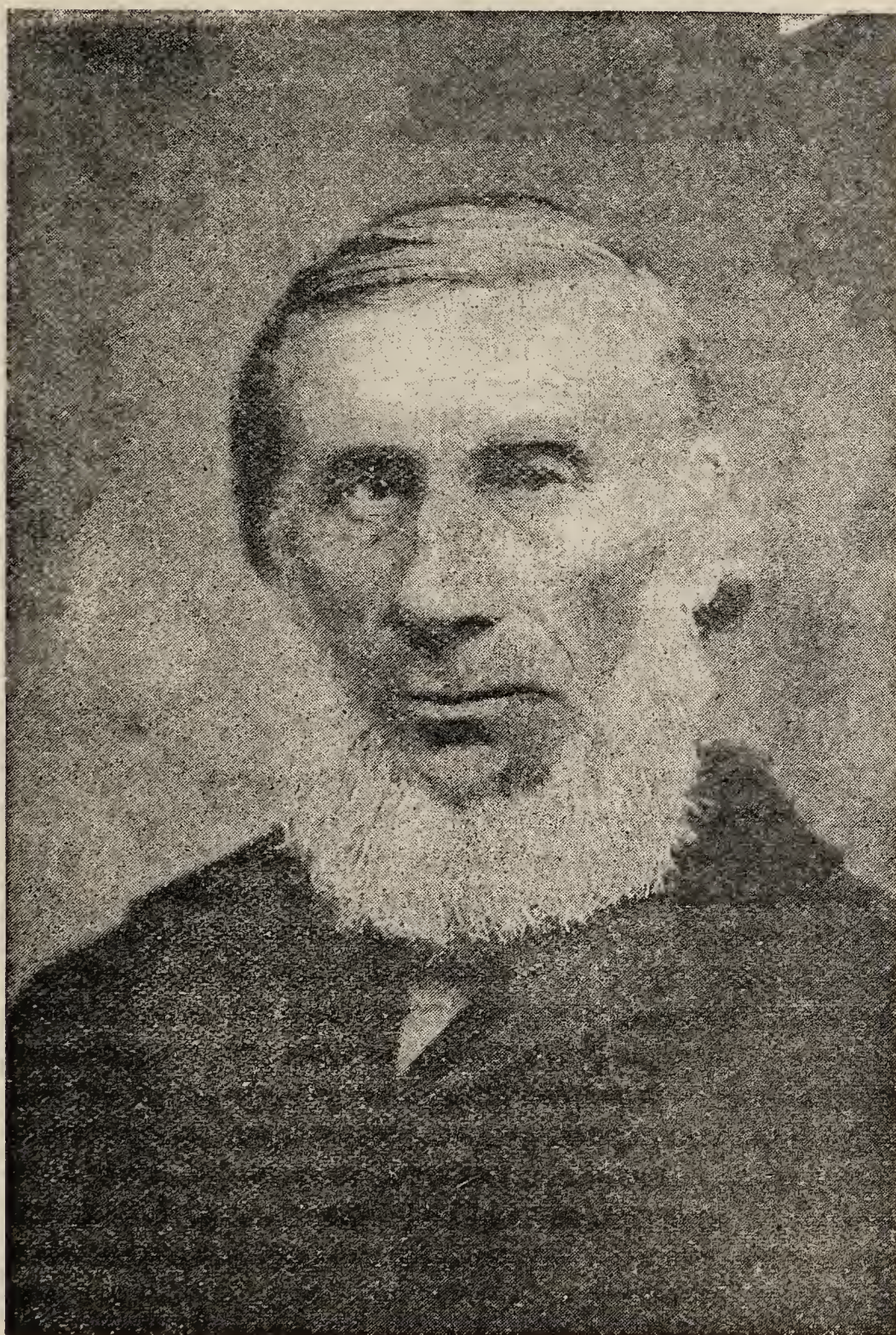
people with whom she comes in contact. She should be where she can have a distinct influence in society, or where she can throw off ideas, teach, discipline, regulate, or manage affairs generally.

SAILE SESON (Hong Kong).—The photograph of this gentleman indicates a very distinct character. He has a well formed side head and there appears to be no special defects. His perceptive faculties are good and he has general power to acquire knowledge and retain it. His reflective qualities are somewhat stronger and give thought, judgment, power of analysis and intuition of mind. His moral brain appears to be well represented in every department; benevolence and veneration predominate in this region, and their influence should be such to render him kind and respectful. He is not one of the rigid kind, but is more inclined to show mercy than severe judgment. His social brain is uniform in development and prominent in its manifestation. Is capable of enjoying domestic life, but is more inclined to intellectual and moral pursuits than to mere social intercourse. He is manly, rather proud, spirited, high minded and honourable. He is firm, persevering, tenacious, and unwilling to surrender when he knows he is right, but he is forgiving in his disposition when others show an inclination to repent of their wrong doing. He has comparatively a narrow head, is not cruel or revengeful, or given to animal passions and pleasures. Is quite candid, open-minded and far from being close or suspicious. He could not enjoy the companionship of those devoted to selfish life. He is adapted to some literary pursuit, or to a business that required a scholastic mind. He might do well in a commercial line if his attention were directed in that direction. He is not particularly gifted in making close bargains, or for being shrewd in making the most of selfish ends.

T. S. H. (Burnley).—This gentleman has a high ambition, is willing to exert himself to succeed, is very practical and tenacious. He has good preceptive powers and practical talent. His thinking brain somewhat predominates, and is quite inclined to investigate, to study science and law. He is given to argument, always gives a reason and requires one. Is quite original and marks out a course of his own. He is more given to intellectual pursuits than social enjoyments, for he is not specially sociable and companionable in the general sense of those terms. He is very sensitive about character and position in society. Is rather rigid in adhering to what he thinks is right. He is a law abiding man, and will preach law rather than gospel; as a judge he would be rather severe. He is not specially reverential and devotional. His piety does not consist in ceremony. He dares to think for himself, and is rather radical in his views. His sympathies go in certain channels; he generally minds his own business. He is combative and fond of argument, and would be the leader of the sect, not the follower. He is positive in his declaration, rather blunt in his mode of speaking, if witty, and the tendency is to sarcasm. He is a man of policy, and does not change sides and go over to the other party. He will succeed in the intellectual line for he is a pretty clever man. He could be a public speaker and agitator of reforms.

THE
Phrenological Magazine.

DECEMBER, 1892.



(From Photo by Elliott & Fry.)

PROFESSOR TYNDALL.

PROFESSOR TYNDALL has a predominance of the mental temperament, hence he is particularly interested in all intellectual subjects that require sharp investigation. He has as well a vigorous organization, and is capable of going through severe exertions.

where strength of body as well as strength of mind is required ; but he is stronger in brain and mind than in body, and there is an apparent weakness of digestion and circulation. He must have come from a family having great power of endurance and ability to penetrate far into a subject. His features are distinct. He knows how to make the most of himself, to keep his own affairs under his control, and impart knowledge in such a way as not to weaken his own side of the question. He is remarkable for having a far-seeing mind. He is not afraid to broach new ideas. He is not easily thwarted in his plans ; has confidence in his own opinions. He is particularly interested in truths that can be dealt with in a bold manner. His head is a remarkable one. He is noted for his love of the study of nature in all her departments. Few are so interested in the unfolding of the laws of nature as he is, and he is prepared to study the most detailed representation of nature as she presents herself. He has very great powers of observation, remembers very definitely what he sees, and would take great pleasure in travelling all round the world, and become acquainted with all its varieties. His nose is a very prominent feature of his face, and means much. One special meaning to it is long life and disposition to fight against any encroachments upon it. He is, in fact, a courageous man in more ways than one ; difficulties encourage him rather than the reverse ; he delights to continue with what is difficult to comprehend. His method is very distinct ; he knows how to keep his secrets and when to dispose of them. He wastes no words in explaining himself. He can listen when others talk without saying anything himself, especially if they are giving instructions by illustrations. He uses language clearly and forcibly, but is not a general talker. He remembers words and sentences without trying to tax his memory to repeat *verbatim*. The speciality of his developments indicates that he is very fond of details when once he masters the whole subject. He is anxious to unfold all the secret truths of nature, but his mind is more interested in questions as they become more difficult, for he has a temperament and phrenological organization that make him take a delight in mental philosophy, and in all mental phenomena. When he looks on a new subject he sees more in it than many do, for his mind covers the whole ground. He is specially apt in analysing, in drawing inferences, in making a speech clear, and in comparing one subject with another. He is very lucid. Causality makes him think and do, until it has almost become a besetting habit in him, as it may allow the hours to run by without his being conscious of

what he has been doing. All the intellectual powers are prominently developed, both the perceptive and reflective, hence he is not satisfied until he has become wholly satisfied on every point ; but he sees so much by the first grasp of his intellect that he does not need to spend so much on a speech as many do. He has more gift as a writer than a speaker. He has a superior power to arrange and systematize to put everything into shape, and digest his subjects so as to have no confusion. He has great scope of mind, and is more interested in nature and her laws than he is in theories and imaginations. But with such a temperament and development of brain, scarcely any subject comes amiss to him that is worth looking at, for he is as anxious to get hold of a new idea and a new way to solve an old one, as a hunter is to spy game. His mind cannot get into a careless way. He cannot let his imagination run wild. He is a regular disciplinarian, and wants to know what is exactly true and useful. His power is in his breadth of intellect, energy of character, and force of mind. He has not body enough to endure all that he puts upon himself to do, and his body will eventually wear out before his mind is prepared to surrender.

L. N. FOWLER.

PHRENOLOGY : ITS UTILITY TO THE YOUNG.

WHEN the science of Phrenology is better understood, it will be found that it is of the highest value in the explanation of all the peculiarities and eccentricities of our friends, in the reclamation of criminals and in the right management of imbeciles and lunatics. In the cure of criminals and in the prevention of dementia there will be a marvellous improvement, when it is known that Phrenology has the key of the difficulty. And of a yet greater use will this science be in the training and education of children. Then will it be proved that Solomon was right when he stated : " Train up a child in the way he should go, and when he is old he will not depart from it."

But first of all we must find out which is the way he should walk in ; and then attend to his right training.

Sir Joshua Reynolds held that all men could become painters. So they might ; but their paintings would often be less valuable than the canvas on which they might daub them. Very few men could learn to paint as he painted.

Parents make grave mistakes in thinking that their children

will excel in any profession they wish them to be engaged in. Before we can gauge the ability of a child we must take advantage of the signs that a wise Providence has placed on his head and constitution. His Maker has specified the kind of "calling" adapted to a person. Parents and friends outside Phrenology can only "try" and experiment: they cannot prophesy. The father of Handel determined that his son should be a lawyer. When he discovered that his little boy was particularly fond of music, he prohibited his practice. This resulted in theft. Handel *stole* his musical practice from his rest at night. When all the family had retired, and he was believed to be asleep, he was hard at work in the garret. He ultimately became the prince of musicians.

The father of Thomas Moore also wished him to be a lawyer. At that time Catholics were refused admittance to Trinity College, Dublin, but the prohibition was relaxed in 1793, and he was admitted. He qualified for a degree, which was refused on account of his religion. But notwithstanding many difficulties, he became a poet and musician of high eminence.

Christian Gottlob Heyne was reared in the bitterest poverty. By hard study and great perseverance, added to much natural capacity, he became one of the greatest philosophers of his or any age.

Charles Abbott, the son of a Canterbury hairdresser, by his natural capacity and hard work, became Lord Chief Justice of England. That was in 1816, on the retirement of Lord Ellenborough. In 1827 he was raised to the peerage as Lord Tenterden.

The father of Lord Eldon was a Newcastle coal-filler. He was undecided whether to bring up his son as a grocer or coal-filler. The youth decided for himself. He would be a lawyer. After much hard work and perseverance he was made a King's Counsel. He afterwards rose to be Solicitor-General, Attorney-General, and ultimately Lord Chancellor.

The parents of John Prideaux had an ambition. They desired for him the office of parish clerk. He failed to obtain the appointment on the office becoming vacant, so then went "on tramp." After accepting a menial office in the kitchen of Exeter College, Oxford, he raised himself by study, industry, and good conduct, little by little, till he became Lord Bishop of Worcester.

Some young people are so perverse, self-willed, and have such a dislike to study, that it is exceedingly difficult to train them up in the way they should go. But the more difficult they are to train, the greater the necessity for the training: such

training to attain its end must be unwearied and constant. How reprehensible then are the parents of such when they leave them to themselves, to the mercy of their surroundings.

Was Dr. Neill trained in accordance with his needs ? Did his near friends consult an honest and intelligent phrenologist ?

What a revelation and what priceless advice they would have received had they done so !

Had his parents been aware of the priceless value of phrenological advice they would have been able to prevent the vice, the poisonings, and the gallows that will be long remembered as characteristics of his career.

His animal propensities are very largely developed. His higher sentiments are dwarfed.

Is he then responsible for his conduct ? No doubt he is far from being free from responsibility ; but is he alone responsible ? Do not others share the responsibility with him ?

No doubt it is hard to climb the hill, to swim against the stream, to crucify one's lusts when the natural inclination is contrary : he found it so, and followed what was to him the pleasanter way. I will give you a different example to illustrate how one's peculiar characteristics may prove fatal.

Lord Nelson liked to be the first in danger and the last out of it. Why ? Because that part of the parietal region of the brain, called the centre of physical blindness by some of our modern physiologists, was somewhat deficient in his head. Phrenologists call this part caution, fear, or prudence. Hence he was incautious and often very imprudent. He knew no fear. He couldn't see *personal* danger. To danger he was blind. He also had large energy, the result of well-developed destructiveness and combativeness.

At the battle of Trafalgar his friends earnestly advised him to be more careful of his person—not to display his personality to the sharpshooters of the enemy. He had neglected similar advice on previous occasions, and had lost an eye and arm. On this occasion his want of ordinary caution cost him his life.

Hence, to know our weakness, and learn to guard against it, is to cure it ; to fail to guard against it is to increase it.

Dr. Ward-Richardson has told a tale that illustrates my meaning.

At a certain boarding-school one of the pupils had the habit of rifling the pockets of his companions whilst they were asleep in bed. His master prescribed the following remedy. For an hour every night, after the school had retired, he gave him an hour's drill. Tired and sleepy when he went to bed he soon fell asleep, and did not awaken till morning. Certainly his cure cost his master some trouble ; but such a cure cannot

be accomplished without much trouble—and the more chronic and deep-set the disease, the more prolonged must be the use of the remedy.

What do I wish to be inferred from these details? That young people should take heed to the advice of their best friends; at the same time those friends should see to it that the advice they give is the advice required.

Does your trusted friend tell you that you are too conceited, too selfish, too invertebrate, or too prodigal? Thank him. How often do young people resent such advice! Should the advice be given by a phrenologist, then watch your every act and word till your improvement is assured.

Yes, watch and pray that you may overcome temptation—that you may be delivered from evil and the thoughts of evil. To secure this result you must know what is evil; for to know what is evil, and to believe that it really is evil, is to avoid it. Why don't people avoid evil? Because they don't look on it as evil; they look upon it as good. Hence to watch and pray against what you are *told* is evil, and what you know to be evil, are two very different things.

When asked why he did not pocket some pears, for nobody was there to see him take them, a boy who *knew* what dishonesty is, replied, "Yes there was; I was there to see myself, and I don't intend ever to see myself do a dishonest thing."

Knowing the evil, he avoided it. No person can rightly appreciate virtue and wisdom who is vicious and ignorant. To talk to such a person about the pleasures and advantages of doing right, is like talking to a blind person about beauty in colour, or to a person deficient in tune of the agreeableness of music. Advice to be useful must be appropriate.

It is as mischievous to tell a backboneless, amiable boy to be meek and humble, as it is to press a conceited and obstinate boy to be independent and firm. Do so, and you make the former more gentle and invertebrate, the latter more stiff-necked and proud. What is good for the one is bad for the other. The phrenologist warns the conceited against pride and selfishness, the humble against undignified submission to presumption and imperiousness.

Whenever our will would lead us astray, in the way we should *not* go, let us not complain of our proneness to evil, but set ourselves by self-denial to overcome it. Our best training is by self-sacrifice, not by complaining of our lot.

"Nay, but, O man, who art thou that repliest against God? Shall the thing formed say to the thing that formed it, Why hast thou made me thus? Hath not the potter power over

the clay, of the same lump to make one vessel to honour and another to dishonour ? ” This should encourage us to charity and helpfulness.

Phrenology not only exposes the defects of our nature in the most striking light, and the temptations to which we are most likely to succumb, but it teaches also that our faculties, when rightly cultivated, have a governing power over the propensities and instincts. The Great Phrenologist does not expect to gather grapes from thorns, nor figs from thistles, but He does expect us to use our talents to the best of our ability.

“ Lord, what my talents are I cannot tell,
Till Thou shall give me grace to use them well ;
That grace impart, the bliss will then be mine,
But all the power and all the glory Thine.”

In the third chapter of Exodus we read that the Lord told Moses that He would send him unto Pharaoh, and bring His people out of Egypt. What did Moses reply ? “ Who am I that I should go unto Pharaoh, and that I should bring forth the children of Israel out of Egypt ? ” “ Behold, they will not believe me, nor hearken unto my voice : for they will say, the Lord hath not appeared unto thee.”

Note the reply to Moses. “ And the Lord said unto him, what is that in thine hand ? ” The sequel is well known. The rod in his hand was to become an instrument of miraculous power.

What have we in our hands ? All that a wise Providence has provided us with to enable us to do our duty—most suitable if used, but valueless if neglected.

Use the instrument provided,—head, hands, or heart,—and you will be able to “ do signs.” Plunge your hands in your bosoms, neglect to use them, and they’ll become “ leprous as snow.”

Don’t covet what your neighbour has in his hand. He requires it. The rod cut out of the bush may seem valueless to you—you may think your talent weaker than another’s but it will prove to be all you require.

In the right training of children, in the selection of their employment, and in every crisis and difficulty ask the question, “ What hast thou in thine hand ? ” If the answer be the right answer, the selection the right selection—because made in accordance with the ability and constitutional peculiarities of the youth, then happy will he be in his “ calling.”

Study Phrenology, not only to tell you what you have in your own hands, but what other people have in theirs. It gives you the power to gauge the motives of others as well

as your own. It explains the reason why so many people fail to accomplish what is expected of them and what their capacity would seem to indicate.

In the galaxy of painters, how came it that the name of Raphael shines so brilliantly? He had larger artistic talents, unsurpassed talents of form and colour. Why the effulgence of Michael Angelo's name? He had marvellous gifts of weight and form; and constructiveness, imitation, size and colour. What brought Captain Cook, Columbus, Livingstone and Stanley the honour they have won? Chiefly their large development of locality.

Do I tell you to write your names with theirs? No. You may or may not be able to do this. You can use the powers you have in response to the command "occupy till I come." You can do something to antedate the time when the angels shall cry out, "Peace on earth: good will to men." Happy shall you be if you are faithful over the "few things" in your hands, for then will you hear the glad welcome of the good and faithful servant, "Enter thou into the joy of thy Lord."

JAMES WEBB.

MEN OF OUR TIMES.

SIR EDWIN ARNOLD has a mind of more than ordinary thought. He has a superior power to acquire knowledge, and a good memory of whatever he pays special attention to. He is particularly interested in history and in the lives and actions of men. He is definite, direct and pointed in his style of putting things, rather than to magnify and embellish. He is clear in his utterances, and makes his subject plain and easily understood. He uses language with much discretion. He is orderly, methodical, and quite accurate in all his mental operations. He does not leave his work carelessly done, but pays attention to it and finishes it as well. He is not extravagant in the use of language, but selects his words and expresses himself in such a way as to be distinctly understood. His writings are not extravagant. He has a lot of common sense, and says what is the truth. He has good power of discerning character. He is very accurate in his intuitional perception of truth, and he deals in matter-of-fact subjects. He may be poetical, but there is a great amount of plain reading in his poetry. There is no nonsense about him. He deals in realities. His imagination is kept within bounds,

and his wit has a point to it, and means something. His nature is rather open and free, yet he is not verbose in the use of language. His power of illustration and comparison is



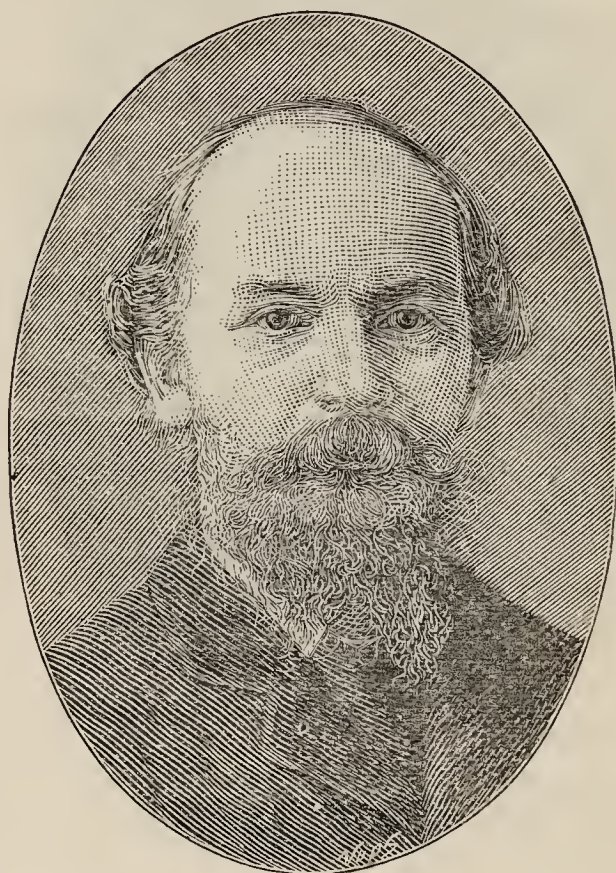
SIR EDWIN ARNOLD.

(From Photo by Elliott & Fry.)

excellent. He is naturally very fond of history, and is quite qualified to write about the lives of men with whom he is acquainted.

MR. ALGERNON CHARLES SWINBURNE.—This gentleman has more than average power of body and mind. Nature has been quite liberal with him in giving him versatility of talent and general capacity. He is full of animal life, and takes large and liberal views of things. He is capable of enjoying himself in a great variety of ways. His brain is rather marked, and he should be noted for ability to think, talk, write, and exert marked personal influence. His head is high as well as broad, and he is very determined when he sets himself in earnest to do a task. His nature is open and thorough, and he prefers to make known his powers rather than to live in a reserved way. He has great perceptions of men and things, he accumulates knowledge easily, and has a gift to tell what he knows and feels. His mind is rather prolific with thought, and versatile with either his tongue or

his pen. His will is strong and he is quite emotional. He is a little too impressible, too much affected by circumstances, and is scarcely selfish enough in keeping his ideas to himself. His perceptive intellect is large. He has much to talk and write about. He has also a good discriminating mind; is quick to see the differences between qualities and things. His



MR. ALGERNON CHARLES SWINBURNE.

(From Photo by Elliott & Fry.)

power to analyse is good. He is intuitive in his discernments of character and motives, and understands human nature quite well. He is not so much given to thought, to originate, as to beautify and embellish.

PROFESSOR HERBERT SPENCER.—The organization of this gentleman is pleasant to look upon. It is finely developed, is made up of first-class quality; all his power is available. He uses his entire organization at the same time. He is not dull and sleepy in one part and wide-awake in another, but gives his whole mind where he gives it at all. The power of his organization is in the brain, but he does not appear to be defective in other powers either of body or mind. There is danger of such an organization working too hard, doing too much, and living too fast, for he wants to know everything and do everything, and he is short of time to accomplish his

various desires. He is fortunate thus far to have preserved his health to the extent that he has. He will need to be careful, however, not to do as much as he wants to. His features are not only bold, but his nose indicates some of the Roman spirit. He has not so much animal life and physical power as he has mental capacity. His nose is a very prominent one, and he must have come from a stock prepared to take any amount of responsibility, and work through it ; but he is more inclined to and distinguished for mental than physical labour. His head above his eyes is very marked ; all parts appear to be fully developed. The base of his brain is comparatively large, which gives him great force and energy of mind, as well as versatility of talent intellectually. His head is high, and he possesses moral powers, which give him a marked influence over other minds, whether professedly religious or not, or has to do with theology, it does not matter so much, he cannot very well avoid being a moral man ; he could not live a wicked life and enjoy himself. He is different from most men of so high a temperament, as he has a heavy base to the brain, which gives force to his character, energy to his mind, and finish to all his movements. He has good perceptive powers, which introduce him to the physical world and to the study of men and things, all of which give a tendency to science. He delights to prove everything, to put his hands on subjects, to become personally acquainted with laws and conditions. He sees more than most men do, because he is interested in everything. When young it was not safe for others to deal with his character lightly. His perceptive faculties qualify him to examine subjects closely. His language enables him to communicate his ideas in a free and easy style, especially if a little excited. ORION.

THE ETIOLOGY OF WORDS.

“THERE is nothing of so much worth as a mind well instructed.” I would rather say as a mind well “educated,” and among the various ways by which the mind can be both instructed and educated, surely the study of “words” should take no mean place.

Around us there is a wonderful, mysterious world, of which we have taken but little notice, perchance have had no conception, except as here and there we have caught a glimpse of it when the deeper meaning of a word has flashed its light upon us, giving us a momentary revelation of some of the beauties in this “word” world.

When we think of the meanings of words, their breadth, depth, comprehensiveness, power, and eternity; when we realise what a wealth of history and poetry is in them, we are amazed that we have lived with them so long, and yet known so little of them.

Our words of common usage in daily life, as we use them what a mighty power we are wielding, which shall help to make the history and shape the future of the world.

It is ours to use this living power, and, in proportion as we study and use words in their truest sense and highest meaning, so shall we leave the world with its atmosphere purer for succeeding generations to breathe, and they shall find less of the insidious poison of deceptive language around and about them to blunt their sensibilities. The mists of inelegant and slang words shall have been cleared away and one more step taken towards the perfection of character, when thoughts shall be expressed in such language that its very appropriateness and meaning shall be a living power and influence.

Words in themselves are a paradox. They are weak, yet mighty; our servants, yet we serve them; they are ennobled or degraded, according to our use of them.

Who has not realised the utter *weakness* and *powerlessness* of words to express a lofty thought? Who has not felt the tardiness of words when ideas come quickly? and we are impatient when the material word has not the power to express the spiritual conception as we wish.

We realise then how poor, and weak, and frail—I had almost said how mean and contemptible—our words are. We see but little grandeur and nobility in them just then; their strength and power is but weakness when the mind holds sway and generates thought so much easier than we can give expression to it.

Man's best and loftiest ideas have not yet found fit utterance in words; his noblest conceptions are, as yet, but inadequately expressed; there is always something more, something deeper, wider, loftier, truer, stronger, than has been made known.

Yet, how *mighty* are words when enthusiasm and zeal *must* find expression and outlet? And as we listen to the natural oratory of one whose eloquence is strengthened by conviction of the truth of his subject, refined and polished by education, and fired by enthusiasm and earnestness, we realise a little of the mighty influence of words and their power in the world.

We, too, often narrow them down to express the present idea—they in themselves contain a multitude of ideas varied in meaning and embracing far more than we at first comprehend.

Words are our *servants*. *How* do they serve us? To a great extent as we will. We may not all have fluency of speech at our command, which is a rare gift bestowed only upon the few; yet we each have it in our power to choose and use the simplest and most comprehensive, the *best* word our language contains to express our meaning, if we are willing to train ourselves to use only such words as exactly convey the intended meaning, and so discipline our minds to always accept the perfect and reject the imperfect, to adopt the true and discard the untrue—in short, to make them serve us at our will. Too often we let them be the power over us, and our own words condemn us.

Like character, words are *ennobled* or *degraded* according as we use or abuse them; they cannot remain stationary. Let us then understand them and ennoble them.

The name signifies the nature, and Coleridge says, "In order to get the full sense of a word, we should first present to our minds the visual image that forms its primary meaning."

If we but heeded this counsel how much clearer would our language often be? for by obtaining a distinct idea of the primary meaning of a word, that word has for us a force, power, and significance unknown before.

Take, for instance, comfort—con, with—fort, strength. We too often think of comfort as that which consoles, soothes, and quiets in times of trouble and sorrow, and so it does; but why should we neglect to grasp its whole meaning, for what reason are we comforted in our sorrow if not to strengthen us—to revive, as the deeper and literal meaning is? Why does the mother take the little child into her arms when in distress? Not simply that she may quiet and soothe it, but also that she may put it down stronger to meet its little difficulties and troubles again. Do we not find it so—that which truly comforts renders us stronger to turn again to the battle of life. Comfort is not ease only, but encouragement.

The more we understand the *meaning* of words and become acquainted with them in all phases of their life, the closer our friendship and companionship, the more *poetry* we find in them.

Emerson says that language is "fossil poetry," for there is so much imagination, so many beautiful thoughts, ideas, and feelings bound together, handed down to us from ages that have passed.

There is oftentimes more poetry in prose than in the so-called poetry, which may, indeed, be rhyme, but nothing more.

In the most common-place—if it is possible for one to be common-place—and unpoetic word, we may, if we will take

the trouble to look for it, find much true poetry. It is everywhere to be found in literature, though not always at first noticed, yet there is an under-current of poetry in all kinds of literature. We may become so familiar with a certain landscape, that after a time we fail to notice its beauties, or we may become more and more enraptured with its loveliness.

So with words, we may become so familiar with some of them that their poetry is lost to us, we have seen it so many times that its charm is gone, or we may be so fascinated with it that we look deeper and deeper into the words, and are ever rewarded by discovering at every turn fresh poetical beauty.

Poetry *will* live, will even, though hidden, still remain for us in our common language. It would be useless to try to crush it, for that would be an impossibility. As long as man is endowed with the elements of poetry and poetical feeling in his nature, so long will it manifest itself in the words he uses.

Many a word is a poem in itself. Life has, and always will have, enough in it, that is necessarily prosaic and uninteresting, and we need to clothe our ideas in language that is poetical, for poetry is but the expression of true sentiment untarnished by the faintest touch of sentimentality.

Besides *poetry* in words there is a *purity*, a *morality*, giving them a strength and power they would otherwise lack. They will speak for themselves, whether we will it or no, and how often we utter deeper truths than we imagine or intend. We condemn ourselves by our words, and need no accuser.

Who that valued his character, would, remembering its meaning, speak of anything he did as "pastime."

Montaigne, referring to this word in his essays, says, "This ordinary phrase of pass-time, or passing away the time, represents the custom of those wise sort of people, who think they cannot have a better account of their lives than to let them run out and slide away; to pass them over and to baulk them; to take no notice of them, and to shun them as a sort of troublesome and contemptible quality."

Surely, as we use the word "pass-time," we witness against ourselves, either that we have not a high idea of the value of life, or else that we use an expression unthinkingly. The use of a single sentence, or even a single word, will often give us a deeper insight into the character, motives, and habit of thought of the speaker than ever he would imagine possible.

We say, "it chanced." Did it? I have yet to learn that any event in this world is other than the result of fixed, immutable laws. It is, I grant, a common expression, but it is also an untrue one.

No true love of the ideal will ever lead us, or allow us, to call a wrong right ; to " call evil good, and good evil ; to put darkness for light, and light for darkness ; to put bitter for sweet, and sweet for bitter."

Fair deeds merit fair names, base acts base names, and if we speak not of them as they deserve, we degenerate and lower our standard of right, truth and morality. True, there are deeds of which when we must speak, it must indeed be in hushed tones, but let them have their merited names. Let us be as ideal as is possible, but let our ideal be truth, and as true thoughts become more and more a part of our nature so will true words be the mirror reflecting those thoughts.

Froude, in his " Life of Thomas Carlyle," says, " He never wrote down a word which he had not weighed, or a sentiment which he had not assured himself contained a truth." A noble example to follow indeed.

Many words become in time modified in meaning, and to attempt to chain them down to their primary and original sense alone is to narrow their sphere of usefulness, for words need to go through their processes of evolution, to advance as the ages advance and science progresses, as much as anything else needs to move forward.

But as Archbishop Trench has said, " It has before now become a veritable matter of conscience with some, whether they ought to use words which originally rested on, and so seem still to affirm, some superstition or untruth. This question has practically settled itself, the words will keep their ground ; but further, they have a right to do so, for no word need be considered so to root itself in its etymology, so as to draw its sap and strength from thence, that it cannot detach itself from it and acquire the rights of an independent existence."

There is indeed enough in the study to engross one's thoughts without expending time unnecessarily on needless scruples about words.

I believe that boys generally get the credit for using " slang " words, but I have met with boys' sisters who have used as much slang of a refined kind—if such a term is permissible—as their brothers do of an unrefined kind. Yet they would be shocked if told so, for are they not the first to complain of their brothers in this particular? Probably the *eternity* of words has never occurred to them. Words are but the expression of thought, and if we admit that thought is eternal, surely then words must have their eternity also. They must continue to express our thoughts till we reach that world where spiritual words are used as the means of communication.

The *education* in words is a large subject in itself.

When we look into it and see a little of the legends and history contained in them, coming to us as they do from different periods of the world's history, many borrowed from other nations and languages, we begin to realise that it is no mean factor in education to take them up as a study.

Of Norman origin are our words expressive of dignity and state, as castle, palace, sovereign, sceptre, homage, &c., but it is to Saxon origin we owe the homelier and dearer names of home, house, hearth, father, mother, &c.

When we study the poetry, the music, the power, the history, the eternity of words, we obtain not only instruction, but also education. We find the mental faculties drawn out and strengthened.

Phrenologically we need language, causality, and comparison to enable us to understand the etymology of words. Sublimity and conscientiousness added to realise their power and influence. Ideality and sublimity to appreciate their poetry. Conscientiousness and ideality to value their purity, strength, and perfection, and to use them rightly; but it needs the whole mind well trained and educated to fully realise the value, importance, and eternity of words.

There is an economy also of mental work in the use of comprehensive words. Atavism, for example, embodies a whole sentence in itself, and so do many others.

Let us then have a better and more intelligent understanding of the instruments we use to express our thoughts; let our ideas flow through as beautiful and perfect a channel as we can construct, seeing we have the materials all ready to our hand.

We trust too much to our written dictionaries, and neglect to make as complete a mental dictionary as we might. We may not all be great philologists, it needs the master mind of a Max Müller for the deep study of philology, but we may all gaze on the curiosities such minds as his have collected, and the gems they have discovered, with interest proportionate to our understanding of them, but always creating a deeper "love of words," and the right use of them, the more we see the wondrous things they contain. To quote, in conclusion, from Archbishop Trench:—

"Let us not suppose the power of exactly saying what we mean, and neither more nor less than we mean, to be a merely graceful mental accomplishment. It is indeed this, and perhaps there is no power so surely indicative of a high and accurate training of the mental faculties. But it is much more than this: it has a moral value as well. It is nearly allied

to morality, inasmuch as it is nearly connected with truthfulness."

" Words are mighty, words are living ;
Serpents with their venomous stings ;
Or bright angels crowding round us
With heaven's light upon their wings :
Every word has its own spirit,
True, or false, that never dies ;
Every word man's lips have uttered,
Echoes in God's skies."

E. M. R.

PHRENOLOGY THE KEY TO MAN.

THE Rev. J. Idrisyn Jones has recently written an interesting article on Phrenology the Key to Man, in the *Christian Commonwealth*. He says :—

" Man, know thyself : then others learn to know," is a maxim which has travelled down from hoary antiquity ; and one of the most speedy and satisfactory methods for knowing men is to study them in the light of Phrenology, or the science concerning the brain. The late Rev. H. Ward Beecher once said that Phrenology had helped him to understand men more than all the systems of mental and moral philosophy with which he was acquainted. How remarkable it is that such a science is discredited by many men of learning, and neglected by the bulk of mankind. Happily, it is a matter which can easily be put to the test, for we venture to say that an examination of any person's head, by a competent phrenologist, will in a few minutes convince the most sceptical.

It is, however, strange that this great law in human nature should remain so long undiscovered, for only a faint conception of it existed before a century ago, when Dr. Gall, a native of Swabia, had his mind drawn to notice the mental and moral differences among his brothers and sisters, and school-fellows. He also noticed that those pupils who had great facility in the acquisition of languages were characterised by bold and protruding eyeballs. He followed up the investigation for many years in conjunction with Dr. Spurzheim, and died in Paris in 1828.

It is now generally agreed that the brain consists of about 42 distinct pairs of organs, by which the mental and moral life of men is regulated ; this distinctive function of any particular organ in the brain corresponding with the fact of organs in the body which have likewise distinctive functions, such as the liver, the kidneys, the stomach, and the lungs. Nor is it difficult to find some corroboration of this matter in

the Bible, as in Heb. xii. 1 : "Let us lay aside every weight, and the sin which doth so easily beset us." Thus every man has his besetting sin, arising from some dominant propensity of his nature—which is exactly what Phrenology teaches.

We wish, therefore, that the time might soon come when Phrenology shall be turned to the best use both in the Church and the world. Would it not be an advantage in the Church in various ways? (1) *It might secure a more tender consideration of human defects and infirmities.* It would be clearly recognised that men act in accordance with the individual tendencies with which they were born; and that so acting is not the same thing as when no such dominant faculties existed: the hasty temper, the covetous spirit, the sway of animal passions, duplicity and insincerity, quarrelsomeness and other faults are the outcome of a man's brain, connected, of course, with the heart. But it is surely easier to deal with such people all the more patiently if we remember how they are thus handicapped by constitutional leanings. The battles of the Christian life are much more easily won in some cases than in others, and a generous allowance should be made for defects and infirmities where they happen to exist. It is not intended to imply that such defective Christians are free from responsibility—for such innate defects are to be controlled and conquered—or, as the Bible puts it, to be "laid aside"—and if they are unwilling to do so there must be condemnation, although such condemnation should be modified by the fact of such constitutional tendencies. Thus Phrenology will tend to soften the feelings towards those who err—especially if it is known that they and themselves are striving to overcome their defects. (2) *It would facilitate the selection of certain members for any given work.* The success of Church operations largely depends on having the right man in the right place. We knew of a good old deacon who found his special hobby in handing strangers into pews on the sabbath, but whom nature never fitted for such an office. On one occasion a large group of friends made their appearance at the door. Presently the old deacon came up and eyeing them he dryly exclaimed, "What a lot!" It is needless to tell that they never came back to trouble him any more. He was an example of a good man in the wrong place, through which the particular church suffered. Viewed phrenologically he would have been at once pronounced as more suited to some other department of labour, where politeness and geniality are not so indispensable. Thus we have in all the churches "round pegs in square holes." Yet every Church member has a niche which he or she can fill to

the greatest advantage. The sentence in the Gospel "to every man his work," carries with it this principle of adaptation! that misplaced Sunday-school superintendent, or church treasurer, or sick visitor, or committee man, or pastor, might admirably fill other positions, and render themselves invaluable, and Phrenology would be an admirable method of finding their proper sphere. (3) *It would suggest the best way of appealing to men.* The variety of temperament in a group of people is such that they cannot all be dealt with in the same manner. Beecher seems to have used his phrenological knowledge in the pulpit, when making his appeals to his hearers. Men are approached by different avenues, as for instance when appealed to on behalf of the missionary cause. One man succumbs to an appeal to his compassion, as he is reminded of the pitiable condition of the heathen; another yields to the appeal to his sense of duty in the command to preach the Gospel to every creature; another will surrender to an appeal to his gratitude, on being reminded what great things the Gospel has done for him, and that he should be willing in return to help its spread through the earth. Every man thus has some vulnerable part of his nature, and in that direction the appeal must be made. But it would be difficult, apart from Phrenology, to indicate its place. (4) *It would facilitate the training of the young.* In no department of human society is the absence of Phrenology so much to be deplored as in regard to the young childhood of earth. Children are too much dealt with as if they were all cast in one mould; and the mental and moral differences are thus lost sight of. Let us take for an example of this the usual plan, say in a Sunday-school class, of giving a prize for learning some chapter of the Bible, or some hymn: now in such a competition we have no test of merit—for one child has a small verbal memory, while another has it large—and yet the former, who is sure to lose the reward, may have toiled for it far more earnestly and labouriously. Now, Phrenology would prevent such a miscarriage of justice, and such competition among those who were so differently endowed in regard to memory. So again, the discipline to be applied to children is too often of one pattern instead of being diversified according to the different temperaments of children. If some wayward urchin were dealt with from the standpoint of his peculiar constitution of mind, a way to his heart would be at once found, and docility and affection called forth from the most awkward little mortal who has to be taken in hand.

Then what a boon would Phrenology be to the outside

world, for there also men are everywhere misplaced. One man is an architect who ought to have been a musician; another is a landsman who ought to be sailing over the sea; another is a tailor who ought to be a schoolmaster; another is a lawyer who ought to be an artist. Thus men are not at their best in the vocations of life, because not in their right place, for they can only succeed in that task for which nature has designed them. There are, of course, men of versatile genius, who can turn their hand to anything, and make their mark therein, but such are comparatively few. How often in the case of an artizan who comes to do some job is it felt that you could do it as well, or better, yourself, because such a man has not been placed in his proper niche? The Duke of Wellington shone on the battle field, but had he been a draper he might have often been in the Bankruptcy Court. Now, Phrenology would work a revolution in the world, by indicating to every one their proper calling; then all over the earth there would be a display of masterly performances. Medical men would succeed where now they often fail; lawyers would be efficient where now they blunder; schoolmasters would teach with a success which is now too much absent; in short, the world would begin a new era of existence, while mankind would toil with joy in their hearts, for the daily occupation would be no longer a drudgery, as is now the case when people have no natural taste for that which they are doing. The task of life is always fascinating if it is congenial to the natural bent. We, therefore, earnestly commend to all who have the destiny of the young in their hands to avail themselves of this great law of human nature, and to submit sooner or later every child to some competent phrenologist, who will soon reveal how that child is to be educated, and what should be its calling in life. Thus the right use will be made of a beneficent plan of the Creator, who has made the brain the temple of the mind, and the machinery of man's mental and moral actions.

HIS THUMB.*

I, ROY D., was born October 6th, 18—, in Alleghany county, N.Y., a few miles south of Belmont, the county seat. I believe that my boyhood days were guided by as good moral and religious training as falls to the lot of most boys. With much pride, I say that my parents were pious, God-fearing people, having identified themselves with the Methodist church in early youth.

I remained on my father's farm until twenty-two years of

* A Story for Scientists.

age, having had a rather easy time of it till my seventeenth year. At this period, father died from over-exertion in rescuing brother James from a perilous position, he having foolishly attempted to ride across a swollen stream astride a floating log—said log refusing to be ridden. Then, for me, life's sad warfare began in earnest. For the first time in my life I realized the great fact, that it was myself, not another, who had to work out my salvation. It was a plain case of "sink or swim, live or die, survive or perish." And to tell the truth, at least for several years, it was more "sink" than "swim;" with sometimes a rather frail desire to "live," and a somewhat robust desire to "die," finally terminating with a firm resolve to "survive." During the first three years following my father's death, I helped my brother cultivate the old farm; in the meantime attending the winter term of the district school. The next two years I taught two terms of nine months each, in the village school. By this time I had raked together six hundred dollars of my own earning, and shortly after received seven hundred and thirty-two dollars as my share of the family estate. With this (to me) enormous sum of money, thirteen hundred and thirty-two dollars in a leather wallet carefully wrapped and tied with a tow string, I felt as important as a Vanderbilt, a Gould or a Sage. But then at this juncture I had not sailed many leagues on the great voyage of life. It is well that the All-wise Creator has kindly veiled the future, and that we are only permitted to know and realize what it has in store for us as we advance a step along the tortuous pathway of life. My education was irregular and incomplete; and for this reason I resolved to supply the missing links ere it was too late. After a considerable turning and twisting of the proposed plan, I finally decided, all things considered, that New York city should be the objective point. There I believed the educational advantages were such as would insure a successful carrying out of the project. And, accordingly, thither I went carefully guarding my leather wallet, so neatly wrapped and tied with a tow string. After an uneventful, but rather tiresome journey, I landed safely in the great metropolis on All Fools' Day. I felt as lonely and dejected as though I were in the midst of the Sahara desert. I timidly ventured down Broadway, that famous thoroughfare; and oh, the scene that met my rustic vision. How devoutly I wished that I were back home again. That nondescript host annoyed me. Alone, friendless, and a stranger in the great city, I could not repress a rising sigh—my mind wandered back to mother and home.

By-and-bye, I came to a confectioner's shop. The shop certainly contained a fine display of candies—every kind and style imaginable. At last, I spied some fine coils of taffy. Now, if there was anything in this world for which I had an uncontrollable weakness, it was taffy. As a child, I dearly loved it, when I grew older I fairly doted upon it; but unfortunately owing to the leanness of the family purse we were only able to get a limited taste twice a year. I bought a couple of coils of the taffy, and finding a comparatively secluded spot, sat down and eagerly devoured both coils. Then sauntering about for sometime, I secured a night's lodging and went directly to bed, feeling supremely happy. After dreaming all sorts of things about taffy, I suddenly awoke near midnight, suffering the most excruciating pain in the region of my stomach. My first thoughts were that I had an attack of Asiatic cholera. But after a few minutes' serious reflection, I thought of the taffy. It was the work of the dearly beloved taffy. I was sick two weeks, the doctor's bill was \$25; and ever since, I and taffy have been sworn enemies. By the time I had fully recovered from my sickness, the leather wallet so neatly wrapped and tied with a tow string, was just thirty-five dollars lighter than when I first entered the great city. I immediately entered an academy, and by great diligence received a good academical education. I had long thought that I should like to be a lawyer, although it had been the dream of boyish days to become a great detective. But, under the circumstances, I deemed it best to choose the law as a profession. After considerable search and disappointment, I finally became a student in the law office of Charles O'Connor, afterward the eminent jurist, but then in the incipiency of his great fame. I remained in the office two years, receiving much valuable instruction; my tutor then was a marvel of learning. In fact, Charles O'Connor was the most versatile person it was ever my fortune to meet. My studies completed, I was immediately admitted to the bar, and in a few days thereafter, hung my shingle as "Attorney and Counsellor at Law." It is scarcely necessary to state that my office was not thronged with clients.

How well I remember the weary waiting. After the lapse of six months my patience was utterly exhausted, and I was about as sick as on the evening that I ate too freely of the coveted taffy. Being fully satisfied that it would be useless to remain here any longer, I determined to shake the dust of the metropolis from my feet and go to Chicago. Fortunately, I had but little business to settle up, and in two days' time was on the road to the future metropolis of the West. My mother

had died two years after I left home, and brother James had shipped aboard a vessel bound for the South Sea islands, and was never heard from afterwards. And of course the old home-place no longer had any charms for me. I reached Chicago in due time, and at once proceeded to look up a suitable location. After looking about for several days, I was still undecided as to the best place to open a law office. At last I found a building in a very desirable part of the city, but unfortunately, it was not for rent. I had already begun to entertain serious doubts as to the reliability of my profession immediately yielding money, of which I stood in great need. The leather wallet, so neatly wrapped and tied with a tow string, now resembled Job's proverbial turkey. And once again, it was "sink or swim." So I concluded to make one great effort to swim over the present difficulty. Once more I found myself alone, friendless, and a stranger in a great city. Experience, and contact with the ways of the world, however, had given me a vast deal more confidence in self, than I possessed on entering New York city.

After strolling about the city several hours I approached a group of men who seemed to be earnestly engaged in conversation. I stopped for a moment in order to catch the trend of subject. I soon learned that a detective agency had recently been established, and that Allen Pinkerton was its instigator and chief. So I at once resolved to apply to the big souled Scotchman for a position in the service. And right here it may be proper to state that, from childhood, I had been a diligent student of human nature. I possessed, as it were, a sort of natural instinct or intuitive knowledge, which enabled me to read character. When a boy, back in my native state, I had squandered hours at a time noting the multiform visages as seen in the surging crowd. The images became firmly stamped on memory's tablet. That the face is a true index to the thoughts and character is a truism which cannot be gainsaid; it is a basic principle in the sciences of Phrenology, Physiognomy, &c., and therefore logical in its conclusions. Constant thought, good or bad, bears its unmistakable impress on the countenance. Some may partially succeed in concealing this great fact, but practiced eye will readily detect the semi-deception. For years I had made the study of Phrenology, Physiognomy, Psychomancy and Palmistry a specialty. So, that to reduce the theory to practice, was as easy as solving a problem in differential calculus, and generally about as accurate.

When I applied to the chief for a position on the detective force, I believed that I came more than ordinarily prepared.

At least, Mr. Pinkerton so decided, after firing at me a series of searching questions. He at once employed me—that is, on probation, and in four days assigned me to my post of duty. At the end of six months I was placed on regular duty, and within eighteen months from date of my application, was detailed to ferret out a delicate and dangerous case.

I was handsomely rewarded for the part I played in the affair, and returned to Chicago. The leather wallet, so neatly wrapped and tied with a tow string, was filled to overflowing. I began to feel that prosperity was near at hand ; and yet, I could not banish the thought that it might prove a delusion, and that once more I would find myself stranded. My fondest hopes had so often been blighted by frowning misfortune, that I hardly dared to entertain a hopeful thought. But, at the same time, I began to have serious doubts as to the feasibility of the course I had been pursuing. The plain fact had already dawned upon my mind that I had belonged to the “floating” population long enough, and that the best and safest plan was to seek a favourable location, settle permanently, and there fight it out to the best of my ability, let the consequences be what they would.

Consequently, I severed my connection with the Detective Corps and turned my face towards St. Louis, determined to make that place my permanent home. In my wanderings through the West I visited St. Louis, and was favourably impressed with the city. It was not without a pang of sorrow that I bade farewell to detective life, for my relations with the chief had always been unusually pleasant. And it was with profound sorrow that I read of his death a few years ago. To-day, I revere his memory—Allen Pinkerton was a good and great man.

I reached St. Louis about the 1st of May, and without any preliminary vacillating, opened a law office in a very desirable part of the city. Once more the shingle bearing my name and profession was swaying to and fro on the balmy breeze. I waited and looked for the coming of clients. Oftentimes I devoutly prayed for the proverbial patience of Job ; I verily believe that if there was ever a person on the face of the earth who needed a double supply of this rare article, I surely was the legal claimant. The first six months I earned three good sized fees—that was not much, yet it was a trifle better than nothing, as it sufficed to keep soul and body together. Thus I waited and worked and existed for a year, barely earning enough to keep the wolf from the door. My office rent for the last quarter was due, and no money with which to pay it. Already I had received formal notice to either pay the amount

due or vacate the room within ten days. This singular stroke of fate at once placed me between two fiercely burning fires. The "wolf" was nearing the door. Did the darkly-gathering cloud have a silver lining—behind the cloud was the sun shining still? If so, I failed to distinguish even a glimmering ray of hope. I was driven to the very verge of blank despair, when I mechanically picked up a daily paper from among my morning's mail. After scanning the local departments a few minutes, my attention was suddenly arrested by the following notice :—

REWARD—\$10,000 REWARD.

A reward of Ten Thousand Dollars is hereby offered for the arrest of the person or persons who murdered John P. L——, Banker, on Tuesday night, June the 8th, 18—. J. L—, & S. L—.

Six days before the above notice was published I had read an account of the affair, but scarcely gave it more than a passing thought. However, I saw the dead banker a few hours after death had intervened. From the horrible manner in which the body was mutilated, I knew that the work had been done by a novice—the subtle hand of the experienced "thug" was conspicuous for its absence.

On reading the notice I was almost overcome with excitement ; the opportunity thus offered seemed too good to be true. I quickly resolved to make a desperate effort to unravel the mystery, capture the murderer, and reap the reward. This was the golden opportunity—visions of poverty and hope long deferred, visions of affluence and a happy future, floated dreamily before my eyes. The tension on my nerves was so great, for the time being, that, in order to study and quiet them, I was obliged to swallow a glass of wine. But this crucial moment was the first time the poisonous cup ever touched my lips ; and God being my helper, it shall be the last time. I went to the police headquarters to ascertain all the particulars of the tragedy, and especially the location where the sad affair occurred ; also, to ascertain who, if anybody, was suspected or had been arrested ; and if detectives had as yet been employed, or were there any who were simply working for the reward. From this visit I gleaned considerable information ; I also learned that a man, a resident of the city, had been arrested on rather weak circumstantial evidence, and was then languish-

ing behind prison bars. At least, the information was sufficiently strong to justify me in selling my law library, also all my books on the sciences. This forced sale was made in order to secure money to defray expenses while searching for the criminal or criminals, and pay my quarterly office rent.

After adjusting my business affairs, I visited the "suspect" confined in prison. On entering the prison, I beheld a medium sized man of rather pleasing appearance. His face revealed more than ordinary intelligence; forehead high and intellectual; veneration, extremely large and well developed; destructiveness, exceedingly small and easily subdued; conscientiousness was what phrenologists would term superlatively superb. Of course, no man can know the inmost secrets of the human heart, for the Bible saith that the heart is deceitful, and above all things, desperately wicked. Nevertheless, after talking with the prisoner more than an hour, I firmly believed him entirely innocent—partially the victim of some old feud. Upon inquiry, I was informed that he was a prominent business man, and had always been considered as an honest, law-abiding citizen. For some reason, known only to himself and a few intimate friends, the prisoner refused to accept the proffered bail.

In my interview with the prisoner, I learned that two brothers of German descent, blacksmiths, had been over zealous in their efforts to fasten upon him the murder of the banker. To this story I attached but little importance, as every community contains a few persons who invariably overreach themselves in such cases. I searched the city from fore to aft, but discovered no clue to the murderer. The city was teeming with idle rumours concerning the affair, but nothing definite could be learned. Almost every one had some vague theory, but to me these theories were valueless. I visited many towns and cities in the south and southwest, but failed to discover even the remotest clue. At this critical period it seemed as if the reward was farther away than at the beginning of the almost hopeless search. Were my prospects and hopes to be blighted and dashed to the ground, as they had often been before? It seemed as if a relentless and cruel fate had persistently pursued me ever since the memorable first day of April, when I landed in New York city. But I had long since discovered that repining and looking on the dark side of life, availed nothing. And then above all things, I heartily detested a chronic grumbler; and to become one myself, why, the very idea was ridiculous. So I mentally resolved to renew and continue the dismal search to the end.

With but little hope of learning anything, even of the

slightest value, or discovering the faintest clue, I went to visit the family of the murdered banker. On making inquiry, I was informed that the family mansion was located on the outskirts of the city—in the extreme south-west part. In a short time I was at the late residence of the banker. Everything about the grounds betokened wealth and refinement. On the unruffled bosom of a miniature lake two of the most beautiful swans that I ever beheld were floating lazily about in solemn grandeur. In a capacious conservatory were rare exotics, flowers in great variety, from the unfolding bud to full blossom, shedding their lustre in lovely tints. I passed on to the door, rang the bell, and in response thereto a servant appeared. I partially stated my errand and was immediately ushered into the parlor, where, after waiting a few moments the mistress of the house came in. She gave me a very quiet but cordial greeting. In a delicate way I referred to the death of her husband, the late banker, and told her that I was a private detective and had been working the case for several months. To this announcement she exhibited considerable surprise, but, upon recovering her wonted composure, remarked that there were at least four detectives trying to solve the mystery in which the case was shrouded. As yet, she said, no trace of or clue to the perpetrators of the sad affair had been revealed. "I sometimes fear," she said, "that they who so cruelly murdered my poor husband will never be brought to justice and forced to suffer the full penalty of the fearful crime. You don't know how good and true he was, nor how much I miss him—sometimes I feel that my sorrow is greater than I can bear."

I then asked her to give all the particulars of the murder that she could, as I was extremely anxious to obtain any information that might possibly throw light on the dark affair; that I had staked my all in the hope of being able to run down and capture the murderers; also, that I was on the verge of bankruptcy, and failure meant to me a vast deal. The woman said that her husband was in the habit of riding to and from the bank in a one-horse buggy, and that on the night of the murder he had tarried at his desk later than usual, and that he had three thousand dollars in National bank notes concealed about his person; this amount, with a valuable gold watch, was stolen. In taking the watch the chain had been broken, leaving about four inches attached to the dead man's vest. I carefully examined the remnant of chain and the vest. A memoranda book, which the banker had in his pocket when murdered, was next produced for inspection. A brief examination revealed the fact that he had drawn the amount referred to.

I was about to return the book when I noticed a little spot of blood on the edge of its leaves. I inspected this for a moment and then opened the book again. On the fly-leaf in the first part of the book was the bloody print of a thumb belonging to the left hand. This remarkable discovery inspired me with some hope. Upon making this fact known to the woman, she at once agreed to defray my expenses one year if I would continue to search, provided the criminals were not sooner apprehended. I accepted this offer with gratitude, for the leather wallet, so neatly wrapped and tied with a tow string, was now almost empty.

Concerning the thumb mark it may be necessary to state that the epidermis, or scarf skin, of the thumb, is not alike in any two persons. There always exists a marked difference, and yet very few are aware of this fact. This theory is based upon physiological principles; therefore is logical in its conclusions. These conclusions, when traced back to first principles, affirm and substantiate the assertion.

This secret I learned from a scientist during my sojourn in Chicago. At that time he was a very old man and had devoted more than fifty years to scientific investigation. He told me that he had taken the impress of five thousand different thumbs and had never found any two alike, but always and invariably a distinct difference, showing variable degrees of intensity. The dissimilarity between some of these thumb-prints (they were classified) was not readily discerned with the naked eye, but when submitted to a microscopical test, clearly revealed a startling difference. But a majority of the thumb-prints were sufficiently dissimilar as to be easily seen without the aid of a glass. In order to satisfy myself as to the accuracy of this remarkable theory I secured the impress of two hundred and fifty different thumbs. A careful and exhaustive examination proved conclusively that the theory was infallible.

The tests are made by slightly moistening the ball of the thumb with carmine or a bright red fluid, and then gently pressing it on a strip of white paper.

I tore the leaf bearing the bloody thumb-print from the dead man's memoranda book, and at once renewed the search. The prospects of success were about as flattering as looking for a star at night while the heavens were obscured by a dense mass of clouds. But I was confident that the thumb-mark was made by the person who murdered the banker. Upon this point there was no conjecture, it was absolute certainty. To find the villainous owner of the thumb was to me the all-absorbing and keenly perplexing question. My only hope was to disguise myself as a fortune-teller, visiting such places

as criminals were likely to take up their transient abode. So, accordingly, I provided myself with a gray wig and false whiskers ; also a four ounce bottle of bright red fluid, and a good sized blank book.

For some weeks I plied my false vocation in and about St. Louis, charging the very moderate sum of fifty cents each for anyone desirous of knowing just what the unknown future held in store for them. After securing a number of thumb-prints in this unique manner, I would then retire to some secluded place and compare them with the bloody thumb-prints on the fly-leaf taken from the murdered man's memoranda book. Among the thirty impressions taken, none proved to be a counterpart of the original thumb-mark, although several closely resembled it. These impressions were invariably made with the thumb of the left hand, as it was with this thumb that the fiend stained the fly-leaf ; and also, for the reason that there is always a perceptible difference between the impress of the two thumbs of the same individual. However, in many instances, this difference is scarcely visible to the naked eye—the chief difference lies in the peculiar formation of the epidermis.

Of course, I did not have much faith in the idea that the criminals yet remained in the city, where the crime was committed ; yet, in several cases, I had known of persons committing most horrible murders, and then lingering near the scene of their crimes for a year or more without being detected, or even suspected. This bold and singular conduct would of course have a strong tendency to divert suspicion.

After due consideration I concluded to make a thorough search among the miners in the great coal region of Pennsylvania. I made ready and went to Harrisburg. Here I spent several days searching for the St. Louis criminals, and making enquiries concerning the coal mines. Then, in accordance with the information I had received, went direct to the designated locality. This locality contained a most remarkable assemblage of humanity. While there were many men, good and true, it was clearly evident that others bore the unmistakable mark of Cain upon their brows. And again, there were still other men of rough and extremely uncouth exterior, who possessed all the natural traits of the "black leg," thief, and murderer.

I assumed my rôle as itinerant fortune-teller and went about the mines diligently plying my vocation. From the moment I entered the mining village until I left it, I felt that my life was in imminent peril. But I had resolutely determined to make a thorough investigation if at all possible.

The first week I made but little progress; but from thence onward I was reasonably well patronized. Among the miners there were several who seemed rather wary. This wariness I accepted as a good omen, and determined to secure the patronage of part or all of them. I had already secured forty-eight thumb-marks, but in no case did they resemble the tragical bloody mark. One Sunday morning after I had been in the village about three months, I prevailed upon three suspicious looking miners to have their fortunes disclosed. Of course I always had some plausible story prepared to suit each individual case. It was absolutely necessary to court their favor and make a story appeal to their vanity—for this was the key to each man's confidence. Human nature is about the same the world over. After securing the impress of each man's left hand thumb and writing his name opposite his own thumb-mark, I walked about three hundred yards away to prepare a story, and examine and compare the thumb-marks. The first mark examined was that of John W. Did it resemble the original bloody mark on the fly-leaf? It was an exact counterpart—the one in human blood, the other in bright red fluid. For a few minutes I could scarcely realize the situation—at last I had found the fugitive murderer, there he stood scarcely three hundred yards away!

Controlling my feelings in a very unsatisfactory manner, I returned to where the men were standing and made known to each his fortune. They paid me the customary fee, 50 cents, and seemed very well pleased. For one of the trio, the near future contained a fortune very different from that which I had just related.

After a careful consideration of the case, I decided that it would be the best policy for me to return to Harrisburg, and telegraph to the authorities at St. Louis to send an officer properly equipped to make the arrest. I made haste to reach the city, and deliver the message to the telegraph operator, then returned to the mining village secretly to shadow my man. At times he would become restless, yet, I am satisfied he never suspected me of being anything but a harmless old fortune-teller. And I took special pains to encourage and perpetuate the delusion. His general appearance did not indicate a naturally vicious disposition—he seemed to have no dissipated habits, but it was that ever restless demeanor and apprehensive look that betoken the guilty conscience. After waiting what seemed to me an unreasonable length of time, I received a message from the St. Louis officer, stating that he had just reached Harrisburg, and was waiting for me to come thither.

I immediately repaired to the city, and had no difficulty in finding the officer. I recounted to him in detail the situation, and together we formulated a plan for arresting the culprit. At first the officer appeared to have but little faith in the thumb-mark theory. In fact he ridiculed the idea—said it was simply preposterous, and would certainly result in failure; and worst of all would plunge us into vexatious trouble. However, with the aid of the microscope and my collection of thumb-marks, I explained and showed to him the principles of the theory, and finally convinced him of its infallibility.

Being fully aware of the desperate character of many of the men in the mining village, we deemed it good policy to secure the services of a local officer in making the arrest. So, early the next morning the two officers and myself departed for the mines where I had located the criminal. Heavily armed, we were prepared to make a fight to the finish if necessary. Upon reaching the place I was overjoyed to find that the murderer was still there, all unconscious of his pending fate. But the moment he saw the two officers with me, it was clearly evident that he at once realized the true situation. He quickly arose from the table, leaving his unfinished breakfast, drew his revolver and started for the door; but the St. Louis officer anticipated this move, stepped into the doorway covering the startled man with his Colt's Navy, and ordered him to throw up his hands. This order he did not comply with till the officer had slightly punctured the fleshy part of his left arm with a well directed bullet. The man dropped his revolver, staggered backward a few steps and raised his hands in the approved style. It required but a moment to manacle his hands, and secure the other revolver and a villainous looking bowie knife. This rendered the man comparatively harmless, and then, but not until then, did he demand to know why he was arrested. Upon being told the precise reason, he feigned great surprise, declaring with much vehemence that he had never seen St. Louis, nor had he ever heard of the murder. He said that twenty years ago he came direct from Germany to the Dutch settlement in Pennsylvania, and from thence to the coal regions about six years ago. We hurried him to the wagon a half mile away which was awaiting our return. After we had gotten into the wagon and started, the manacled man showered upon us the most violent abuse. He would curse and pray, alternately, in German and English—speaking the former language fluently, and the latter fairly well. It was a singular case of what might be termed the emotional religious.

We reached Harrisburg in safety, and after liberally rewarding the local officer for his kindly aid, boarded a train for St. Louis. By this time the prisoner had wilted down to meek submission and the journey was made without further demonstration on his part. We conveyed the prisoner to police headquarters and surrendered him to the proper authorities. The chief of police at once recognized the prisoner as the the older of the two German blacksmiths already alluded to. He (the prisoner) very emphatically refused to tell anything concerning the whereabouts of his brother. Upon being shown the bloody thumb mark on the fly-leaf of the banker's memoranda book, and the impress of his thumb on another paper, he seemed somewhat bewildered. I explained to him that both marks had been made by one and the same man—placing them side by side under the microscope, and bade him look. He looked at the ghastly object perhaps five minutes, turned deathly pale, and exclaimed, "O, my God, I am condemned, the banker's own precious blood condemns me." The prisoner tottered to a chair, seated himself, and finally broke down and cried like a child. Such heart-breaking wails; who could hear them and remain unmoved? I fervently hope that I may never hear the like again.

After the prisoner had somewhat subdued his emotions, he candidly confessed, though reluctantly, that he murdered the banker—that his brother took no part in the affair, but simply received half of the money and the gold watch, that he alone had stained his hands with a fellow mortal's blood, and was ready and willing to suffer the penalty of his crime. He pleaded poverty as the incentive to the crime, and said, "God knows how much I have suffered. I have regretted the deed a thousand times, and the memory of the white, silent face of the banker has pursued me like a spectre ever since that fateful night."

Acquaintances of the prisoner said that he had always been considered a good, but rather eccentric citizen; that he professed religion, was regular in his attendance at church, and could pray with all the fervour and eloquence of the typical negro chicken thief at a backwood's camp-meeting. And, also, that the prisoner and his brother had announced three months before the murder, that they designed returning to their native land (Germany). Consequently, when they did take their departure, it was scarcely thought to be on account of that horrible affair. The grand jury had failed to indict the suspect, who was arrested and cast into prison immediately after the murder, and he was released, and went forth a free and innocent man.

The prisoner was indicted and speedily brought to trial, I assisting the prosecution. The poor fellow simply pleaded guilty to the charges preferred against him and appealed to the mercy of the court. After a brief but fair trial, the jury returned a verdict of murder in the first degree ; and shortly thereafter the murderer expiated his fearful crime on the gallows.

I promptly received the \$10,000 reward, which was judiciously invested ; I then resumed the practice of law, and the impetus naturally following my perseverance and success in this famous case, soon placed me on the road to prosperity and happiness.

G. W. WAYWICK.

LONDON,

IMPERIAL BUILDINGS, NEW BRIDGE STREET,
LUDGATE CIRCUS, E.C., DECEMBER, 1892.

HEADACHES IN CHILDREN. WHY do we hear of children having headaches ? The wee bairnies should not know what an ache in the head is. Taking the facts as they stand, how is it that they exist ? There are many causes. *First*, perhaps is from too rapid growth. This cannot be avoided, but hard study can be prevented. While the constitution requires all the nourishment, circulation, and energy it can get, and if the brain too is calling for a large share of vital fluid,—the blood,—there ensues a bankruptcy of vitality, and headache is one of the smallest items of the bankrupt stock. Such a child requires to be kept from too hard work of body or mind, and fed with cooling, healthful, easily assimilated foods. *Second*, from too much intellectual activity, and too little fresh air and outdoor life. The blood does not become sufficiently oxygenized, and the little brain is imperfectly nourished, like a room that is heated with gas with all the ventilators closed. *Third*, from indigestion as a result from improper food or over-eating. The remedy is plain to see, but not so easy to follow by those who do not know how, when, and what to eat. *Fourth*, headaches among children often have a nervous origin, late hours, lessons in the evening, &c., which should be avoided, and cold applications to the head, and hot foot-baths are useful ; also massage to the limbs and back, and tepid baths. *Fifth*, from poison in the blood from inherited disease (gout or rheu-

matism). For such, the sea-side schools are often chosen with benefit, the children bathe in the sea in warm weather, or have sea-water baths, and live out of doors all they can. *Sixth*, from too little arterial blood. Such little ones sadden the nursery with white faces. They live chiefly on sweets, and in close rooms, instead of brown bread, milk, eggs, porridge, and fruit; they sit and do fancy work instead of taking gentle exercise out of doors. *Seventh*, from injuries to the head, as blows, or falls; these must have for a time dark quiet rooms and surroundings. The heat of the head must be drawn away by hot foot-baths, inflammation allayed by cold compresses on the head. As a rule the headaches of childhood are occasioned by ill-ventilated schoolrooms, over-pressure, and a badly planned diet. Attend to these, and much of the misery of the young would be cancelled.

MARGARET
FOSTER
HERRICK.

THE Sargent prize of £500 for the best translation of a Horatian ode, though open to all Harvard University, has been carried off by Margaret Foster Herrick, of the Harvard Annex. A contemporary thinks that as this is the second time that a woman has won this prize that it is about time for that wise person who declares that women's brains don't weigh as much as men's,—hence they are intellectually inferior,—to crawl off to some retired corner and hide his diminished head. See Mr. Coates' article on "Brain and Sex" in the *Phrenological Annual* for 1893.

MIND
INFLUENCE
OVER BODY.

"HEALTH AND HAPPINESS" was the title of a practical address recently delivered by C. G. Davies, M.D., of Chicago. He said, "Theorize as you may, but let me tell you that crime and vice are nothing more than the manifestations of disease. What was morality hundreds and thousands of years ago is not always morality now." This is decidedly true, and as it should be, for the standard of moral life is ever on the rise, and a man, to be symmetrical in his nature, must live up to the ideal heights of the age in which he is born. "A man must live in harmony with himself. When his daily acts are in discord with his recognized standard of right and wrong, nutrition fails, digestion is poor, assimilation is imperfect, the circulation is sluggish, *the brain* suffers from want of nutrition, and the man is ill." This condition is worthy of thought, for it forms an interesting psychological study. When the discord is removed, when a man is once more in harmony with him-

self, we notice the eyes brighten, the colour returns to the pale cheeks, the lips grow red, the digestion improves, and the heart sends the healthy arterial blood to the extremities, and he feels the glow of a new life pulsing within him. It is astonishing how many people are made ill and then cured again by the action of this mental law. "As a man thinketh, so is he;"—therefore when you tell a man bad news, he will lose his appetite, and often become seriously ill in a few minutes. When you tell him how ill he looks, you think you are benefiting him, but instead, you make him worse than he is, through the great influence which the mind has over the body. These influences we are hardly sufficiently aware of. A happy, tranquil state of mind is necessary to perfect health. How many have either in this age of pressure ?

HOW TO
PROLONG
LIFE.

ACTIVITY without overwork, healthful living, moderation, self-control, the due exercise of all the faculties, the cultivation of the reason, the judgment and the will, the nurture of kindly feelings, and the practice of doing good—all things, in fact, which tend to build up a noble manhood—also prepare the way to a long and useful life, and a happy and blessed old age.

Fowler Institute.

MEMBERS' NOTES.

"*Life is the soul's nursery.*" — THACKERAY.

OWING to the inability of Rev. W. L. Spooner to attend at the Institute on November 14th, his paper on "Comparative Psychology" was read by Mr. Tovey, while Mr. Fowler presided. The following is a brief *precis* of the writers remarks :—

"Aristotle, the great cosmopolitan thinker and knower, whose philosophic influence had been so vast, is regarded as 'the father of psychology.' Psychology covers a wide ground, it is soul-science, the science of the states and activities of mind. It has in the main taken two directions—the spiritualistic and the materialistic. By the spiritualistic, I mean the method which has assumed the existence of mind as distinct from the body; and by the materialistic, that which regards all so-called mental phenomena as physiological sensibility and action. The spiritualistic will include the old Grecian, the Biblical and the modern Cartesian, Kantian, Hamiltonian, Idealistic, and main Phrenological schools of thought. The materialistic school will gather in thinkers of the Lucretian order in

the olden time, and the followers of Hume, Comte, and some of the sensational psychologists in modern times.

“ In the western, rather than in the eastern, part of the world, the real psychologic thinking has been done ; but, for the purpose of a fair survey, we may divide the subject into its ancient, mediæval, and modern aspects. Ancient Psychology may properly be limited to Biblical and Grecian thought, the former, of course, not being scientifically but merely incidentally stated. The “ Socratic School ” of Philosophy, working through the Aristotelian channel has been for ages the greatest force in the western world. Socrates felt he was not summed up in his own body. Aristotle taught that soul, though indwelling a body, is not body, but does so indwell the body that all movements of thought, &c., were of the body as well as of the soul.

“ The middle ages are not rich with Psychologic facts ; in every sphere of life during this period practical science was at a discount. Phrenologically, the mediæval period serves to show the mistake of a one-sided use of mind.

Speaking broadly, the revival of learning and the revival of religion were nearly parallel. Psychologic study felt new inspiration during the 17th, 18th, and 19th centuries, and may be called specifically the Psychologic period. On the subject many books have been written, such names as Descarte, Leibnition, Spinoza, Bacon, Hobbes, Locke, Hume, Kant, Hamilton, Brown, Reid, Comte, Spencer and others are most familiar. Despite the condemnation Phrenology has received from many of the so-called leaders of Psychology, the teachings of Gall and Spurzheim have been maintained, and continue to widen their influence ; and any history of Psychologic movements of the last hundred years, which ignores Phrenology, will so far be a defective record.

“ Both as to the scope and detail of its teaching, Phrenology holds, comparatively, the higher ground. It contemplates its subjects in view of, and in connection with the whole personality of a man. This, perhaps, the old Psychology professes to do ; it, however, gets into an abstract mood, dwells on abstract qualities, and comes to abstract conclusions. The new deals more with the concrete, and generalises conclusions, which cover the active phenomena. The old speaks of faculties, but regards them as merely names for certain moods of the soul ; the new says that the soul is made up of manifold real faculties.

“ In comparison with other psychological systems, old and new, Phrenology, I think, may and will hold its own. Its method is scientific, it appeals to the test of life, its principles leave room for further advance, and the tread of other psychologic thought appears to be towards phrenological principles.”

A vote of thanks was proposed and seconded to both the writer and reader of the paper.

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At the Charité Hospital, Paris, recently, a series of remarkable experiments have been made by Dr. Luys, of the “ exteriorisation ” of the human body. “ So complete was the exteriorisation of the subject

that Dr. Luys was able to transfer a woman's sensibility into a tumbler of water. The tumbler was then taken out of sight of the hypnotised person, and the representative was invited to touch the water, and as his hands came in contact with it the woman started as in pain. This experiment was repeated several times, the requisite precautions being taken that the hypnotised subject should not see the contact between the hands and the water. The water retained the sensibility a considerable time, and, if drunk before the sensibility is exhausted, the patient falls into a deadly swoon. Dr. Luys was also able to confirm the wonderful discovery made by Colonel Roche, administrator of the Ecole Polytechnique, who found that it was possible to transfer the sensibility of a hypnotised person to the negative of a photograph of the subject, and that the subject not only felt but showed signs of any mark made on the negative. Supposing, for instance, a scratch was drawn with a pin across the hand on the negative after it had been charged with sensibility, the subject would shriek with pain, and a few instants later a mark similar to that made on the negative would be visible on the hand of the subject. Dr. Luys tried the experiment several times with an extraordinarily sensitive subject now at the Charité, and each time with considerable success. The experiments are creating a great deal of interest in the scientific world."

* * *

Hypnotism is of course no new thing, having been known and practised by the Egyptians, Persians, Greeks, and Indians, while in this country it has appeared as Electro-Biology, Electro-Psychology, Animal Magnetism, Mesmerism, &c. That which was so strongly denounced at one time, and which caused the celebrated Dr. John Elliotson to throw up his appointment as physician to the University College Hospital, is now being *accepted* and *investigated* by the medical profession. There is no telling where the benefits and dangers of this subject may end, when we read such cases as the above, or, for example, when young and delicate women are rendered capable of lifting heavy weights in one hand with the greatest ease, which a strong man could scarcely raise from the ground with both hands.

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It is somewhat surprising and depressing to learn, that despite the rapid strides made in all branches of science, that one quarter of the people on the earth die before reaching six years of age, one half before attaining sixteen, and that only about one person in every hundred reaches sixty-five. Deaths are calculated at the rate of 67 per minute, 97,000 per day, and 35,639,835 per year. Births at 70 per minute, 100,800 per day, and 36,792,000 annually. According to Professor Cornfield's calculations, however, the mean length of life in London during the last fourteen years has increased from $34\frac{1}{4}$ to over $38\frac{1}{4}$ years.

* * *

Jews enjoy a remarkable endurance against disease, tabercular diseases especially, also a far greater tenacity of life than Gentiles, which brings their average duration of existence far in advance of the above figures.

Mr. Smith writes :—“ I frequently come in contact with interesting specimens of humanity, tending to prove the truth of Phrenology. There is a man employed at the docks for looking at the packages that are landed and taking note of their marks, size and general appearance. He has large individuality, form and size, but his reflective organs are deficient. Another man, whose avocation requires him to sit still and think all day, has abnormally developed reflectives, but his perceptives are weak. One of the passengers I met on a P. & O. steamer a short time since was conspicuous for his immense organ of mirthfulness. At dinner time he kept those around him in convulsions of laughter. Even the stewards who waited on him caught the infection and hurried from the saloon to smother their bursts of hilarity. All the Channel pilots I have met have large locality, and all the ships' husbands large cautiousness. There is one ship's husband who has the largest development of cautiousness I have ever seen ; he must have inherited a fair share to begin with, and through constant exercise every day it has become his ruling faculty, so that now it is quite depressing to be near him. Another gentleman, although not deficient in cautiousness, has the organ of hope much larger. I have seen several people go to him in a desponding frame of mind, and after a short time leave him inspired with hope and confident of success in the future. He reminds me of H. W. Beecher's saying, ' God puts excess of hope in one man in order that it may be a medicine to the man who is despondent.' May not the same be said of other faculties beside hope ? ”

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If those students who make a practice of observing human nature, would only record those observations as Mr. Smith has done, we might by this mutual help greatly assist one another in gaining knowledge which is difficult to obtain by other means. It is partly with this object that the committee have arranged to discuss “ the choice of pursuits,” considered phrenologically, at the next monthly meeting, on December 12th, when we hope to learn some members' opinions respecting the advisability of preparing tables similar to those suggested in last month's number. The subject of pursuits is of primary importance to the phrenologist, it matters comparatively little if an individual is credited with, say half a degree more or less of an organ in an ordinary examination, but when a boy's future avocation is being selected for him it is highly essential that he who makes the selection should possess the necessary knowledge for so-doing. Members, who, by the way, are permitted to bring their friends to these meetings, that are anxious to make Phrenology of greater public value, are specially asked to attend, while those in the country would oblige by forwarding any suggestions before the appointed date, to

G. B. COLEMAN.

The end of our being is to educate, bring out, and perfect the divine principles of our nature.

Correspondence.

To the Editor of the "PHRENOLOGICAL MAGAZINE."

SIR,—I shall be obliged if you will allow me to inform correspondents through your columns that I have no longer any connection with the B.P.A. Also to ask friends when they send newspapers, &c., to take care to have them sufficiently stamped. I receive many communications of the kind on which I have to pay double postage.

I am, yours truly,

ALFRED T. STORY.

Notes and News of the Month.

THE January number will contain the first of a series of articles on skulls, illustrated.

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PHRENOLOGICAL examinations daily from 10 a.m. to 5 p.m. Saturdays 10 a.m. to 6 p.m. Evenings 7 to 9.15 p.m.

* *

THE Examinations for diplomas and certificates at the Fowler Institute will take place January 12th and 13th, 1893. Intending candidates should send in their names to the Secretary, on or before the 31st December.

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THE *Phrenological Annual and Register* for 1893 has just been issued. It contains a cheap sixpennyworth of phrenological literature. We find therein not only what Phrenology has done in the past, but what it is going to do. Now are we not all a little curious to take a leaf out of the future in every department of life? Let us gratify our desire to study occult history, and see if our optimistic views will be realized.

* *

WE shall also find the views on phrenology of a great man, and how he became acquainted with, and was obliged to believe in phrenology. That was an era not only for such a genius, but also for the world; his addresses and discourses are weekly filled with a wonderful depth of human nature, a study of character which no one can excel.

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AGAIN we dip into the contents, and find a common councilman speaking of the good the science is to men of business and those in influential positions.

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THE Fowler Institute Annual Soirée will take place Monday, January 16th, when all members are cordially invited to attend.

MR. F. C. BARRATT, of Margate, contributes the following facts gathered from a village churchyard, as extremely suggestive to a phrenologist who has daily to face the ugly fact of physical inheritance :—

In Memory of

Wm. C——,

Who died September 4th, 1834, aged 79 years.

Also Mary, his wife,

Who died June 11th, 1839, aged 80 years.

And of 5 sons and 6 daughters of William and Jane C——

Mary Jane	...	Died Nov. 3rd, 1821	...	Aged 15 months.
Clara Jane	...	„ May 1st, 1822	...	„ 2 days.
George	...	„ April 8th, 1824	...	„ 2 „
Thomas	...	„ May 21st, 1825	...	„ 1 „
Frances May	...	„ Sept. 3rd, 1826	...	„ 3 „
Susan	...	„ Aug. 28th, 1827	...	„ 1 „
Charles	...	„ Sept. 19th, 1828	...	„ 11 „
Hanna	...	„ Nov. 13th, 1829	...	„ 14 „
Richard	...	„ March 7th, 1831	...	„ 3 „
John	...	„ Dec. 1st, 1833	...	„ 11 „
Margaret	...	„ Aug. 15th, 1835	...	„ 5 „

Also the above Jane C——,

Who died Jan. 20th, 1866, aged 66 years.

Also of Marian, her daughter,

Who died Mar. 12th, 1866, aged 26 years.

Also the above-named Wm. C——,

Who died July 10th, 1885, aged 89 years.

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CHILDREN OF MINE LABOURERS.

AMONG the mine labourers of Pennsylvania, except in rare instances, the Slavs and Italians never send their children to the public schools. The boys are early set to work among their own people, and the girls can seldom make acquaintance with those of other nationalities. This clannish habit prohibits the acquisition of the English language, and prevents the fostering of American patriotism in the coming generation.

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BROUGHT BACK TO LIFE.

MR. PASSAVANT records an instance of a peasant boy who revived after being supposed to be dead for several days. The boy bitterly resented his being called back to life, and informed those that gathered about him that he had been in a beautiful place, and had associated and conversed with his deceased relatives. Before his insensibility his faculties were not even ordinarily brilliant, but afterward he conversed and prayed with surprising eloquence.

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THE WAY OF THE WORLD.

WHEN Thackeray was in this country he called on General Scott, full of admiration for his remarkable campaign in Mexico, and eager to hear

the warrior explain how battles were fought and fields were won. "Well, now you know all about it," remarked a friend, as the novelist returned from a two hours' *tête-a-tête* with the soldier. "Not at all," replied Thackeray, with a twinkle in his eye. "The general takes no interest in strategy. I found that literature was his forte."

Poetry.

MAN AND WOMAN.

YET in the long years liker must they grow ;
 The man be more of woman, she of man ;
 He gain in sweetness, and in moral height,
 Nor lose the wrestling thews that throw the world ;
 She mental breadth, nor fail in childward care,
 Nor lose the childlike in the larger mind ;
 Till at the last she set herself to man,
 Like perfect music unto noble words.

TENNYSON.

* * *

FOR, I doubt not, through the ages
 An increasing purpose runs,
 And that men's thoughts are widened
 With the progress of the Suns.

TENNYSON.

Temperance Notes.

AT The Hague a minister recently stated in his sermon that £500 were daily spent on strong drink in that city.

DR. NANSEN, who on former Arctic expeditions refrained from taking alcohol "to keep out the cold," has resolved to make use of it, but for cooking purposes only, in his new Arctic expedition.

SAYS a writer : "I asked one sweet little girl of eight what she would like to do for a living if she might be allowed to choose, and she said, 'Serve out "fourpenny," Miss.'"

Alas ! for the little ones so early accustomed to the degrading influences of the public-house !

AN alleged new cure for drunkenness is said to have been invented by a physician in Vienna, consisting of an extract from ivy leaves. It appears, however, to be a very ancient remedy, for the Greeks believed that this plant would make a tipsy man sober, and accordingly crowned Bacchus, the wine god, with wreaths of ivy.

WHAT ARE THE EFFECTS OF ALCOHOL UPON THE HUMAN FRAME?—Alcohol is a mild anæsthetic and sedative. It is a source of heat energy, but, owing to the paralysing action which it exerts on the vasomotor system, a dilatation of the cutaneous vessels occurs, resulting in additional blood supply to the surface, increased loss of heat, and eventually a diminution of the temperature of the body. The increased frequency of pulse that is usually observed is not directly due to the alcohol, but is the result of a condition of excitement. If the body remains quiet it will scarcely be noticeable. Alcohol blunts the sensibility of many organs; for instance, of those which are concerned in the sensation of cold. It excites hunger, but to some extent retards digestion. It also interferes with the physiological functions; and the powers of clear judgment and reason are paralysed. Emotional life being brought into free play, unhampered by the guiding strings of reason, dangers and difficulties are no longer foreseen, and not only physical, but also mental suffering is allayed. The sense of fatigue is deadened; but the sensation of tedium (one of the greatest incentives to exertion) is at the same time diminished.

What Phrenologists are Doing.

[We shall be pleased to receive, for insertion under this heading, reports of lectures, meetings, or engagements of phrenologists. In sending notices correspondents will oblige by enclosing their communications in an envelope, and addressing them to the office of publication of the PHRENOLOGICAL MAGAZINE. Newspaper cuttings pasted on post-cards are an infringement of postal rules and subject to a fine.]

ON November 2nd, Mr. L. N. Fowler, lectured on "The true moral hero," at the Fowler Institute, to a large and appreciative audience.

"SUBLIMITY" was the subject of a lecturette given by Miss Jessie A. Fowler during the month. This faculty has escaped much notice. It is therefore hoped that it will be shortly published.

THE British Phrenological Association held their Monthly Meeting on Tuesday, 8th inst., when Mr. H. C. Donovan gave a paper on "Concentrativeness and Inhabitiveness," which was well received, and an interesting discussion followed.

MISS CROW gave a highly interesting lecture on Wednesday, November 23rd, on the Blind, and how they are educated, and their special phrenological developments. The lecture was profusely illustrated by works of art made by the blind, and a practical demonstration was given of how they are taught to read and work out their sums.

NEW JERUSALEM CHURCH.—On Monday evening Mr. H. E. Williams, Ph.D. gave a very interesting and instructive lecture to the members and

friends of the New Church Guild on the subject of "Pathognomy." The visits of Mr. Williams, which are never too frequent, have always been looked forward to with special pleasure, but on this occasion the feeling was unanimous that never before has the lecturer given such satisfaction. It was pleasing to observe the simple and entertaining manner, which, by the way, seems perfectly natural to him, and in which he always excels, to notice the way in which he handled so intricate and difficult a subject. He takes you along with him, and "From grave to gay, from lively to severe, is the noiseless tenour of his way." Nothing artificial, but by his own unassuming manner he leaves an impression which does one good, and which also does credit both to his head and his heart. The attendance was good. A very hearty vote of thanks was accorded to Mr. Williams for his lecture.—*Weekly Advertiser*, Clayton-le-Moors.

Character Sketches from Photographs.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in Postal Order) of 6s., for twelve months' subscription to the MAGAZINE. The leading traits will be given when 1s. in stamps is enclosed with the photograph, and the MAGAZINE containing the delineation will be sent.—Letters to be addressed to L. N. FOWLER.]

MR. H. C. DOBBS (South Wales).—The photo of this gentleman indicates a strong organization, and a favourable development of brain power. His framework is solid, and his muscles are compact, giving him strength of body, tenacity and power to resist and endure great physical strain. There is every indication of a good constitution, and if attention is paid to food, and the wants of appetite, he will enjoy health and long life. He does not show many excesses in his actions, and does not go far from right; he is conscientious and disposed to follow the dictates of his conscience; does not commit himself, and shows a prudent and careful disposition generally. He is rather quiet, sensitive, and needs to be brought out, to be at his best. He is ambitious, and puts forth considerable efforts to improve himself. His actions are slow. He is a plodder. He is affectionate, and shows a good disposition. Sense of order and memory of faces is good. He is manly, without being overbearing, and is pretty sure to succeed, because he is painstaking and has good common sense, and practical talent. Could succeed as a farmer, stock-grower, engineer, or surveyor.

MISS S. (South Shields).—The photo of this lady indicates a fair share of health and vitality, and disposition to enjoy life. She is thoroughly in touch with her surroundings, and shows a lively genial disposition. She has plenty of animal spirits, consequently is restless

and active, must be doing something. She is decidedly fond of change and a lover of variety, does not like things that are tedious or monotonous. She shows a rather excitable and impulsive nature, and is interested in almost everything. Her affections are strong, she is warm-hearted, very friendly and highly sociable. She is very sympathetic and intuitive. She understands and enters into the spirit of things straight off. She inspires the confidence of others through her sympathies, and does much to please and to help others. If anything, she shows a lack of decision ; she hesitates and defers action, and may thus injure or destroy many good opportunities. She dwells too long and thinks too much, when she has a right to be more positive ; she needs to banish fear and entertain a more resolute spirit. She has a marked appreciation of order and system, has a good general memory, a love of travelling, and appreciation of music. She is sensitive, and places a great value upon the opinion of others. Her memory of faces and forms is also good. She will make an excellent wife if the right gentleman finds her. One who can understand and appreciate her.

T.W.F. (Braintree).—The photo of this gentleman indicates a mental or nervous temperament. His brain uses up more vitality than is good for his body, and care and attention need to be given to secure a healthy and harmonious condition both of body and mind. He is rather intuitive and impressionable ; is quick to sense a subject and get at the truth of it. Is quick to understand, and is apt in his application both in expression and action. His intuition is as strong as his judgment. Is a good judge of mankind, and is quick in understanding their motives and their actions ; should read character by the face well. He is sound in judgment, takes comprehensive and extensive views of things ; is not superficial, but deep and exhaustive. He is critical and comparative, and apt in his illustrations. He is particularly energetic and forcible, shews a firmness of mind, and a continuity of action, sense of order and system is strong, memory of events, &c. is very moderate. Capable of enjoying literary work, and of taking the lead and giving directions.

“FRA DIAVOLO.”—The photos of this gentleman indicate strength of character, and a fair amount of health and strength. He possesses considerable energy and force of character, and is rather of a positive disposition, full of action, and ability to surmount difficulties. Plenty of pluck and spirit, and has no half measures ; goes right at a thing and carries out and effects his purpose. He has a sharp commercial talent. He is shrewd, and has an admirable judgment of the qualities and conditions of things. He learns and educates himself through his eyes. What he sees he never forgets ; his memory of faces, people, and form generally is remarkable, and should be able to reproduce at any time things he has seen. Should be able to draw remarkably well. He has a versatile mind ; his knowledge is extended over many subjects. His mind is well stored with facts, but he is not so deep or sound as he is possessed of facts and statistics. Order, system, and neatness are large. He is critical, and possesses a good off-hand judgment. He is intuitive, and generally on the right side if he follows his first impressions.

