

THE
COLOUR AND HEALTH
SYMPOSIUM
A SYMPOSIUM

EDITED BY

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INTRODUCTION

THIS volume of *Colour and Health* is issued under the auspices of the International College of Chromatics, and is the precursor of other volumes from the same source on other aspects of the many-sided subject of colour.

A few words about the college may be of interest to readers. It is the first college of its kind in any age, in any land.

The International College of Chromatics was founded in May, 1916, in the interests of the science of colour, by the present Principal, the Rev. John J. Pool, and the present Registrar, Miss Grace Ethel Cowell, with the encouragement of a circle of friends of artistic and scientific tastes. The college has no barriers of race or creed, its aims being threefold: (1) to study colour from every point of view; (2) to spread a knowledge of the science of colour in all lands; and (3) to knit together in the bonds of friendship the various races of mankind

through interest and association in a special subject which is common to all lands, for colour is universal.

At the present moment the college has some twenty-seven nationalities affiliated with it, represented by thirty-nine vice-presidents, who are men or women of distinction in the realms of science and art. There is a great future of usefulness before the college, which does its work through public lectures and colour causeries, and lesson series by correspondence on a manifold number of colour subjects, such as the solar spectrum, colour vision, colour language, æsthetics or taste in colour, colour in the home, colour in dress, colour in gems and precious stones, colour music, colour in architecture, in astronomy, in heraldry, in botany, in natural history, etc., etc.

Amongst these colour subjects comes colour therapeutics, an aspect of colour that is exercising many minds to-day. The wish of the college is that colour and healing should be studied and investigated on scientific lines. It is thought that the medical profession will find colour of immense service in the treatment of nervous

patients more particularly, and the sick in general. The belief, indeed, is growing that colour will be found to have its place, and an important place, in the prevention as well as cure of physical and mental ailments.

This volume contains ten carefully prepared papers on colour and health by men who have given the subject special attention. Nine of the papers deal more particularly with what has been done, and is being done, in this country in the therapeutics of colour, and the tenth paper, prepared by the editor of the series, gives the opinions, convictions, and experiments of an eminent American authority, Dr Babbitt, who in his knowledge of, and devotion to, the study of the question of the healing power of colour is second to none. Indeed Dr Babbitt may be regarded as one of the pioneers in this movement to whom many in this land are more or less indebted for information and stimulus. It will be informative, after reading the nine English papers, to turn to the tenth and compare notes. One thing may be learnt to advantage from Dr Babbitt—viz. that it is wise,

when possible, to give proofs of statements. Theory must be tested by the results of practice.

The special value of this volume on *Colour and Health* lies in bringing together in a convenient form what is taught by various experts on a very difficult and perplexing subject. The weakness and the strength of the movement can thus be estimated. It is a topic very much to the fore just now, about which the public are wishful to obtain information, but find great difficulty in doing so. Even individual experts know little of what other experts are teaching and doing. The whole subject is in its infancy.

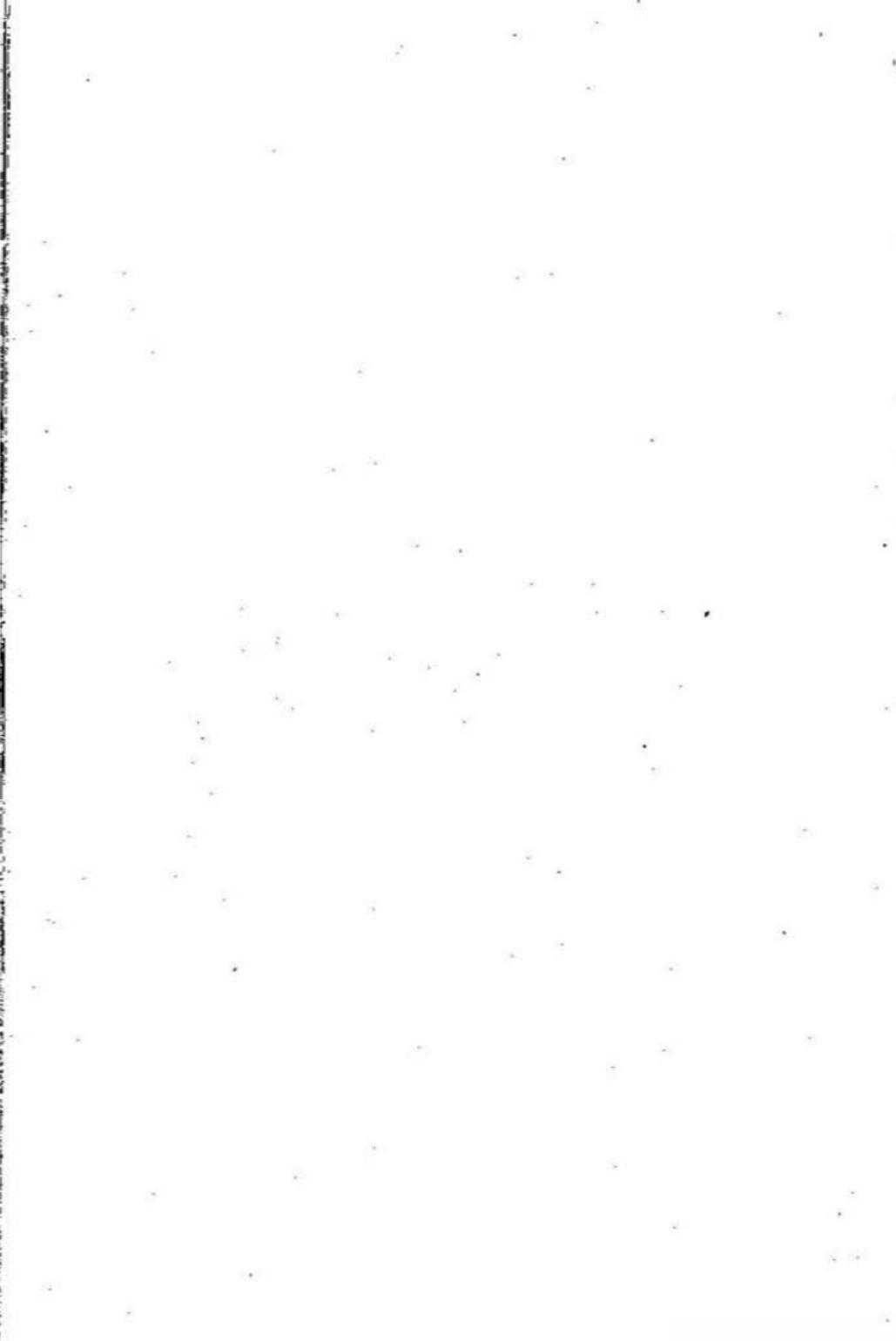
It is a very good sign that medical men are beginning to attend lectures on colour and health and even to preside at such lectures.

In the month of May last the Foundation Lecture of the International College of Chromatics was delivered in the Council Chamber of the Caxton Hall, Westminster, with Lieut.-Col. Sir Robert Armstrong Jones, M.D., in the chair. The lecture, which was on "The Therapeutic Value of

Colour," was given before a large and select audience by Mr Howard Kemp Prossor, the well-known colour specialist, who is one of the vice-presidents of the college. Much of what Mr Prossor said on that occasion is in the article that he has contributed to this volume. A discussion followed the lecture, in which various medical men took part, and the general attitude was sympathetic to Mr Prossor's line of thought and also to the special aim *re* colour and health of the International College of Chromatics.

The college aim is to study this vital question of the therapeutic value of colour in an all-round manner, keeping an open mind always and a readiness to hear and ventilate every valuable opinion on the subject. The writers of the articles in this volume have been given a perfectly free hand.

If any reader should wish to communicate personally with any of the writers, the address will be supplied on application to the Principal at the headquarters of the International College of Chromatics, 3 Finsbury Square, London, E.C.2.



COLOUR & HEALTH

CHAPTER I

THE THERAPEUTIC VALUE OF COLOUR

By H. KEMP PROSSOR, F.C.Chrom.

MUCH has been written lately on the question of colour in our hospitals. Most people have considered it from the decorative point of view and not from the most important of all, the curative. Colour, like music, has a great effect upon our nerves, and in the treatment of shell-shock and neurasthenia it plays an important part. To many people blue, pink and various other colours are merely names given to them, but do not convey any meaning of health except as being vaguely described as "restful to the eye."

It is essential that all patients in the hospitals should be surrounded by the colours which suggest to their minds "Spring," the

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time of life and recuperation. Far too much red and brown has been used hitherto. The question will at once be asked: "Why not?" The answer is that, apart from the fact that red increases the flow of the blood, it is symbolic of war and bloodshed, while brown is symbolic of autumn and decay.

It may be interesting to know that the following colours have proved beneficial in cases of neurasthenia and shell-shock:—
(1) sunlight yellow; (2) sunlight primrose;
(3) firmament blue; (4) spring green;
(5) anemone mauve; (6) apple blossom pink. Yellows are used to produce on the mind the sense of sunlight; blue the vibration of the firmament; pink and green the early spring; mauve and violet are used in special cases where rest and quiet are required for the overwrought brain. It must be remembered that the colours must live, so to speak. They must vibrate with life. All life is pulsation.

Now we come to the most important point of all, and that is the proportion of colour. This is no new theory. Was it not Aristotle who said: "Colours may

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mutually relate like musical concords for their pleasantest arrangement, like those concords, mutually proportionate"? When a doctor gives a prescription it is the proportion of each drug which he considers. In dealing with colour the same practice should be observed. Lighting, the size and position of rooms or wards must be considered in order to arrive at the right colour tone proportions required. It is, therefore, necessary to impress upon people that to understand colour treatment a knowledge of line and space is essential.

Those who have studied colour in connection with shell-shock and neurasthenia must look at it from the mental as well as the physical side. Neutral grey is advocated by some, meaning indifferent grey; by using this, however, we are making the mind and body unable to take part in the contest with others. On the other hand, blue concentrates; it is also soothing and magnetic; all ceilings, therefore, should be painted in this colour. But, again, the aspect and lighting of the room or ward must be considered and the right blue in the colour scale used.

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It must be remembered that the mental side of colour acts on the physical by suggestion. Colours such as yellow, green and pink, representing life to the eye, will react through the mind on the body. Suggest life by colour and that will aid. Suggest death by colour and that will kill. Blue is, from the mental side, a recuperative. Violet is a most powerful chemical curative, as we all know. It has been proved to be most beneficial in cases of insomnia when using colour medicine. An interesting letter received from a staff-sergeant who was treated in a violet and blue room is as follows:—"As a long-standing sufferer of nerve trouble, I cannot express my feelings as to such a wonderful cure in such a short space of time. The effect of your colours has been to me a valuable medicine."

It has been proved that in ninety-nine cases out of a hundred the normal man requires pink, and it has yet to be explained why. Sometimes it happens that a patient dislikes a colour in the room in which he is put, but it does not follow that this is wrong for him. It may be the

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one quite necessary for his recovery. If these dislikes were given way to with regard to doctors and their medicines, or masseuses and their treatment, very few cures would be accomplished. A doctor cannot oblige his patient by leaving out quinine and putting in sugar, or a masseuse by treatment of an arm instead of a leg. It is the same with colour medicine. One cannot omit a colour because of the dislike to it evinced by the patient. Many patients in colour wards have after a week or two not only admitted that they were better for colours they disliked, but have stated that they wished for them. This disproves the theory that the colours we like should always be given to us.

Colour acts in three different ways: as a stimulant, a sedative or a recuperative. Stimulating colour, such as yellow, is necessary to a great extent in cases of neurasthenia and shell-shock, as it excites hope. In a great many cases strong, powerful, physical colours, representing physical power, must be used as well as mental ones to overcome the inactivity of the mind. In the case of neurasthenia minor tones should not be

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used, as strong measures are necessary. Shell-shock and neurasthenia, according to many doctors, create fear in the mind. Here, again, is the danger of the grey and minor tones.

Blue is a favourite colour with most people. An interesting fact is that it has a health-giving power, not only for human beings, but also for plants. Flowers grown under blue glass greatly increase in size and vitality. Red has its uses—so have morphia and chloroform! It has its place in the universe of colour vibrations, but it must be used with knowledge. Scarlet rooms for lazy boys have been tried in America. They have a tonic effect. American athletes also find help in fixing their eyes on a red handkerchief before running a race. This colour causes restlessness in some people.

We do not fully realise the power of light. Light is not a form of colour, but colour is a form of light. Black and white are not found among the colours, because they are positive and negative aspects of light. Tints and shades will not increase the number of the spectrum, but they show

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modifications of tone. These modifications are necessary in certain cases.

A most important matter in hospitals and houses is the medium formed by curtains through which the light comes. Purple is sometimes necessary, as it excludes the heat, while yellow increases it. In all rooms there should be a secondary curtain of yellow. It is an easy matter to arrange things so that only the one required is drawn. In mental cases colour-tone curtains play an important part, according to the mental state of the patient. White has been used a great deal in the decoration of hospitals and houses for some time past, and the present failing eyesight is largely owing to the glare of it. This opinion is confirmed by well-known oculists.

Most doctors now advise country surroundings and work in the garden as a mental cure. This being the case, why should we not get as near to nature as possible in the decoration of our wards by the introduction of spring colour tones and, for the working part of the prescription, employ the patients to introduce

them? This has been proved to be not only beneficial, but a pleasure, and many of the men have admitted that they felt better for using the colours. It has been found that men suffering from shock, whether they have received it on the field of battle or in the air, one and all express a wish to be put in a colour ward which suggests to their minds the sense of space, combined with sun and life. Apart from their curative properties, yellows, blues and greens will meet this desire.

It must be repeated that colours should be used in combination and proportion, otherwise the harmonies will be destroyed. This does not mean that violent combinations must be avoided. It is most important that strong, powerful combinations of colour should be used for the neurasthenic, who dislikes the idea of work or concentration. The doctor and nurse do not give way to the patient in these cases; neither must the colour specialist. The war has drawn on the physical and mental power. It must be replaced by physical and mental colours.

Very few people realise how the Greeks

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delighted in colours, especially strong colours. Their statues even were painted, and vivid purple and blue were among the colours used.

Yellow, green and violet have strong healing properties. This has been proved in cases of neurasthenia and nervous headache. The environment in hospital wards, however, is often an obstacle in the way of the cure. It is therefore necessary that every article in these wards should be carefully given the right colour proportion.

Colour is often used by people who have not studied it, but what would be thought of a doctor who prescribed for a patient without any knowledge of medicine? Doctors admit that colour appears in the ingredients of the drugs they use: carmine, orange, yellow, blue, red and so on. Yet we take colour medicine from people who are unable to give a logical reason for prescribing it, especially from the health point of view.

One of the questions of the future is the housing problem. But what of the interior decoration? Are we going to let the artist

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and decorator only have their way or are we going to make a stand and insist on colour treatment from the health point of view? This is a question which must be brought forward before it is too late. The matter should also be considered in regard to schools.

It will be found, if we study this subject, that as a nation declines the love of strong powerful colour gradually disappears, and gives place to a liking for minor tones. Therefore, if the race is to be kept physically fit, we must see that the people are surrounded by major colours. Nature is greater than art, and it is to nature that we must go for our colours to restore health, because they have a vitality which nothing else possesses. We must study nature's vibrations and, aided by science and theory, we shall then be able to attain good results.

CHAPTER II

COLOUR AND HEALTH FROM THE POINT OF VIEW OF CHILD WELFARE

By P. S. G. DUBASH, M.Ph., D.Sc., D.Chrom.; M.R. San.
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STARTING with the axiomatic supposition that child welfare embraces the physical, the mental and the spiritual well-being of a child, it will be evident that if colour has anything to do with it, surely it is too important a matter to be neglected any longer.

Almost all bodily actions which are intelligent are controlled by the brain.

By far the greater proportion of the medical world believes that the left half of the brain controls the actions done by the right half of the body, and the right half of the brain controls the left half of the body. Yet many people will not go one step forward and see that there are different centres in the brains

that rule different fundamental mental and physical qualities and the well-based science of phrenology acts on them like a red rag to a bull.

Now we come to the eye and its corresponding psychological centre specialising in the sense of sight. Nor does this differentiation stop there. The sight centre again divides into the centres of perception of light, of colour and of form comprising both shape and size. I grant that form is appreciable by the sense of touch, as even the blind can perceive the difference between a pyramid and a sphere.

To corroborate my statement I quote no less an authority than Dr Edridge-Green, M.D., F.R.C.S., from *The Lancet* of 4th August 1900, as follows:—"If there be, and all recent research points to the fact that there are different centres in the brain for the perception of luminosity and colour, it is obvious that ascertaining the luminosity of a colour will not give us any information concerning that colour, because the two are absolutely and totally distinct."

This should be sufficient to prove that if parents wish their children to develop perfectly

healthy eyesight, they must take special steps to cultivate the colour perception.

Colour-blindness—by which I mean imperfect colour vision—is very prevalent, one person in twenty or so being more or less colour-blind, resultant on health weakness and disabilities.

A priori I wish to propound this bold speculation that, to a certain extent, colour-blindness is preventable. It is well known that children can inherit a tendency to rheumatism. The tendency to rheumatism can be controlled and its active form altogether suppressed by the proper exercise of the bodily organ liable to it helped by right dietary. Thus the proper exercise of the knees will keep off rheumatism, though there be a tendency towards it. This possibility can be extended to mental disabilities. People not naturally gifted with a good memory can, by constant effort, cultivate a good memory. People not having a mathematical head by constant exercise have developed that centre of the brain.

Again, on the other hand, a perfectly healthy organ, if not used, deteriorates. The same can happen to the centre of colour vision.

It is slightly difficult to see at first how a person can let his colour centre deteriorate if he at all uses his eyes. There are hundreds or thousands of people who can go into a room and stay there a fairly long time, and though their eyes may be open never see the predominant colour in the room, be it of the wall-paper or paint or of the furniture. Unless this faculty of observation is exercised it will not be cultivated, and if sufficiently long neglected it will naturally, like other organs, even deteriorate.

There are such cases as acquired colour-blindness, and excepting those that come about suddenly by severe falls or accidents or steadily by drug habits, they can be attributed to the neglect of the colour perceptive centre. If it is possible for people born with a good perception of light to lose it partly by neglect, why should not the same be true with the perception of colour so nearly allied? If a child is not in its early days taught to observe or take an interest in colours as it grows up, and if there is a slight tendency to colour-blindness as to rheumatism, and if the organ is not properly kept in working order, is it not evident that in his later life of adult

power this neglect would become manifest in "a weak colour perception" and then into some form of colour-blindness?

It is universally acknowledged that a female right from her early girlhood observes the colour of the dress of the people she meets. Moreover, it is universally known that colour-blindness is less prevalent amongst women than amongst men. In the light, then, of the several preceding arguments and these two universal facts, one can at once see that the exercise of observing colours amongst the female sex may have something to do with the fact that there is less colour-blindness in it.

To show this to be probable, let us consider the question of inheritance of colour-blindness. Investigations in heredity have shown that the daughter of the father who is colour-blind will not in all probability be colour-blind, but the son of the same father in all probability will be. It has also been shown that this daughter, though not manifestly colour-blind, may be a carrier of colour-blindness and may pass it on to her sons again. These mysterious facts have perplexed physiologists, but I have a very simple explanation to offer, and its simplicity itself is the greatest argument

to show the probability of its correctness. The daughter has the tendency to colour-blindness, but because of the exercise of observing colours in the dress which she is so likely to study, she prevents the weakness from being easily manifest, and if she does not very much overstrain her eyes she may finish her sojourn on earth before the weakness has the upper hand. The boy, however, if not somehow led to make strenuous effort to realise colours, allows the weakness to become slowly more patent and actually helps it forward by smoking and alcoholic drinks. The handling of any kind of infirmity is a matter for the State to consider, and so I suggest that to prevent colour-blindness the different governing bodies should take up the matter of colour education earnestly. However, meanwhile, it is the bounden duty of every parent to try to avert the danger of colour-blindness in her or his child. To merely say that and give no guidance how to do it is not right, and so I suggest the study of the booklet, *Colour and the Child*, published by the International College of Chromatics.

In case the authorities of States, in the interests of the health of the people generally,

do not consider the prevention of colour-blindness as sufficiently important from the above arguments, I carry it further by saying that the development of colour perception in childhood is helpful in getting good citizenship in adults, as well as good health in later life. In my book on *Town Planning and Vegetation* I have shown that in planning our new garden cities the colour aspect must not be neglected. To-day we grumble about the houses constructed some fifty to one hundred years ago, because of the want of such requirements as make the life pleasant. Yet if to-day we neglect the colour aspect, tomorrow we shall be condemning our garden cities for the want of this requirement. So, if to-day the child is taught to appreciate colour, when he grows up he will not grudge the trouble of having to journey a little from his home to his working place, for that will be amply compensated to him if in his little house he can grow in his country garden the flowers of the colours he likes. People who have inquired into the housing of the poor know that it is not easy to persuade working people to go to a little distance to inhabit buildings and houses built for them in country

suburbs. Had their parents in their childhood cultivated the sense of colours the charms of the country would have facilitated removal thereto. Prevention of overcrowding, let it be borne in mind, leads to the decrease of immorality, as is well known to investigators, and therefore the cultivation of the colour sense in childhood, leading to country popularisation, makes for good citizenship and physical, moral and spiritual well-being.

All these remarks bear on the health of the child, but in finishing I will be more explicit. My investigations and experimentation in hospitals, institutions and schools have led me to the conviction that colour affects health as directly as ordinary light does. When people go for a change in the country or by the sea the recuperation is helped forward by the change of the colours of the surroundings from those of our modern towns. The expanse of green in the country and the expanse of blue of the sea is drunk in by the eyes and heals the overtaxed nerves. So when an adult or a child cannot go out in the country or to the sea, let it have the colours at home.

A child is decidedly more instinctive than

the adult. A child does not depend upon the relation of cause and effect by reason, but by instinct. My statistical investigations have shown that red is the most favourite colour of the child, though blue is a very keen competitor. The following passage I quote from the report I drew for "The Experimenters' Circle" in the *Popular Science Siftings* of the 13th August 1918: "Red is *par excellence* the most favoured of all colours among children about the age of twelve—43 per cent. of them have chosen red. Taking boys alone, 42 per cent. favour red the most, and 44 per cent. of girls do the same. Next to red comes blue. This, indeed, is a formidable competitor of red, because 35 per cent. of mixed children like it the best. Boy preference for blue is 36 per cent. and that of girls is 34 per cent. . . . Children show clearly that they have their favourite colours and that they wish to discriminate them very carefully."

Hence I suggest that those colours that children instinctively like are the ones that are within moderation good for them. Nurseries, to be beneficial from the colour point of view, should have a preponderance of red and blue. Because adults on account

of a different mentality do not like red, there is no reason why children should not have it. However, the blue will have the effect of moderating any bad effect parents may fear from red. The same holds good with regard to children's clothes and games. Let them have within moderation the colours they like and encourage them to "mess about" with colours and they will be healthier and happier for so doing.

CHAPTER III

COLOUR—THE CURATIVE AGENT

By W. GORNOLD, D.A., L.C.A., F.C. Chrom.

THE idea that there can be any curative power in so subtle an agent as light was for many generations held in contempt. The drug habit had assumed a firm grip upon the people. The pill and draught, the leech and lance, the plaster and the unguent were things that were held to be efficacious because—and only because—they were tangible and foreign. But those days are gone and with them have gone the ill-conditioned beliefs of an unenlightened people. To-day we not only recognise that there are finer forces in nature than those which are purely mechanical and dynamic, but our chemistry and physics have put us into relations with an entirely new octave of existence. The vehicular powers of spatial ether are as yet only partially defined, but already we have the etheric phenomena of

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heat, light and electricity, and in addition to these a certain order of "X"-rays whose nature and functions we are only now beginning to apprehend.

It is in the middle region of etheric phenomena that we are most at home. The influence of light—that is to say, of composite coloration—has always been recognised in the higher region of thought as being intimately connected with pathological conditions, and to the extent that experimentation has been made in this region we have advanced our knowledge to the specific agency of colour as a curative agent. It has long ago been affirmed that light is an important factor in the development of plant and animal life, and its association in thought with all that pertains to healthful activity in human life percolates through the whole of the world's literature. Our conception of the earliest stage of world-life is that of an emergence from a state of inactivity and darkness. "And the earth was chaotic and barren, and *darkness* was upon the face of the deep" is the Hebraic view of the age preceding the Genesis. "The books teach *darkness* was at first of all" is the idea of the Hindus as

conveyed to them in their ancient scriptures. Dante in his *Divina Commedia* refers to his vision of hell, where "Not light, but rather *darkness* visible, served only to discover sights of woe." In fact, darkness, disease and death and the moral and intellectual causes of all human ills may be regarded as synonymous. Light comes, and immediately there springs forth new life, new hope, new endeavour; and how much the sick, "hailing the welcome light and sounds that chase the death-like images of the dark away," owe to this beneficent and God-sent agent only those who have acquainted themselves with its curative powers can properly estimate.

The function of luminiferous ether is to translate energy into certain modes of vibration, whereby the phenomena of light are made sensible to us by means of sight. For a long time it was a moot point with scientists as to whether the undulatory or atomic theory of light propagation ought to be adopted. For many, if not most of us, the question has been settled by reference to the ancient records. The Hebrew word for light, *aur*, comes from the root, *ar*, to flow; hence Yar, a river, as Yar-Din (Jordan), the

river of knowledge. We retain these roots in our own language as in the words *aura*, *oriel*, and in the familiar place-name Yarmouth, the mouth of a river. The later developments of physical science altogether sustain the ancient theory of etheric vibration.

It is only when we come to the more intimate study of the specific pathological values of the several rays of the spectrum that we enter the domain of experimental science in relation to chromatic pathology. Let us take a general view of the ground in discussion.

Although the British Pharmacopœia adheres with all the tenacity of fossilised conservatism to the treatment of disease by the internal application of mineral products and other bodies more or less foreign to the normal constitution of man, yet in succession various attempts have been made to institute new and improved pathological methods. Herbs, electricity, magnetism, massage, suggestion, *et hoc genus omne*, have all in turn been pressed into the service to make war upon disease and death, which, we must all admit, seem to keep pace pretty steadily ahead of all their would-be destroyers. Perhaps in the last resource physicians will turn to the primary

sources of all human disease, whether mental or physical—namely, the man himself, the origin as well as the subject of all pathological changes. Admitted that our environment exerts a direct influence upon the human body; that matters of diet, clothing, sanitation, etc., are of importance in relation to health, and that they exert a perceptible influence upon our physical condition, what is it, after all, that registers this condition and responds to it in terms of feeling—which is, in fact, the pathological criterion? Undoubtedly it is the Soul. But let us close our eyes for the moment to the Ultima Thule of medical science and consider what has been done, beyond what has already been cited, towards the alleviation, or preferably the cure, of human physical suffering

It is but recently that a new champion has entered the lists of curative agents, and from what we know of it bids fair to do all the running. Dr Albertini discovered that the action of coloured light upon certain nervous complaints was, so far as his experience extended, an infallible cure. The effects upon a maniac and also on a patient suffering from melancholia were graphically described by

him. The madman was put into a blue room, lighted by blue glass, and in a fortnight so far succumbed to the palliative influence of his environment as to be free to go whither he might choose. The hypochondriac was put into a red room, lighted by red glass, and on the second day began to eat his "square meal" with the gusto of days long since gone by.

Now I want to look at the proposition involved by this discovery from a point of view which some may regard as novel and others as antiquated. I may take it for granted that the well-informed reader is aware of the fact of the solidarity of the solar system, and by inference—altogether upheld by the observations of modern astronomical science—of the further fact of planetary interaction, to which our own earth is no exception. The ancients are known to have associated the primary metals with the various planets of the system by which we are environed, and I have shown that although they are not suspected of knowing anything of atomic weights they nevertheless have arranged the respective metals referred to in their strict scientific order. If anybody will take the trouble to find the reason for the universal order of the

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days of the week which carry the names of these planets, he will certainly discover the basis of this very ingenious observation of the ancients. But further, they ascribe to each planet a definite colour and a corresponding note of sound. Few people are aware that in Shakespeare's *Taming of the Shrew* the elements of this system of notation are reproduced.

Now if we look at the question before us from this point of view, we can suggest an analogy between the phenomena of light, sound and planetary action. The underlying factor of the different sets of phenomena is simply that of etheric vibration. The Watts-Hughes apparatus for the production of sound-forms, known as the eidophone, clearly shows the relationship that exists between Sound and Form. The ancients suggested this in their concept of the *logos*, or word, as Demiurgos, by the power of whose voice the visible universe was created. Consequently we are not surprised to learn that Dr Albertini discovered that colour-blindness was attended by corresponding deafness to certain notes of the musical scale.

Pythagoras spoke of the "Music of the

Spheres" by which he related the observed motions of the heavenly bodies to their corresponding notes in the gamut of sound, and this may be allowed as a happy conception of which the poets have not hesitated to avail themselves, while the more cautious philosophers have not proved themselves indifferent to the lure of the Muses. Perhaps Pythagoras was not romancing so much as we might suspect. Do we not observe that the propeller of the aeroplane gives out a definite note and that it is possible to distinguish between the various types of machines by sound alone? Similarly do we not observe that the various planets of the system not only revolve on their axes at different rates, but also sweep around their orbits at widely differing velocities? Perhaps if we had ears to hear we should catch the droning of these great bodies in space and hear the great tone which dominates the wondrous universe! If for a moment we could raise our auditory sense by a whole octave so that it became related to etheric instead of atmospheric vibrations, this problem would be solved for us. However, to return to our substantial facts.

Albertini informs us that red, which is the

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basic colour in the spectrum, corresponds with the basic note in the gamut of sound, which he calls *Sol*; and green, according to the same authority, corresponds with *Re*. Here at least is a start for those who are inclined to pursue their investigations. In the old astrological concept the planet Mars rules the colour red, and according to Hippocrates is "of a tonic nature, astringent and pungent and productive of fevers"; while among the metals it is related to iron, the tincture of which is styptic and astringent and a well-known tonic. Hence it acts beneficially in melancholia, black jaundice, anæsthesia, etc. This corresponds entirely with the known action of the red ray.

Blue is ascribed to Venus, its action being palliative, soporific and temperative, and is prescribed for frenzy, fever, insomnia, neurasthenia and the like complaints arising from unusual excitation of the system.

During the year 1886 I made some experiments in this direction, with a degree of success which hardly justifies the neglect of so important a discovery as that which I then made in regard to the curative properties of the colour ray when conveyed to the system

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through a neutral medium. Three glass bottles were provided, in colour red, blue and yellow respectively. These were filled with distilled water and exposed to the light of day and placed, as far as weather would permit, in the direct rays of the sun. It was found that half-a-tumbler of water taken from the red bottle first thing in the morning on an empty stomach had the same effect upon the system as a draught from the quassia cup. For a purgative the same quantity from the yellow bottle sufficed; while for headaches and nervous excitement the blue bottle was chiefly in requisition. Then it was found that an admixture of the contents of the red and blue bottles acted to increase the supply of arterial blood, the immediate indication being that of increased blood pressure. The yellow and blue agents when taken together appeared to act as a sedative. If I remember rightly it was Dr Charcot of the Salpêtrière, Paris, who mentions a number of experiments made upon various hypnotic subjects with coloured glass balls, and in this connection we ought not to overlook the recorded experiments made by Reichenbach regarding the effects of planetary rays concentrated by

lenses upon hypnotic discs, by which his somnambulists were sensibly affected.

In conclusion it may be remarked that the whole tendency of modern science, medical and otherwise, seems to be in the direction of establishing the correlation of forces all along the line as a fact in nature, whether manifesting to us by sight, hearing, smell, taste or touch. A synthetic system of thought embracing all that is known of the phenomenal world would probably lead to the conclusion that the substantial basis of all existence is primarily one and homogeneous, and that what we recognise as so many distinct forms of energy are but differentiated expressions of the one all-pervading force which we call Life. In such a system the science of chromatics could hardly escape recognition.

CHAPTER IV

CHROMOSCOPY—THE COLOUR SCIENCE VIEWED IN ITS THERAPEUTIC ASPECTS

By J. ALLEN PATREIOVEX, F.L.S.

CHROMOSCOPY is the name given to a new and systematised form of colour application. The word really means "to view colours," but, in its applications, the system is much wider than that particular term implies.

Another of the names given to it is "Mental Spectrum Analysis," for it seeks to do mentally what the spectroscope does physically. Here again, however, its scope is far wider than what is possible by spectroscopic analysis. The spectroscope only reveals the constitution of things physical and inanimate. Chromoscopy reveals the constitution of individuals as well as that of so-called inanimate matter. One of the oldest definitions of this system—the most cumbersome, albeit the best definition of all—was that of "Col-Numero-

Linology." This means a discourse (or science) relating to colours, numbers and lines (otherwise forms). This is the most comprehensive single-word definition, for chromoscopy in reality is "the science of the laws of vibration as they are expressed in letter, colour, number and form." Thus it will be seen that the scope is very much wider than, from the name now generally given to this new science, it would at first sight appear to be.

The purpose of the present article is to show more particularly how *colours* can be employed for the benefit of the community on entirely new and original lines. Incidentally, this will also assist us to see the wide and useful range of personal colour applications for health purposes.

In considering this subject we shall have need to deal more particularly with the esoteric side of colour vibration. Each colour, so this science affirms, has a definite kind of influence quite apart from any special stimulating or sedative, etc. effect, such as is taught in the ordinary way that certain classes of colours possess. Thus it is very generally known that reds are stimulating and irritating

whilst blues are sedative and calming. Advantage is taken of this, in certain methods of colour treatment, for bringing about special therapeutic effects.

In chromoscopy, however, not only are we taught that reds generally are stimulating and irritating, but we are also taught what the particular *colour influence* of the red is; also that this varies with the special tone of red employed. Thus light red, bright reds and pinks possess what is called the "love element," and under their influences love, courtship and marriage take place; also the home life is fostered and strengthened. On the other hand the deeper and darker reds, such as crimson, turkey red, maroon, etc., possess the "passion element," and, under their influences, anger, irritability and passion are aroused, crimes are committed, lust is provoked, fires are kindled and the whole of life disturbed generally when the darker red colours rule at all prominently.

This knowledge also has its therapeutic uses, for a lighter tone of red ought therefore to be used for less stimulating purposes, or to affect the more superficial organs, whilst a deeper tone of red ought to be used for fuller

stimulating purposes and to affect the deeper seated organs.

We might thus go through all the thirteen colours used in chromoscopy's spectrum, giving to each colour its particular and distinctive kind of influence and applying them also in the same way for specially distinctive therapeutic purposes.

The reason why different colours should in themselves possess such definite and distinctive influences, differing so much one from the other, ought not to be far to seek. Varying colours are to physical sight but pictorial evidences of the varying rates of vibration or "velocities."

Colour reveals the velocity produced by various substances in the incandescent state and the increasing stages of incandescence. The velocities decrease from white light (186,000 miles) through the red, orange, yellow, green, blue, indigo, violet to black (140,000 miles). It is by the varying momenta of these velocities that the eye is affected by the sensations known as colour.

The present "theory" has one velocity for all "waves," which is most unscientific and contrary to all known wave motion, and the

eye is required to distinguish between trillions of an inch in length. This is wholly incredible as the eye can only note eight impressions to the second. If anyone can still believe in "waves" he should read the whole contrary argument in *The New Philosophy* (Prof. Calvin S. Page's book).

White light is the universal medium of exchange in colours in nature effected by reductions of that velocity, and these reductions are occasioned by the varying degrees of the molecular tension in the objects. A green orange is not changed to a yellow by pigments, as a painter requires, *but by a change in molecular tension*. A green piece of glass does not select the green out of the spectrum and reflect and transmit that while absorbing "the other six colours" in some mysterious and unexplained legerdemain, but changes all the white light into green, reflecting and transmitting the same. For if any other colour than white light is used, the glass is not green. Thus the law of the change of colour is *downward* from the red to the violet (*Lecture Course to Physicians*, p. 350. Dr G. Starr White).

We are not cognisant of light till the light

velocities, set in operation by that universal source of light, the sun, striking the retina of our eye, are then carried forward by the nerves of sight to the brain, there again to be reproduced as a special vibration in the brain substance. This special vibration we have learnt to denominate as light, with its derivatives, colour. When it is uniformly of one velocity we have learnt to appreciate it as a certain colour; when it is of another particular uniform velocity we have learnt to appreciate it as another colour. Such vibrations, communicated first of all to the mind, and from thence to the brain, give rise also to varying corresponding sensations in the human frame. When these vibrations affect the mind only, they are purely of a mental and emotional nature; when these vibrations affect the brain substance, then they also communicate a particular effect, therapeutic or otherwise, to the physical body.

I am treating here only of the effect a particular colour exerts as it is transmitted from the eye, through the nerves of sight, to the brain. When the whole body is treated to colour rays, as in certain remedial measures,

the effect upon the physical body is of a still more striking and permanent nature.

Now chromoscopy claims that not only do colours possess the special and particular influences they are taught as possessing in this science, but also that the letters of the alphabet, numbers and even lines and forms possess correspondential influences to these colours. What the related letters, numbers and forms are to the colours is also taught in this science.

The above facts ought not to be difficult of comprehension. The science of correspondences has been by now sufficiently elucidated to show that law is continuous throughout each section of the universe. The operations of law are never altered, only the manifestations of that law. These manifestations are conditioned by the particular attributes of the matter composing the realm in which the law happens to be operating at the time of consideration.

Life consists in the expression of vibrations, and these vibrations express themselves in a hundred thousand different ways. A certain vibration in the realm of colour manifests itself as a particular colour. Transfer *that same vibration* to the realm of sound and it will

manifest itself as a particular sound. Again, transfer *that same vibration* to the realm of form and it will manifest itself as a particular form.

The close relationship between sound and form has well been shown in "Chladni's figures." Lycopodium seed or fine sand is dusted over a clamped metal plate. A violin bow is drawn across the plate and a musical sound is produced. The powder or sand, at first scattered promiscuously over the metal plate, under the influences of the vibrations communicated to it by the violin bow, takes a certain symmetrical shape. If a different musical note is emitted the sand or powder takes a different symmetrical form or shape.

The intimate relationship between colour and sound has also often been observed. Many clairvoyants, for instance, have been able to see beautiful colours produced in the inner realm by means of a series of musical tones produced through the playing of an instrument in the physical realm, the colours continuously changing according to the variety of musical notes played.

However, this relationship between sound and colour has lately been made demonstrable

even to the physical senses. Dr George Starr White of Los Angeles, California, whose work I have previously quoted from, is daily utilising this fact in his new method of diagnosis, which he has termed "The Bio-Dynamo-Chromatic Method of Diagnosis." Briefly, this method is as follows :—

There is a special form of energy passing through the magnetic meridian, says Dr White, which influences all persons. When an individual faces due north and south he comes under the influence of this energy streaming from the magnetic meridian. This affects the sympathetic-vagal system in a very definite manner, causing a certain tension in the abdominal organs.

When a person faces east and west he is end on, as it were, to the force streaming from the magnetic meridian. Hence he does not come under its influence so much as when facing north and south and the same tension in the abdominal organs is not manifested. With the individual first facing east and west the bare abdomen is percussed in a special manner and a sound of maximum dullness is reached. A line is drawn on the abdomen, showing where this sound of maximum dullness has

been obtained. The patient is then turned to face due north and south ; the bare abdomen is percussed in the same manner and the same sound of maximum dullness is elicited. If the subject is healthy the line drawn in the second case will be one to three fingers' breadth *below* the line obtained in the first case. The first line is called the "working line" ; the second line is called the "reflex line." The person being healthy, when a dim, dark-room ruby light is shed upon the abdomen in the epigastric region, with the patient still facing north and south, this magnetic meridian vagal-reflex (M.M.V.R.), as it is termed, immediately disappears. This means that the sound now elicited by percussion of the abdominal organs has been altered by means of the energy conducted to the individual by the dark-room ruby colour. Should the person, however, be suffering from some profound form of toxemia, it will be found that this M.M.V.R. cannot be obtained by percussion of the epigastric region with the patient facing north and south until a certain colour has been shed upon the abdomen, which colour will temporarily normalise the abnormal energy radiating from the body due

to the toxemia from which he is suffering. Here again the sound has been altered by means of the energy conducted to the patient from the radiant colour, this time because he is suffering from an abnormal condition. According to the special colour which elicits this M.M.V.R. that person is diagnosed to be suffering from a certain complaint. Similarly that same colour shed upon the affected part is also used, along with other measures, to bring about a cure.

Thus sound and colour are here shown to be correspondential, and are utilised, hand in hand, to bring about a cure. The difference is that, whilst one standard sound only is used, for measuring purposes, a variety of colours representing various energies have to be applied. One or other of these various colour energies steps up the particular sound till it accords with the standard sound decided upon.

This method of diagnosis, it may be said in passing, is unailing in its results, so it is claimed. Dr Starr White has patients sent him from all parts of the United States for diagnosis. Cancer, consumption, syphilis, gonorrhœa, jaundice, malaria, tonsilitis,

various neurotic conditions can all be diagnosed one from the other by this means. If the condition of the disease is not too far advanced it is also claimed that an unfailing measure of successful results are also obtained by the particular colour thereby employed, along with other remedial measures.

The most distinctive feature of chromoscopy, and one which distinguishes it from all other systems of colour usage, is its individualistic method of application. For instance, this science supplies, for an individual, what are called his personal colours.

These personal colours are divided into five classes of thirteen colours in all. These five classes, with the number of colours in each class, are as follows:—three personal colours belonging to what are called the “Golden,” “Psychic” or “Spiritual” class; three personal colours belonging to what are called the “Success” and “Fortunate” class; three personal colours belonging to the “Health” and “Protective” class; two personal colours belonging to the “Warning” and “Guiding” class; two personal colours belonging to the “Danger” and “Adverse” class. In addition to the above personal

colours there is also used one which is called the "Master" or "Leading" vibration for that person and which is not denominated so much a colour as a vibration.

The golden, psychic or spiritual colours have to do with the purely spiritual or intuitive life, with the psychic constitution, and are operative for good upon the individual in an all-round way.

The success and fortunate colours have to do more with the mentality. It is claimed that their use is to assist the individual in business and professional, etc. matters by bringing spheres of successful and fortunate vibrations about the person employing them.

The health and protective colours form a very important class. Their use, as their name implies, is to bring health and protection to the individual whose personal colours they are; to assist him to "keep fit," if well; to assist to restoration, if ailing.

The warning and guiding colours — one warning and one guiding — have their uses in that they warn or guide individuals as to conduct in daily affairs.

The danger and adverse colours form

another very important class. Like the golden colours, they possess an all-round influence. Their effects are inimical and adverse; adverse in the general way, but dangerous when personal.

No two persons are likely to have the same kind of personal colours in the same classes. This means to say that no two persons are likely to have their personal colours exactly alike. Very often a colour may appear in more than one class. Thus, light green may prove to be, not only a personal health colour, but likewise a personal success colour. Light green may therefore be used for both health and success purposes. On the other hand, another person may have light green as a danger colour. This means that this person should not use the light green colour for health or success purposes; in fact, should eschew its employment altogether in the matter of dress, furnishings, etc.; should also seek to protect himself from its inimical influences by the employment of his personal favourable colours, such as one or other of the golden colours.

These personal colours are obtained from the name and birth data of the individual

concerned. By the name and birth data is meant the surname, full Christian name, date and time (if known) of birth. It is from the letters of the alphabet and the numbers going to constitute that personal data arranged in a definite order—called “the personal formula”—that the personal colours are obtained. It will thus now be seen why so much stress has been laid upon the fact that colours, letters and numbers are all correspondential. Knowing the name and birth data of the individual, we know also the letters of the alphabet and numbers making up the personal formula. Knowing the correspondential colours to letters and numbers we can then write that personal formula out in terms of colours instead of letters and numbers. At certain points—“focal” points—we can pick out certain of those colours from the personal formula. These are what, then, constitute the personal colours for that individual. It is claimed that such “focal-point” colours have influences far and away more telling than the other colours making up the personal formula. Hence the necessity for their knowledge and use.

This, it may be urged, is all mere theorising,

and it will be asked: "Have these statements any foundation in fact?"

It is generally accepted that certain persons respond to certain colours more than do other persons.

Says Dr Starr White:

"Although red is spoken of as a warm colour, blue as cold, yellow as cheerful and green as restful, yet there is a difference in the way different people are affected—one may be pleasantly impressed by a certain colour, while another is affected oppositely. This would indicate that some are in tune with certain ray frequencies and others with certain other frequencies, pointing to an *inherent condition in constitution*" (Dr Starr White, *Lecture Course to Physicians*, p. 361).

It is this "inherent condition in constitution" which is disclosed generally by the personal formula and focally by the personal colours. Chromoscopy claims to be able to supply an exact scientific method, not dependent upon any clairvoyant faculty nor upon any intimate knowledge of the person's temperament, but simply upon the mastery of a few rules easily learnt by any person of average intelligence.

It is in thus selecting and utilising such personal colours that chromoscopy follows out the ideal scientific method—namely, that of finding out and utilising the line of least resistance, or, to put it in a better way, to find out and utilise the path of most responsiveness.

In addition, however, to this general experience corroborating the theory that there are certain colours personal to an individual and to which he is therefore more responsive, we also have the testimony of actual experimentation along these lines. Mr William Heald, the discoverer and systematiser of chromoscopy, during the twenty years or so on which he has been engaged in investigating and testing the matter, claims to have subjected his discoveries to close upon 80,000 tests of different kinds. Of this number 75 per cent., so he asserts, have been completely successful. The remaining 25 per cent. of apparent failures have, many of them, been due to wrong technique and working out and not to any flaws in his theories. Given right and proper methods it is claimed by him that the percentage of errors would have been very much less.

Chromoscopy is not only unique, how-

ever, in its discovery of the personal colours ; it is also unique in its methods of application. Nowhere is this shown more fully than in the application of the health and protective colours. In the usual methods of colour treatment a large and powerful dosage of the particular colour to be used is employed. Because in chromoscopy the path of most responsiveness is utilised a large and powerful dosage of the colours employed is not necessary. It therefore works in simpler manner and with much less expensive apparatus. Given a knowledge of the individual's health colour, it is sometimes only necessary to apply colour rays for a short time each day upon the bare skin, sometimes only covering the part affected with a cloth or silk in the necessary colour and allowing the light to fall through that upon the bare skin is all that is required. Though this procedure may seem almost absurdly simple to the uninitiated, there are evidences that the effects produced by it have been permanently remedied. Yet workers along other lines are coming round to the point of view that, given the right kind of colour vibration to use, large and powerful dosage in many cases is not necessary. Again,

quoting from Dr Starr White's monumental work, he says :

“ May it not be that the true value of all remedial agencies are in their colour or colour-producing qualities. [It will undoubtedly come to be realised in the future that the colour of the agency employed is an accurate index of the particular healing property that agency possesses, just as the colour of an object is now almost universally regarded as an accurate index of its quality.—*J. A. P.*]. I have had this fact very forcibly brought to my attention by many of my pupils, and although I have not had time to elaborate on it, I made one very remarkable finding—namely, ‘scarlet red’ is a red aniline dye in an oily base. This ointment has been used with marked success in healing certain kinds of open sores. I had a patient under my care on whom I used this ointment and it had no effect. I took some of the same base and made it blue and it acted like magic in healing up the sore. This sore gave off energy which could be neutralised by radiant blue. . . . Was not the colour practice of the ‘ancients’ based on this chromatic principle? They certainly used colours in a way that I do not believe was empirical. It

seems as though they had some fundamental reason for it. Their manner of painting the skin, I believe, had some specific action upon the conditions for which they painted it. The skin being exposed to the sunlight radiant colour must of necessity have reached the blood through those various colours.

“My experience with this method of painting the skin has been limited, but it seems as though, if the skin were coloured with certain indicated colours and exposed to the sunlight, there would be a more profound effect upon the abnormal condition of the patient than if the skin were not so painted” (p. 190).

Following along the same lines Dr Albert Abrams, the celebrated U.S.A. specialist, writes, in the June, 1918, issue of *Physico-Clinical Medicine*:

“In the treatment of cancer, marvellous results have been achieved by myself and others with Eosin (a red aniline dye). This drug has a much greater potentiality than radium and a neutral polarity.

“It is equally efficacious in gonorrhoeal rheumatism (painting the implicated joints) by neutralising the positive and negative soil of the disease. Incipient tuberculosis with-

out complications yields quickly to gamboge. Painted on the chest in incipient tuberculosis it is practically a specific and a symptomatic cure may be achieved in several weeks."

The above quotations all go to show that, after all, it is not large doses of colour energies that are required but a judicious selection of the *right kind* of colour energy. That branch of chromoscopy that deals with the applications of the personal colours for health purposes has been termed "Idio-kromopathy." This means "healing through one's colours." Repeated cures have been effected by the application of idio-kromopathic principles. This has been the case when all other methods have failed, even including the ordinary methods of colour therapy.

One striking instance of cure was a four years' cancer case, treated by Mr Wm. Heald. The patient had been under medical treatment for some considerable time and had been declared incurable. The simple idio-kromopathic treatment rendered resulted in a stoppage of the discharge from the ulcerated part, cessation of pain and no further growth. The patient also received back some use in his arms, which previously had been utterly use-

less. Consumption, asthma, bronchitis, colds, debility, eczema, gout, headache, insomnia, influenza, palpitation, rheumatism, wounds, etc. are all claimed to have been cured by this method.

Only a very little has been stated here about the manifold applications of this personal colour science. In point of fact, the number of its applications is as multitudinous as the experiences of life itself. Wherever colours, letters, words, numbers, forms and shapes are employed there chromoscopy has something instructive and helpful to reveal to all and sundry who care to avail themselves of its guidance.

CHAPTER V

COLOUR AS A VITAL AGENCY

By R. DIMSDALE STOCKER

MY conception of the practical value of colour as a vital agency may be summarised thus :

1. That as, throughout nature, colour is the means of manifesting vigour, health, organic efficiency and normality, so, in relation to human life, it bears the most indissoluble affinity with the functional and organic conditions.

2. To secure life, freely and abundantly, the whole system must be in a state of equilibrium. And for this to be so the circulating and respiratory organs, as well as those associated with the functions of secretion and excretion, must be in sound working order. This involves that the symptoms of health, physical, mental and moral, shall be present—which also means that the face and other

parts of the body shall reveal the appearance associated in our minds with vitality and health.

3. Excessive pallor, a complexion devoid of freshness, sallow cheeks and so forth furnish proof that the physical, and therefore the mental, life is impaired and diminished.

4. To secure a normal condition is the problem of chromotherapy.

5. The application of these principles I have already set forth in my book, *Colour as a Curative Agent*, but, while I would direct the serious inquirer to the pages of that volume, I may add the following practical hints.

6. As colour is one of the needs of our nature so every person should consult his own preference for that colour in his personal attire and domestic surroundings which most appeals to him. To ignore this preference is to neglect or to suppress one of the most important aspects of our individuality, which, in order to express itself, requires such opportunity as only an organised colour-scheme can afford it.

7. All such preferences reveal a profound psychic significance, and the "suggestive"

value which colour possesses is practically unlimited.

8. As for the psychic properties of colours, it is found that *red* is most stimulating, forceful and intense; whereas the device of *mauve* or *violet* reveals rather sensitiveness, delicacy and aspirational tendencies. *Blue* is cool and tranquillising and depresses rather than elates; it, however, promotes serenity. *Orange* is vigorous and life-giving. *Yellow* appears to be favourable to self-confidence and assurance. *Green*, the symbol of growth, corresponds to the dawn of individuality, is restful to the eye, but suggestive of progress; while *indigo* represents harmony, balance and power.

9. To apply the principles which are involved in this theory is quite simple, and besides the technical means which I have advocated in my book, I would suggest the adoption of these colours, either in one's apparel or in one's home, which are calculated to furnish the required stimuli. The choice of a specially selected fabric for one's dress or, in the case of a man, a necktie of the required shade, should possess considerable efficacy. For in all such cases the deliberate concentra-

tion upon a given colour should tend to "suggest" the mental conditions to which such a colour corresponds.

The application of the principle, however, may be attempted in a great variety of ways, the only point being to encourage sufficient familiarity and intimacy with the requisite colour.

CHAPTER VI

HEALTH AND COLOUR ENVIRONMENT

By M. H. HOPKINS, B.Chrom. (Berger Decorative Department)

MAN, so our scientists inform us, is four to one in favour of environment, so Heredity stands a very poor chance when she is up against Environment. As surroundings play such a very large part in the making of man special care should be taken to make them as beautiful as possible in order to assist in the uplifting of the human race. Beautiful colour does much towards making beautiful surroundings.

The mind is most influenced in childhood and ill-health ; in the former case because it is like a blank sheet waiting for time to put his mark upon it, and in the latter because it is like an instrument tightly strung when the slightest touch will cause it to vibrate. Colour is well known to have an effect on the health by operating on the senses through the medium of the eyes. In the normal person it

produces varying sensations of comfort or discomfort according to the colour selected, but on the artist, or the person in a weak state of health, the effect is acute, because in both cases, although from different causes, the nervous system is working at high pressure and is consequently much more susceptible to outside influences.

The room or ward in which the person in a weak state of health is to spend the greater part of the day should vary in decoration and treatment according to the complaint from which the patient is suffering; for instance, a patient suffering from melancholia would not require the same colour treatment as one with homicidal tendencies. In the one case the patient requires something to rouse his interests, and in the other the aim is to avoid excitement. Again, the treatment of a man suffering from severe wounds would vary in some degree from that of one who had reached the convalescent stage.

The effect of colour on a patient who is delirious is subconscious in its action, and partly conscious in the case of a person who is in his normal condition of health.

A special colour treatment for each patient

might offer too many difficulties to be carried out successfully in the majority of hospitals, sanatoria and asylums, but it could well be adopted for the decoration of private nursing homes, etc.

Meanwhile much could be done to improve the wards of the Public Health institutions, the majority of which are too plain and devoid of interest in their interior decorations to act as a tonic on the patient. In fact, more often than not the effect is quite the reverse.

Interior decoration of wards for the wounded should aim at giving the impression of cheerfulness and simplicity, but should avoid being overweighted with colour or detail. In many cases the patient is not able to read, write or talk much; consequently what he sees will occupy his mind very much. It is very depressing to lie still hour after hour, surrounded by unfurnished walls in one all-pervading tone, unrelieved by any interesting note of colour.

The women's wards should be as homelike as possible in their treatment and dainty in their colouring. Women are particularly susceptible to details; a decoration in the old-

world cottage style could be carried out successfully.

The children's wards should be decorated with illustrations out of the favourite story books, but care should be taken not to use anything that might frighten a child. Children do not discriminate between the picture and the fact ; to them everything is real. A child's imagination, if worked upon in a practical manner, will do as much good as medicine in bringing the child back to health.

Colour treatment of the wards for the insane must necessarily vary very much with the form the insanity takes. Insanity is due to many causes. In each case the symptoms vary and so must the colour treatment in order to assist the patient to regain proper control of the mind.

The decoration of the convalescent wards should be as cheerful as possible ; heavier detail and colouring than that used in the ordinary hospital wards could be followed out, and as long as the ordinary rules of design are adhered to there need not be many restrictions as to the form and colouring the decoration should take.

What is necessary in all cases of disease is

to lead the patient's mind away from dwelling too much upon his complaint, and this can be done by giving him other interests, such as well-decorated surroundings.

One of the most important points to remember in hospital decoration is to use a material that can be well washed without harming it, as in a hospital cleanliness is even nearer to godliness than usual.

Schemes for Hospitals

(a) A simple scheme for the decoration of a ward for the wounded.

Ceiling.—White, to give plenty of light.

Frieze and Mouldings.—Cream. Frieze, stencilled; sky, shaded blue; tree-tops, light green; tree-trunks, dark green; ground, light green and yellow shaded.

Walls.—Stencilled green.

Panel.—Pale green, banded by stencil lines in dark green.

N.B.—The predominant shade is green, which suggests restfulness.

(b) Scheme for women's ward.

Ceiling.—White (banded to illustrate beams, stencilled in light brown).

Frieze.—Stencilled; sky, blue and white; ground, white and pale green; trees, green and orange; trunks, black.

Cottage Roof.—Terra-cotta.

Walls of Cottage.—Cream and black.

Walls.—Green. Flowers, stencilled orange; leaves, green; stems, yellow; all patterns outlined black.

N.B.—This scheme, provided the colouring is not used too heavily, would have a brightening effect.

(c) Scheme for children's ward.

Ceiling.—White.

Cornice and Skirting.—White.

Wall.—Style, cream. Stencilled picture, with black lines for border, in the following colours:—water, blue-green; bird's nest, brown; baby, flesh colouring (hair, fair); bird, white shaded; ground, green and brown; tree-trunk, brown; foliage, green; sky, light blue, shaded.

N.B.—A series of pictures to harmonise could be stencilled at intervals round the wards.

(d) Scheme for ward for convalescents.

Ceiling.—White.

Frieze and Mouldings.—White.

Walls.—Strawberry, stencilled with swag in pink, white and green.

N.B.—The strawberry and pink suggest cheerfulness and warmth. According to what our temperament is, so colour will affect us. It is impossible to lay down definite rules about colour effects and say this colour should be used and that one not, or that a certain colour will often produce laziness and another work, because a colour will often affect one man deeply and another man not at all. Although colour effects vary considerably, the following colours are generally believed to produce the effects named on the normally developed and balanced mind:—

<i>Red</i>	.	.	brightness, grandeur
<i>Light blue</i>	.	.	spirituality
<i>Dark blue</i>	.	.	seriousness
<i>Green</i>	.	.	restfulness
<i>Yellow</i>	.	.	brightness
<i>Orange</i>	.	.	energy
<i>Black</i>	.	.	solemnness
<i>Pink</i>	.	.	cheerfulness
<i>White</i>	.	.	purity
<i>Brown</i>	.	.	thought

Colour in the home is just as important (if

not more so) than the colour in the hospital. Well designed and coloured homes will do as much towards helping people to keep healthy as correctly coloured hospital wards will do towards bringing them back to health.

When decorating the home the use that each room is put to should be the first consideration. Where the room is occupied by only one person, individual temperament should be considered. The study of colour harmonies, and contrasts, and their relation to form, light and existing colour environment about the room are also very important.

Colour, which is light rays made visible, by being reflected against a substance, is also itself further affected in tone by light. For instance, a white object will appear grey when seen against the light. It will therefore be seen that a great many points have to be thought out before a completely satisfactory colour scheme for a room can be arrived at. It is quite possible, though, to state a few general rules for colour in the home and to make suggestions for colour schemes based on those rules, which would suit more or less satisfactorily the general run of houses. In fact the same applies to the home as the hospital :

special colour treatments might offer too many difficulties if carried out on a large scale, but could well be used for special cases. In the future, perhaps, colour specialists will be scattered all over the world and then each individual can be treated separately for colour in the same manner that we can be treated for our health.

Bedrooms should have very light colour treatments; drawing-rooms rather ornamental treatments, but still on the light side. Dining-rooms should be slightly heavier in treatment, with a touch of red somewhere for comfort. Studies are best suited to a brown treatment, with a touch of blue or orange for relief; nurseries in gay colouring, not too heavy. In fact, heavy colouring should be avoided as much as possible, as it is depressing. Halls, light shades, and so on. These are general rules to go upon, but, of course, as previously stated, they must not be regarded as fixtures.

The following are a few suggestions for the colour decoration of rooms :—

<i>Bedroom</i>	<i>Bedroom</i>	<i>Bedroom</i>
<i>Frieze.</i> —Grey	<i>F.</i> —Cream	<i>F.</i> —White
<i>Wall.</i> —Pale Pink	<i>W.</i> —Pale Blue	<i>W.</i> —Pale Yellow
<i>Dado.</i> —Cream	<i>D.</i> —White	<i>D.</i> —Grey
<i>Wood.</i> —White	<i>W.</i> —Cream	<i>W.</i> —White
<i>Drawing-room</i>	<i>Drawing-room</i>	<i>Drawing-room</i>
<i>Frieze.</i> —Pink	<i>F.</i> —Cream	<i>F.</i> —White
<i>Wall.</i> —Pale Mauve	<i>W.</i> —Deep Yellow	<i>W.</i> —Pale Green
<i>Dado.</i> —Deep Mauve	<i>D.</i> —Cornish Grey	<i>D.</i> —Deep Green
<i>Wood.</i> —Cream	<i>W.</i> —Light Oak	<i>W.</i> —White
<i>Dining-room</i>	<i>Dining-room</i>	<i>Dining-room</i>
<i>Frieze.</i> —White	<i>F.</i> —Cream	<i>F.</i> —Orange
<i>Wall.</i> —Medium Blue	<i>W.</i> —Red	<i>W.</i> —Deep Blue
<i>Dado.</i> —Deep Blue	<i>D.</i> —Stone	<i>D.</i> —White
<i>Wood.</i> —Mahogany	<i>W.</i> —Mahogany	<i>W.</i> —Antique Oak
<i>Study</i>	<i>Nursery</i>	<i>Hall</i>
<i>Frieze.</i> —Orange	<i>F.</i> —Pale Blue	<i>F.</i> —Pale Blue
<i>Wall.</i> —Medium Brown	<i>W.</i> —Pink	<i>W.</i> —Cream
<i>Dado.</i> —Cream	<i>D.</i> —Heliotrope	<i>D.</i> —Deep Blue
<i>Wood.</i> —Medium Oak	<i>W.</i> —Cream	<i>W.</i> —Medium Oak

To close, let us express the hope that the future holds for the world a reformation in the colour treatment of our hospitals and homes, for they are badly in need of one. A colour reformation will help very much to produce a better, happier and healthier race of people. Man makes his conditions, *and conditions make the man.*

CHAPTER VII

HEALING BY THE APPLICATION OF COLOUR

By HERBERT A. SANDERS, B.Chrom., B.W.S.

CHROMOPATHY, or the science of healing by the application of colour, is at present in its infancy. It is, however, a science which has a very important bearing upon our everyday life, and knowledge of its principles and their application should be world-wide.

That colour plays a great part in maintaining, improving or depreciating the state of the health is gradually becoming known, and should be universally recognised. A year or two ago the man who spoke of the healing effects of colour properly applied was looked at askance and regarded as a colour fanatic, a crank, but the devastating war through which we have successfully passed has forced the claims of chromopathy to be recognised and applied, even by the medical profession, usually a very conservative body. The

“colour doctor” is now being spoken of daily, and the wonderful effects of the skilful application of the science can be seen at some of our leading hospitals. Not only in hospital work are its principles possible of application, but the home and school also afford fruitful fields for investigation, and this article, after a survey of the general effect of colour upon health, will endeavour to show how the home, and particularly the school, are affected by, and demand the application of, the science of chromopathy.

It is generally admitted that a little learning is a dangerous thing, and this is true in the endeavour to heal by the use of colour. It is possible, owing to the misuse of colour, to drive people to melancholia or depression and so seriously to affect their health in an adverse manner. By the correct application of the proper colours, however, it is possible to disperse melancholia and to raise depression from those afflicted by these two ailments. Vision may be corrected or impaired according to the use of proper or improper colours, and therefore a word of warning is necessary. “Colour healing” is a science and demands as accurate and

minute a knowledge of its principles as all other important sciences do.

HOSPITALS.—The application of the principles of chromopathy, under the skilful direction of doctors and nurses keenly interested, has been fairly successful and foreshadows a more extensive usage of the science when the knowledge of the effects of colours becomes more general. Colour-cure wards have been established, with encouraging results, for it is now realised that environment is an important factor where the sick are concerned. Attention must be paid to it, as well as to the particular remedies by which it is hoped a cure may be effected. An antagonistic environment may retard, and even be detrimental to, the recovery of a patient. Therefore it is essential that the colour schemes of hospital wards and rooms receive expert attention, for the correct and artistic application of a colour scheme can counteract even faulty building construction. Colour, properly applied, is a powerful ally of medical science.

THE HOME.—The study and correct use of colour is as important in the home as in the hospital. In the home one is continually

under the influence of colour, and if there is a scheme and it conforms to the "colour code" all is well, but if the scheme is wrong the adverse influence will be reflected in the temperaments of the inhabitants. The development of the æsthetic sense is necessary if well-balanced colour effects are to be obtained. Not only should each individual room be considered, but also the colour scheme of the house as a whole. For instance, three rooms may lead out of a hall; in the event of all the doors being open at once the colouring of one should not act adversely upon the others.

It is possible so to arrange the scheme of colour in a room that one can feel soothed, or refreshed, or excited whilst in it, but the misapplication of colour may irritate the eye and so cause irritability of temper. Bed-rooms should be so coloured that sleep is induced, therefore the colour scheme should be in harmony with the effect desired. The study, where the greatest amount of work in conjunction with the greatest economy of mental energy is the aim, can be coloured to assist the realisation of this object. By the use of lamp shades of various colours, in-

spiration may be stimulated, chaotic thoughts reduced to order, or a sedative effect produced, as may be required.

SCHOOLS—Schools, where the application of the principles of chromopathy should most certainly be found, have been almost entirely neglected in this particular. Many of our schools are very dingy, and even the sunlight finds great difficulty in penetrating into them. They are faulty in construction, and colour appears to have been entirely neglected. Most of the schools built within the past ten years are greatly improved in design, but even in these colour forms no part of the scheme. Children are most susceptible to colour; it is the first influence they feel of the outer world, an influence which should most certainly be continued at school, where they have to spend at least ten continuous years of the most impressionable period of their lives.

In addition to the class-rooms, the colour principles should be applied also to the educational apparatus in use. Much of this is constructed without a thought other than the particular purpose for which it is made.

It is necessary to point out here that an

overdose of colour can be as harmful as an overdose of an opiate.

COLOUR CURES.—Colour cures have already been effected and the following cases are cited as definite evidence of the benefit derived from the correct application of the principles of chromopathy. The cases quoted are authenticated, and afford encouragement for further research regarding the healing properties of colour.

CASE "A" (Shell-shock).—A soldier sustained severe shell-shock in Flanders. His nervous system was seriously affected, the sudden closing of a door, an unexpected voice and such-like occurrences caused nervous prostration, and gradually his mental ability became atrophied. In consequence of this, depression seized him and he rapidly became worse. He was admitted to hospital and placed in a colour room, the governing idea of which was sunlight. The room suggested the open fields and the colour scheme was that of spring. The ceiling was blue, which continued into a frieze about eighteen inches in depth; the upper portion of the walls was yellow and the lower portion light green, and the floor covering green felt, toning with

the colour of the walls. The window hangings were of a deep yellow, and the artificial light was diffused by means of orange electric bulbs placed round the walls behind a cornice coinciding with the base of the frieze.

In this room the patient lived, supplied with light literature and appetising food, and in a week a noticeable change for the better came over him. Mental alertness began to return, he became brighter in spirits, and the nervousness before evinced when in conversation was lulled. In three weeks the patient was not recognisable as the nervous wreck who had entered upon the treatment with dread, and he bade fair, with its continuance, to regain almost in full measure his former vigorous vitality.

CASE "B" (Insomnia).—The subject of this example was a young officer who, as the result of the horrors through which he had passed, received a severe shock to his nervous system which asserted itself in the form of acute insomnia. He was treated in France and in various hospitals in England without any tangible result. It chanced that he was eventually seen by a doctor interested in "colour healing," who suggested a trial of the

treatment. The colour scheme of the private ward used in this case was carried out in mauves, blues and greens, which have a sedative effect. The patient entered the ward in the morning and spent the whole day under the influence of the colour scheme. That night he had his first unbroken and refreshing sleep since the advent of his nervous derangement.

CASE "C" (Melancholia).—Many forms of this ailment have been successfully treated, and the particular case under notice was that of a woman who was treated by a friend in her own home. She was subject to very severe periods of melancholia. Red has a stimulating effect, and a red room was prepared, with red lights. When the subject was feeling a fit of melancholia settling upon her, she had to go into this room and put the lights full on. Because of the vigorous stimulation occasioned by the red rays the melancholia was dispersed. Then she passed into a room the colour scheme of which was carried out in yellow and gold, a combination producing mild stimulation, and an effect of natural brightness which effectually restored the excited mind to its natural poise. Being

continually surrounded by carefully selected colours of a bright nature, the mind of the subject was eventually restored to its natural state.

CASE "D" (Eyestrain).—Cases of this type are very common, particularly amongst students, who work a great deal by artificial light. Much depends upon the colour of this light, and its effect may be beneficial or detrimental. In the particular case under consideration the subject became painfully aware of severe eyestrain, which was most noticeable immediately work was attempted in his study at night. An investigation showed that he was working by an intense red light which, although in the first place it had increased the alertness of his mind with the consequent increase of mental receptivity, had eventually overexcited and irritated the optic nerve. Becoming unresponsive to red light it was vibrating to its complementary, bluish-green, and finally the nerve was rendered almost impotent. The eyes were colour weary and demanded an antidote, which was supplied by the substitution of a shade coloured soft green. Gradually the eyes regained their normal power and the eyestrain disappeared.

Other cases might be quoted, but the instances already given show that what is claimed for chromopathy is well founded and, given devoted and enthusiastic research, a great future should be assured it. Doctors will, it is hoped, give their powerful co-operation and enlist the knowledge and services of the colour specialist, for colour, besides being of untold value in the treatment of disease, can also ensure successful and beneficial convalescence. The colour specialist is essential in the treatment of disease, for proportion in colour is as important as proportion in medicine. Wrong proportions in colour treatment can be equally as disastrous as the careless application of medical remedies. Properly governed, colour treatment can be almost as efficacious as a course of medicine, and the "colour doctor," in the future, will most probably be brought into consultation to assure the complete success of the efforts of the medical profession.

*Qualities and Effects of Colours and Colour
Combinations*

Red.—This is a stimulating colour of a high standard, which excites and increases the

working power of the brain. Too much can disturb the mental balance of delicately poised minds; the circulation of the blood is quickened and melancholia is dispersed.

Yellow.—A cheery, stimulating colour, which re-energises the brain. A hopeful colour, suggesting sunlight, and very useful in convalescence.

Blue.—A colour possessing cooling, sedative properties which, to some people, are depressing. If used in too large quantities can produce melancholia, therefore is useful in reducing cases of excessive excitability. Effective in the reduction of inflammation and useful for allaying neuralgia.

Orange.—A very cheering colour, eminently suitable for the convalescent period. It is suggestive of sunlight and is health-giving and stimulating, but in a less degree than red.

Purple and Mauve.—These two colours are sedative and soothing and are both productive of sleep. They concentrate and are very useful in cases of mental instability.

Green.—A colour, possessing cooling properties, which is useful in nervous diseases as it subdues excitability. It acts as an opiate and counteracts the brightness of the sun.

It excites the eye less than any other colour, even black, and induces repose.

Black.—This colour is not necessarily depressing, and is useful for toning strong colours. Therefore it should always be used in combination; alone it is depressing.

White.—A cheering colour which attracts sunlight but, if used alone, is cold. Combined with red, yellow or orange, it is stimulating.

Brown.—Restful and warming in quality, but if used alone tends to have a depressive effect. It is very useful in combination with orange, yellow or gold, when it suggests sunlight and counteracts melancholia.

Gold.—A bright, cheerful colour, useful in convalescence.

Grey.—A depressing, cold colour which must be relieved by a stimulating one.

No room should be self-coloured; there must always be one dominant colour, suitable to the effect desired, and all other colours should be subordinated to the dominant, but the sub-dominants must assist in the attainment of the desired effect. Colours vibrate and the vibrations must be taken into account and proportions maintained. The combina-

tions of colours must be carefully studied, for wrong colour combinations will probably cause mental indigestion, and wrongly coloured rooms can bring about a state disastrous to the health.

Educational Aspects of Chromopathy

A very important field of research is awaiting exploration in the application of the foregoing principles to educational purposes. The foundations for future good or evil are laid in the time spent by children in scholastic studies, and during this impressionable period all influences for the good of the children should receive particular attention, and the necessary impetus given to make them effective and permanent. Colour is a very fertile medium through which healthful influences may be brought to bear upon the child's mind, for through it is received its first permanent sensations of this world, and colour is with it throughout the whole of its life. In this way the influences are kept fresh and vigorous, and therefore it is of paramount importance that those received at school should be nothing but good.

Colour is taught in most schools with, in the majority of cases, commendable results, but the efforts of teachers are neutralised because few of the schools or class-rooms conform to the principles taught. Children are ever ready to follow examples set by their teachers, and are impressed to a greater extent by their school surroundings than by any other influences.

With the exteriors of schools now being built not much fault can be found, for a noteworthy change for the better is apparent in most of them. They are more attractive, and many of them have a well-balanced and imposing appearance; this applies most particularly to two-decker schools. Of the interiors, however, the same cannot be said. The new schools are undeniably light, but this is obtained by a dado of white glazed bricks. These give a very clean, healthy appearance, but the strongest sensation one feels is that the atmosphere is cold, a sure preventive of keen work. Above the dado unglazed bricks are employed, most often of a very unattractive colour, and the very antithesis of one which is thought producing or brain stimulating. Red, possessing the greatest

stimulating property, would be unsuitable, but yellow, or rose, would be very welcome to the children. Extremely pure or bright colours are harsh and irritating, therefore these must be banished from general use, with the exception to be shown when artificial light is being discussed.

All the rooms also are of the same colour, without any attention being given to aspect, and as colour makes a universal appeal, rooms should be varied in colour for the sake of the children. The white glazed bricks have the necessary cooling property required in a room of warm aspect, but the effect upon a room having a cold north aspect is the very reverse of comforting. Rooms for work should be comfortable in colour, therefore it is logical that class-rooms should be decorated in colours suitable to the aspect.

A room facing north or east might have a dado of cream or buff glazed bricks with the remaining portion rose or yellow, or vice versa, and there is no reason why all ceilings should be white. The colour of the walls should be continued over the ceiling, giving a more effective appearance and adding to the height of the room. Another combination

suitable for a class-room with a north aspect is to have the glazed bricks of a rich brown colour and the upper portion of the walls a rich yellow or cream, covering the ceiling also. In the case of rooms with a warm aspect cooling colours would be required—*e.g.* a room with a south or west aspect would need pale blue or green, and perhaps pale grey bricks. Of course, external influences must also be taken into account, for some rooms having a sunny aspect are deprived of part of their light by an outside building, etc. ; this is very often the case with city and town schools.

Consideration must also be given to the natural lighting. The window space is usually ample, but often the light is glaring. This is particularly harmful to young eyes, especially when the direct rays of the sun, passing through the clear glass, fall upon the pages of a book. The light of class-rooms, natural or artificial, should be diffused. In the case of the natural light this could be accomplished by using frosted glass, which would perhaps also help to hide an unpleasant outlook. Better still, the principle of stained or coloured glass, common in churches, should be used, and so arranged to assist in obtaining an

effect in accord with the aspect of the room. Pale rose, yellow, blue and green could be used, and the window-panes vari-coloured. If the colours are pale, the direct glare of the sun would be counteracted, and the light falling upon study books would not be harmful to the eyes. This idea would also allow for the ingenious use of window transparencies, plain coloured or figured, giving the teacher an opportunity to obtain the light which a colour experience had shown to be necessary.

One other point only need be mentioned from the educational point of view—viz. the reading and study books used in all schools, but particularly in secondary schools.

At present text or reading books are printed with black lettering on white paper, thus producing one of the greatest colour contrasts possible. This is good if the books are to be read for short periods only, but if they are to be studied for more than twenty minutes continuously the hard, strong contrast may prove harmful. Therefore it is advocated that if the printing must be black, the paper should be cream or pale buff, in this way softening the contrast. Better even than

this, green printing should be used on cream or buff paper. With this the eyes would sustain the minimum of strain and fatigue with the consequent increase in the mental receptivity of the children.

Proper attention to colour in our schools and homes as well as in our hospitals will aid materially in improving the health of the community at large.

CHAPTER VIII

THE THERAPEUTIC SIDE OF COLOUR IN ART

By CARLO NORWAY, M.Chrom.

THE sun rises in the east—the east brings us light, and light is colour.

So colour is born out of sunshine, and it is an emblem and a very condition of happiness.

Happiness, again, is a sister of health, as all our scientists know.

This is an ancient wisdom—the sun-worshippers were by no means ignorant; they knew, the sun is the life-giver—and without it there is nought but death, the “colourless.” Every blade of grass, every leaf and every flower are depending on the paternal smile, that warms up Mother Earth and gives life to all its children.

And how do they express their healthy happiness, at once a prayer of gratitude to their Maker and an endless chorus of joy? Their prayer and song dance in the rays of

the sun in a myriad harmonies and vibrations, that blend into one great chime, filling the mighty dome of eternal blue—it is “colour.”

There is colour in the depths of the sea, even where it is darkest, for mysterious lights are lit and flit about like the souls of poor, wandering mortals, only just conscious of humanity's higher aims in life and after-life; these multi-coloured lights, which guide the inmates of the purple deep, are like so many sparks of hope.

And let us wander farther up, where the rays of the great light commence to penetrate the salten depths. Already here the waters abound with colour—the very element itself is rich with blue and green as the neck and tail of a peacock. More and more luminous and opalescent it becomes the higher we rise, and its wonderful growths of orange, deep reds and sap-greens cover vast stretches of rocky ground; gold and silver fishes glisten and sparkle in metallic splendour, while mother-of-pearl dreams of the rainbow.

And now we rise above the surface and see the sky reflected in its mirror.

When the wind is still and the sky is blue, with but the sun, a single gem, within its

vault, even so does the sea portray to the eye this very blue, and in it the blinding speck of light, that to behold unveiled were sacrilege and therefore quickly punished!

But if we wait till eventide, when the mists of atmosphere form a veil between the sun and our eyes, and this star of stars appears like a ball of fire, we may with impunity behold its glory and the reflection on the watery surface, voiced now perhaps by a thousand ripples in musical reiteration, and forming a road of pilgrimage for the eyes of man to the eye of God.

And then the "angelus." Is not the gorgeous altar-cloth the clouds have woven in itself a prayer and evensong? It is of gold and copper on a ground of orange, melting into green and blue, with purple shadows interspersed. Its colour sings and sounds afar as colour does—for it is music to the eye and mind; vibrations, harmonies and rhythmic lines, far more intelligible to the masses than good music, they cannot fail to move all but the hardest hearts with a sensation of the purest joy.

So the sea can teach us to love the heavens, and depth and height become united, for do

they not meet and kiss each other eternally on the surface?

And every emotion felt by the one is transferred on the other. When dull clouds hang heavily overhead, the waters are shrouded in grey—and both reflect their melancholy on our minds, making us yearn for colour. This endless stretch of water, melting mistily into grey clouds on the horizon, which cover us from north to south, from east to west, wherever we look, is like a cold prison to our souls—its very vastness seems to shut us in and wrap us in despair. And if we chance to live on some northern island, where this dull, dead grey reigns, not for days and weeks only, but for months at a time—do you think the struggle to keep sunshine in our hearts and minds would be an easy one?

Even though our island were densely populated and its landscape full of variation and beauty—we would roam about more dead than alive for lack of sunshine, the bringer of joy and colour. We would become morose and peevish and our state of mind would soon affect our general health if we are at all sensitive to our surroundings, as most civilised creatures are.

Even a dog or cat will find a sunny spot in the garden on which to doze in perfect comfort. Plants under shadow of a wall will bring no flowers or fruit, and grass refuses to grow under the shading branches of a large tree.

So how much more than these must sensitive man stand in need of what the sun has to give him?

Let us for a moment examine this gift from the point of view of plants and lower animals—for the former have no eyes to see beauty, though they themselves are among the loveliest of creations, and the latter can hardly claim to possess an intelligence able to enjoy a light as such. What draws them towards the sun is its warmth, one of life's chief conditions.

And now we can begin to draw the parallel we have been leading up to. Allowing that colour, as a form of comfort or happiness, is necessary to good health, let us try to apply its uses in theory on mankind in general.

First of all, and perhaps most important, there is the warmth of the sun, so dear to flower, beast and man. Can colour give such warmth?

The actual, physical warmth of colour again depends on the rays of the sun, which are absorbed by some colours and reflected by others.

This fact we are quite accustomed to, and dress with light colours during the summer season, to throw back the light and heat which would otherwise be absorbed by the dress material and thus increase the heat we wish to subdue.

But apart from this we speak of "warm," even "hot" colours, and of "cool" or "cold" ones.

What may be the reason for this distinction, and which are the main colours thus qualified?

As coldness and heat are qualities determined by our sense of feeling, the parallel may have been drawn with the aid of objects surrounding us.

For example, fire or a "red-hot" iron gives us perhaps the hottest of all colours—a scarlet verging on orange. It must be remembered that of any colour mentioned innumerable degrees of strength or intensity are possible, lustre and surface-effect playing an important part. A pure scarlet is neutral in its heat as far as reds go, but of course red, like orange,

and in a lesser degree yellow, is one of the warm colours. Crimson commences the scale of cooler reds, of which magenta is the coldest, if we can term it red at all. We then come to violet or purple, the evenly balanced blend of red and blue. Blue is the first of the cool colours, its degree of coldness depending on the quantity of violet or green alloyed with it. Thus the blue of an autumn sky is one of the coldest—seen from a mountain-top its very clearness breathes cold breath. But the most frigid of colours, and yet one of the most beautiful, is viridian or pure emerald green. You see it in water and the sections of glass and ice. Green, the mixture of blue and yellow, is always more or less cool, as the juice in a plant is to the touch; but where blue is predominant, as in viridian, it is the essence of coldness. Yellow completes the circle, as it were, standing between green and orange. Its warmth, lacking the glow of red as in orange, is almost disputable. The minerals gold and brass are cold to the touch, but sunshine again is warm—so in yellow, as also in its complementary colour violet, we find it hard to decide its position.

I should feel inclined to draw a circle and

divide it into six equal sections, three for each primary colour and three for their respective complementary colours. Then, drawing the diameter through the middle of the violet and the yellow spheres, we divide the circle into two semicircles, of which the one is warm, the other cold.

Black and white, though really expressions of darkness and light, must also be considered. They are formed by all colours equally blended together in their darkest or lightest appearance, and, with their mixture grey, they cannot, strictly speaking, be termed either warm or cold, but may swing one way or the other, according to the predominance of warm or cold colours in them. But in talking of grey, we generally convey the idea of something cold to our minds, as stone or fog, that chills us. Even black and white do not escape the suspicion of coldness. We talk of the "cold, black grave" and, of course, "white as snow." It is their extreme neutrality that is seemingly cold to us, no doubt, but we might draw a black, a white and a grey circle and divide these into six sections, as we did our first one, and tinge or glaze them with a very thin layer of the six colours. This would be the only

way of determining any grade of temperature in them—unadulterated they give us no clue.

Thus language has given qualifications to colours, which are divided in many cases from objects showing these colours and their physical relationship of temperature.

But there is a far more important connection outside the physical world and yet strongly influencing the same—it is the psychological link, born out of instinct or traditional intelligence.

It is not our object to pursue the many wonderful results of this universal intelligence on the colours of soil or rock, plants or animals. Let us just touch the fringe of its most obvious intentions, as deception in mimicry or warning by contrasting and crude colours side by side—for example, black and yellow in several poisonous or dangerous animals—a danger-signal to the weak. Again, anger is aroused in some animals by red, so suggestive of blood. And without doubt the love of gorgeous colours in some butterflies, birds and fishes must be a quality, perhaps unconscious in them, but evidently suiting nature's purpose.

This instinct, then, which led the moth to mimic the bark of a tree and the fur and

feathers of many an animal to turn white in the winter's snow—should this be dormant in human beings, who are as much in need of protection and ease of mind as these lesser children of creation? They feel sensations far deeper than the latter—anger and fear, sadness and comfort.

And naturally colour, too, affects them to a much stronger extent. Unfortunately very few of us seem to realise this vital fact. If we did, there could be far more happiness in the world, sorrow would be ameliorated, mental disorder and nervous trouble easily coped with.

“Achromatism” would be the name of a common but curable malady, the remedy supplied by—artists!

This may sound an extraordinary proposition, art and physics being generally supposed to be separated by a wide gulf. But the fact remains that there is a very strong link between the two—it is psychology.

The study of art develops not only strength of observation but also imagination, the gold mine of pioneers in every capacity.

An artist with strength of imagination who has not lost, as many modern artists have, his power of observation, and who is at the same

time a "colour expert," will in the near future be as indispensable as our physician is to-day.

By "colour expert" we must understand a man who knows the ins and outs of colour psychology by means of study and his own sensitive organism and possessing the impulsive quality of transferring an impression of a certain kind on the eye and mind of a spectator. Imagination and sense of colour and composition of the highest order will be required to effect a development beneficial to the melancholy or nervous mind.

But a new and strong race of artists are rising all around us, free both from the academic lack of imagination as from the dotting and degenerating influence of cubism and futurism, etc.

We might call them "pan-chronists" (all-time artists), or men who understand that every epoch in art throughout the ages, wherever it be, has many a lesson to teach them, either in colour, line or the placing of masses, in simplicity or detail. Realising this and looking back upon certain things in harmony with their own individualistic tendencies, they will be strong enough to tune their instruments

to the orchestral strains of the present, thus being prepared for the symphony of the future.

The "pan-chronist" or "all-time artist" will be the ideal adviser and practitioner for laying the foundation to healthy homes for happy lives, and also for giving relief to the afflicted.

This is no hollow forecast, but one based on observation and experience of many years of travel in different countries and visits to innumerable homes and exhibitions, illustrative of the ideas brought forward in these pages.

Taking psychology as the guiding star, the artist may begin by formulating various colour schemes, with a view to utilising them in decoration. He knows that individuals differ more or less in their taste for colour—if any—and in consequence the effects he chooses will have to be most varied. Like the physician, he must have a well-filled medicine-case and find the right remedy for, or safeguard against, the evil of achromatism.

People who see the world in monochrome are indeed to be pitied and sorely in need of the artist-physician, lest utter melancholy overtake them. To these he would show a

few colour schemes after the following fashion, "prescribing" the most suitable ones for decoration.

Scene 1.—A spring-clad garden of fruit trees with a foreground of multi-coloured flowers. The sun covers the whole in a golden veil, through which white cherry and pink apple-blossom compete for life and joy. The tree-trunks and branches are a rich, dark purple, and the blossom stands out against a sky of brilliant blue, the background between the trees being a hazy gold-green.

Scene 2.—A more ornamentally treated landscape. The background is a hill covered with autumn tints, the yellow of the birch-tree, the black of the pine, the dark gold of the chestnut and the reds and greens of the maple. These colours are put together like a pattern and reflected in a lake with a strip of deep blue sky, interrupted by pale blue rows of small clouds. The nearer background is the deep copper silhouette of trees, and the foreground is composed of daintily arranged branches and twigs with playfully scattered leaves in a light, silver-green colour, which stands out against the rich background. Birds and other animals as suitable patches of

colour among the branches will add to the whole a refreshing touch.

Scene 3.—A subject of giant catkins and flowers. The background, only visible about one-tenth part of the entire surface, is a vibrating orange. The catkins, hanging in thick clusters, are white with just a flush of purple to soften them, their outlines being a slate-blue. They hang from slender black branches, rising and falling again at the top. Among the catkins are sunflowers of gold-yellow with deep purple-blue centres. Their thick leaves and stems are viridian and this colour broadens out and forms the entire foreground, on which rich red and violet, white and pale blue flowers form a strong but harmonious pattern.

Scene 4.—A softer and more quiet effect, a moonlit river landscape in opalescent hues. The sky, much lighter at the corner on one side, suggesting the proximity of the moon, is of a hazy violet. A gently moulded silhouette of the horizon, with clusters of trees here and there, is only just discernible from the sky, being a trifle darker and more blue. In the distance the silvery curve of a river is visible and winds gently into the middle back-

ground, where its line is straighter. As the landscape approaches it becomes gradually a darker green, a few tree-tops in the foreground standing out somewhat lighter in grey-greens and slate colour, reflections of the hazy, violet sky being suggested amidst the foliage.

Of these four scenes or colour schemes the last one will be the most likely to suit the highly strung and nervous person, who is constantly on the move and lacks the capacity of this most necessary occupation—resting. It is an evil only too common in our coarse age, where time is money, and most people are inclined to forget in their struggle to secure the latter that more hurry is less speed. A colour scheme as in Scene 4 invites to rest ; it slows down the feverish pulse and causes the lungs to do their duty well. A room arranged with the colours mentioned makes an ideal resting-room or lounge, and an hour's rest, say after lunch, daily, for a year or two, will often lengthen lives considerably.

This effect is due entirely to modification of colour and line, and symptoms of a nervy disposition as described should be treated in this manner at the earliest moment, as troubles like insomnia or even consumption are only

too likely to get the better of an organism weakened in this way. For a different type of weakness again this modification would prove not only useless, but in a way perhaps even harmful. This is the malady of those who through the grey spectacles of their minds discolour every object they perceive. It is as common a failing as that of the "hurry sick." A morose and unhealthy tendency of this sort soon develops into the vilest hypocrisy and "fault-finding mania," or else into a morbid and ruinous perversity of body and mind—or into both these vices. These unfortunate victims of heredity, or perhaps just of gloomy or hostile surroundings, would only see in a quiet colour-scheme more lack of colour through their grey spectacles—it would be worse than fog to their tortured and tired minds. Also those, weakened through long suffering, mental or physical, will welcome colour-schemes as in Scenes 1, 2 and 3—not modification, but accentuation of colour—warm, sunny colours for preference. And where the sun is strongest there also is the darkest shadow—so contrast is the maxim we must follow here to give a vitalising effect.

It should be an easy matter to improve on

these lines, not only our own homes, for rendering life more friendly to ourselves and others, but to arrange a campaign of reform in all hospitals and so-called asylums or homes for our poor sufferers of mental diseases—at present anything but sanctuaries or places of rest and comfort. For coldness and discomfort of mind there is perhaps only the prison and the average boarding-house or hotel to equal them. No doubt everything is most hygienic and scientific as far as the animal body is concerned, but scientists, alas!—with all due respect to our learned friends, the physicians, as also town and county councils—are often apt to forget that unfortunate man is afflicted with a soul and mind, which two, when sympathetically treated, would be quite strong enough to keep alive and well the weakest of bodies even in the most unhygienic surroundings!

There can be no doubt whatever that, for those of us who claim to be more intelligent and sensitive than animals, beauty of surrounding is a most vital necessity—the thousands of shops in our cities with their huge warehouses filled with objects intended to beautify our homes and persons being ample proof of this.

They certainly fail to fulfil this duty in most cases, as we may be able to point out later, but the purpose is unquestionable and gives strength to our arguments throughout.

As long as this globe has been inhabited one civilisation after the other has struggled upward to obtain perfection in strength, commerce, learning, and last—not least—art. What were ancient Persia, China, India, Assyria, Egypt or Greece without their art, their colour? It is the colour of the Orient in particular that for centuries has been struggling westward, its light only flickering at times on account of our cold, north-western winds.

The last century was a particularly sombre one; very few artists were bold enough to break the conventions and step out of the prison of realism at its dullest. The truth is, one had forgotten the importance of interior decoration as art in Europe—particularly on the Continent—while a few strong men with narrow ideas held forth and developed these in Britain. But though a few very good works of art were completed, with quite a brave show of colour, on the whole there was greyness.

Why was that? you may ask. Of course

it was the mighty development of industry, so beneficial in many ways, so utterly ruinous to art. Decorations were turned out by the hundred thousand by wonderful labour-saving and beauty-killing machines, picture-frames cast, preferably in the most hideous mouldings and glaringly gilt for the benefit of the academy shows and similarly blinded institutions, as if to make an excuse for the lack of colour in the works to be shown inside them. And these "pictured frames" one would hang up, and fancy one's rooms, with the machine-made rugs, furniture and so forth, were now the perfection of style!

The well-to-do would have real Persian rugs, real Chinese or Japanese screens and knick-knacks, then a lot of gold curls and white marble, mirrors everywhere, candelabra with showers of glass attached, hideous wall-paper, for preference white, grey or pink, with roses, cushions here, brocades there—and then again these pictured frames to crown the cacophony! Thank God, we are at last beginning to wake up!

Yet there is an enormous amount of lumber and dinginess to be removed. Who does not know the utter desolation and monotony of

our upper middle-class residences, on whose pattern hotels and boarding-houses are furnished? Whereas the before-mentioned type of place blinds and insults the eye with its crudely glittering glamour and its superficial discords of colour, this latter form of interior "degradation"—no more suitable word comes to my mind—is the very breeding-place for melancholy.

The exterior of these germ-filled dwelling-places, and of the slums, of course, even exceeds in ugliness their interior; but how long would it take to reform builders and landlords to the charitable gospel of beauty? They cannot yet realise that it pays them in the end to improve this state of affairs.

But a new generation is rising, and after having filled the best of homes with beauty the old soot-covered carcasses, in their symbolical rows of monotony, will all be broken down, never to rise again!

There are traces already to be found in some of our modern shops, and particularly in modern art, that colour is returning to us, and with it freedom of design.

Let Eastern styles remain by themselves unadulterated—and, if possible, not be made

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in Birmingham—but let us do all to encourage the wave of colour and strength, which is personality in art, in penetrating the thick veil of Western commercialism.

As sure as prevention is better than cure is it the duty of the whole and healthy to remain so and to supply their less fortunate sisters and brothers with these means of leading happier and more comfortable lives.

We know to-day how all-important a happy state of mind is to the health of our body—and art is the highest ideal, next only to a sympathetic religion or broad-minded philosophy, whose handmaid she will always be for effecting again at this turning-point in history a renaissance of the spiritual as well as physical world. We are ready for a flood of colour!

Out of this want of the moment the spirit of artists throughout Europe and America is undergoing a decided change. Many are my friends, who, from a sordid study of realism, devoid of style and colour, have become gradually more and more decorative in their work, each in their particular style—the youngest grasping the idea almost at once—and only the war, with its temptations of

topical display for the sake of mammon and the limelight, has spoilt the personal style of some of them.

However, the soul of art was never dead—though slumbering—and many are the artists now worthy to play the part of physician for the nerves of humanity. Artist-physicians are organising and concentrating their efforts on decorating and designing.

With designs and decorations of a superior kind surrounding us in style and order, there will be need also for reform in portraiture. A portrait does not want to be void of style even at present—we have innumerable proofs from past masters how infinitely superior a portrait is, designed and arranged for the purpose of playing a leading part in the scheme of a well-decorated interior to one of the last century's school-studies or canvases for brushwork bravado and all in very sad colour, if any.

Here is another field for the young and ambitious which, once established, will soon scrap the common error that colour-photography can ever compete with sincere and good art. In fact, photography, mistaken for decoration, is a public danger—and photographs or cheap prints hung up in lieu of

portraits bring us to the lowest level of human taste for ugliness; it is degenerating in the highest degree.

Again, instead of printing millions of reproductions of utterly worthless rubbish for the delectation of the poorer classes and the children, whom, we must suppose, publishers and printers deny all imagination—we might encourage strength of personality and style among artists by creating a demand for good work only, which often is much cheaper to reproduce than the usual intricate eyesore.

All this can only be bettered if artists as a class cease to be looked upon as a mere vegetable garden, full of weeds. The weeds cost nothing—so some publishers will have these and throw sand into the eyes of the masses with them—and the newspapers do the same with a better-class public by creating a boom for a certain man or a certain section of artists. Competition in art, as in everything else, is good, for it helps to bring at least a few of the best men and women to the top, but the standard of human intelligence and education must improve to an equal extent and counteract the blind commercial tendencies and

propaganda of publishers and journalists as well as art dealers.

Printers of fabrics and wall-papers will gradually but surely turn the scale toward the better side of designing—for a more educated public will be critical and refuse the “howling-with-the-wolves” style, alas, still so predominant! China, glass and rugs, too, must undergo a change for the better, and of course furniture and ornaments in general. Artists must have authority where art is concerned, not business men, stage managers and all manner of art greengrocers! If they would only leave the weeds and find the cabbages, there would at least be something green to enjoy.

But where there is green at all there is hope—and hope with faith have inspired these lines—may charity follow—but please, in the right direction! Not charity as a snub to artists, but as a boon to the famishing and poisoned public. It wants the best of bread, wine and fruit, grown in the sun, in the shape of colour, conceived by true and willing artists.

Their children and their paupers need it as sorely as any; the children must not tramp through the dust and mud of bygone days—

and the paupers may, please God, reach a more desirable state of existence with more ambitious efforts and requirements.

Above all, however, may we see our sufferers relieved by happy colour-schemes and works of art, the nervous soothed, the weary ones lured back to life, with its sunshine and its rainbow.

Then indeed the world will be a garden of bright flowers and butterflies, and the dream of the "mother-of-pearl" in the depths of the sea will have come true.

CHAPTER IX

THE SPIRITUAL ASPECTS OF COLOUR AND HEALTH

By J. E. PEARCE (Founder and President of the League
of Healing)

THE results of modern psychological research have been firmly to establish the fact that man is not all that he appears to be in this temporary state; that he has other than the physical body—viz. bodies or vehicles which express his thoughts, feelings and desires, and that these, moreover, have a potent effect upon his physical body and determine, to a very large extent, his well-being.

The point of view of this article is the relationship of man to his bodies of expression, for we are guided by this knowledge into the laws of health, without which we may merely exist as comparative invalids.

The greatest philosophers and teachers throughout the ages have recognised man as a

spiritual being, divine in essence, yet necessarily using mind, feeling and desire as avenues of expression, in conjunction with his physical body, in order that he may gather experience and correspondingly expand his consciousness. Man is thus expressive of the great truth that all life is one and indivisible—that form is a necessary complement of that life; or, in other words, spirit is inexpressible without matter, and matter cannot exist without spirit to inform it.

Hence the necessity of bodies as instruments for man's expression will be obvious. As a corollary to this we may add that it is also true that the health of man is determined by the right use he makes of these instruments, and obviously he is limited in this use according to the knowledge he has and the control he exercises over them.

We are not able to proceed far in this knowledge without being convinced of the fact that vibration—motion—lies at the root of the phenomenal worlds. Light and heat, sound and colour are produced under the same vibratory law; in fact, all nature is veritably the "garment of God" woven from the movement of His great loom. When we consider

this we see more deeply into the meaning of the Biblical narrative of creation recorded in Genesis, where we are told that "God *said* let there be *light* and there was *light*," and again in the Gospel of John: "In the beginning was the *Word* and the *Word* was *God*." In both we remark *sound*—i.e. vibration—as the power, and may we not add that *colour* surely corresponded to this great *note*, thus beginning the music of the spheres?

Accepting, even hypothetically, that all forms are the results of rates of vibration, and that there are such heights and depths of these rates that to the limited sound and colour sense we possess they are unheard and unseen, we cannot for that reason ignore them, and therefore include them as potencies to be reckoned with in all phenomena.

It is thus with the bodies of man, which under this law and as reflecting the creative power of God, he, by the vibratory motion caused by his thoughts, feelings and desires, builds continually out of the matter of these worlds, in colours perfect in their response to his mind and moods, which interact and are interdependent with the growth and development of his fleshy or physical body.

Not only are these the expression of the man, but they also serve as channels for the spirit of life—his source—to play through and nourish him. These are not only represented by the physical forces or elements of fire, air, water and earth, but the spirit of this universe moves as a living power in the three great aspects of God (the Holy Trinity of the Christian terminology, Father, Son and Holy Spirit), each having their distinct attributes reflected in and affecting mankind. Man's bodies are alone healthy in proportion as he gives to each the free and unobstructed play to these attributes by their due expression in his life, through his vehicles.

When this is done harmony is the result between each and he realises it as health. When we think of these vehicles of expression in terms of colour, we are able to see more clearly how this harmony may be produced, for every thought, feeling and desire has a particular rate of vibration affecting the matter of its own world and therefore must have a corresponding sound and colour, with a form peculiar to itself, and, according to the strength and quality of each, so is the particular body brought into harmony or discord

with the other bodies and the life forces playing through them all.

According to the quality—*i.e.* the purity or impurity of the emotion and thought—so has it a cleansing or the reverse effect upon the bodies concerned—a brightening or deadening of its colours.

The habit of cultivating the purest and highest thoughts and feelings is at once seen to be a necessity for healthy life, and only thus can the man be truly said to *live*. We are admonished to “be good,” but we do not often see the reason for this where it is conveyed with the abstract idea of the “saving” of our souls through a belief. But here we have a reasonable demand laid upon us, not alone for our own health’s sake, but because to live with unclean thoughts and desires as our normal expression—though our outermost garment (the physical body) may be clean to all appearances—has a definite and constantly increasing detrimental effect upon our fellow-creatures, not to be exceeded in its destructive character even by a virulent contagious disease in the physical body. If this is true, and we are able to get definite proof of this by watching the effect of our own characters—*i.e.* the aggregate

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of our thoughts, emotions and actions upon our fellows—we can probably see the reason why certain environments of persons or places are detrimental or the reverse, and why certain people and colours appeal to us more than others.

It is obvious that all combinations of sounds and colours should be studied carefully in relation to their effect upon our moods, and definitely to choose, not only our companions, but also our diet, music, wearing apparel, etc. according to their highest values for our progress; because each of us has a definite *need* to satisfy and that is not always met by what we may, in a moment of impulse, *desire*. If this could be done as a matter of habit, much as we choose our daily meals, the result in our health would be as marked as it would be permanent.

It may be useful to tabulate as an illustration some colour correspondences to particular states of mind and feeling:

<i>Devotion</i> —Light Blue	<i>Fear</i> —Dirty Grey
<i>High Intelligence</i> — Light Yellow	<i>Depression</i> —Dark Grey
<i>Sympathy</i> —Light Yellowish Green	<i>Selfishness</i> —Brownish-red
<i>Pure Affection</i> —Rose Colour	<i>Malice</i> —Black
<i>Adaptability</i> —Green	<i>Jealousy</i> —Brownish-green
	<i>Sensuality</i> —Dirty Red
	<i>Anger</i> —Blood Red
	<i>Pride</i> —Orange

Others may be found by experiment, and the common expressions of "seeing red," the "green-eyed monster" of jealousy will be found to have at least some foundation in fact.

Following what we can gather from these principles, we may apply them safely in our daily life if we remember that the object of human evolution is to express the divine within each one of us by mastering the material of the worlds at our disposal and building therefrom truly a fitting temple for God to dwell and function therein.

While this process is at work—as in all building processes—apparent confusion seems to reign; there are accidents to face, errors to correct, diseases to cure; but when some knowledge of the plan of the Architect and Master-Builder is acquired order will gradually emerge from the seeming chaos. That which before was deemed useless and hopeless now will become the very means of progress, indeed essential to it. Every disease is the result of error, the effect of a past or immediate cause, a misuse of material in whatever state of matter, and the matter of the mind and desire worlds is as much and even more liable to misuse as is the earth matter. To

choose and use our material wisely and therefore rightly, and to rebuild anew where we have failed, is our great work as human beings.

Fortunately for us, though we may sometimes deem it otherwise, the material of the mind and desire worlds is very malleable and responsive to our WILL, for it is not so dense as the physical matter and can be moulded by our will as colours are drawn and blended in response to the hand of the artist. When mistakes have been made their correction is not so much a definite effort at their destruction as it is the *will* and effort put forth in reconstruction—*i.e.* a pure and high thought or desire with its corresponding colour will turn out or transmute its opposite in the body concerned, as the habit of the particular quality is maintained, just as physical darkness—being the absence of light—is dispersed when light appears. Because this is so under the great law of consequences, it still demands that our definite *choice* must be made and established as habit before the quality is made permanent and strong; hence the importance of choosing the best and therefore the most permanent.

The progress of a healthy life is always

marked by its power to overcome obstructions by persistent effort and definite choice of the means thereto, and as we advance we are helped by the opening of additional means as we become strong enough to develop and use them. If we are true to our self (the innermost self) we shall find that we possess a certain dominant characteristic or ray of colour peculiarly our own, which determines our place and work in the world and along which we shall find our best and truest expression. Our errors and difficulties are mostly through the lack of self-analysis performed with detachment—*i.e.* looking at ourselves *impersonally*; we are prone to morbidity and spend most valuable time and energy in self-pity and disgust, which we think is repentance. The only true self-correction is to examine impartially the error and at once use the right means to correct it. It is the same with pain; we habitually identify our consciousness at the seat of the pain and so accentuate it by the mind dwelling upon the *pain* and associating the cause with the organ concerned. To obtain the proper centre from which to view the errors and pains of our bodies we have first to accept the fact

that we are not our bodies any more than the carpenter is his plane or chisel ; this means a reidentification of our self, and if we accept the statement that man is of divine origin, and is therefore a spark from the divine flame, shall we not have a better and truer vision of our instruments and our use of these, if we can get above them in consciousness by attempting to make our centre one with the immortal spark *within* rather than the without? "Man, know thyself." How can we know? This may be a counsel of perfection to many, but it is none the less worth trying, and some are with us who have found what they sought and would fain tell us how we too may find. In the ancient Egyptian mysteries the candidate for those mysteries was led into the depths of the pyramid into the utter darkness of a symbolic death ; he was ultimately raised after three days into a new realisation of life in the centre of the pyramid, the "Chamber of Light." This is significant to those who truly seek, for to these the very darkness of the seeming death becomes the DOOR to this mystery of the SELF, for it is ever true that out of our darkness of difficulty and trial will come the light we seek. Within each

heart there is a CENTRE of light, wherein all colour is found, a veritable chamber of light, real and yet figurative ; it would help many a weary soul even to imagine this as a centre of refuge wherein he may retire for rest from his pains and from thence to view his thoughts, desires and actions and resolve upon his future course. It may be that there is more truth in the Christ's saying than we thought, when He said : " The kingdom of God is *within you*." Indeed, one is led by experience to know that these old sayings are not fables but direct the seeker to the source and strength of his being, that hidden splendour of which Robert Browning speaks in *Paracelsus*, when he says :

There is an inmost centre in us all,
 Where truth abides in fulness ; and around,
 Wall upon wall, the gross flesh hems it in,
 This perfect, clear perception—which is truth.
 A baffling and perverting carnal mesh
 Blinds it, and makes all error : and " to KNOW "
 Rather consists in opening out a way
 Whence the imprisoned splendour may escape,
 Than in effecting entry for a light
 Supposed to be without.

CHAPTER X

CHROMO-THERAPEUTICS, OR THE HEALING POWER OF COLOUR

The Views of EDWIN D. BABBITT, M.D., LL.D., of New Jersey, U.S.A., on the Healing Power of Colour, as set forth by the Rev. JOHN J. POOL, Ph.D., B.Sc., F.R.G.S., F.Z.S.

DR BABBITT'S well-known book on *The Principles of Light and Colour*, an imposing volume of some six hundred pages, contains a chapter on "Chromo-Therapeutics" of great importance, and as the volume, I understand, is out of print, I make bold, in the interests of the science of colour, to gather together some of the learned author's views on the Healing Power of Colour, which views will supplement the foregoing chapters, with their articles on Colour and Healing, by various European writers.

Dr Babbitt may be classed as second to none in his knowledge of a perplexing subject. Indeed, probably he has gone more deeply into questions of colour and

health and expressed his reasoned views at greater length than any other investigator. Many have consulted the pages of his remarkable book, and we all, who are interested in the science of colour, owe to him a debt of gratitude, which I for one take this opportunity of warmly expressing.

But to come to the views and teaching of this authority. Dr Babbitt in his book asserts that all things manifest their potencies by means of colour, and that consequently in the region of colour a standard of medical practice may be based on principles of almost mathematical precision. He maintains that sunlight constitutes a truly *celestial materia medica* which must be more safe, effective and enduring than the cruder elements, given, of course, that we know how to control it.

Minerals are at the bottom of nature's scale of prices; then comes the vegetable world, then water, then pure air, but the finest potency of which we can avail ourselves in the external world comes from the sunlight. Hence the healing power of colour.

Dr Babbitt deals with the relative powers

of various colours in their work of healing the sicknesses of mankind. Take, first of all

The Healing Power of Red

Red, he asserts, stimulates and increases the action of the warm red principles in the human system, as, for instance, the arterial blood. Oxygen, as is well known, develops the red principle of the blood and by reaction harmonises and animates the system, which has become too cold and sluggish under the predominance of the bluish venous blood.

The warming element of sunlight is red light, and it acts like red drugs with a rousing effect upon the blood, and in a degree also upon the nerves, especially when strained through grades of red glass, which admit not only of the red but of the yellow rays. Dr Babbitt declares that such a light is invaluable in paralysis and other dormant and chronic conditions, and he gives some instances of cures. He says:

“Mr E., of Vineland, New Jersey, was cured of a terrible case of rheumatic ankylosis of the shoulder by thermolumine baths

and some massage in two or three weeks. Red glass was used over the part."

Again: "Mrs C. W. Hunt, of Cincinnati; whose knee was bent and ankylosed by rheumatism and had baffled the best physicians for eight months, was put into a solar sweat-bath (a thermolume). The knee was cold as a corpse and could not be made to perspire until red light was put over it, when almost immediately the blood was kindled into new life over the whole body. The leg was entirely straightened out on the second treatment, truly a marvellous achievement."

Dr Babbitt gives other examples, quoting freely from Dr S. Pancoast's work, *Red Light*, but the instances I have given are sufficient to show effects of treatment, and I pass on to the learned investigator's warning that red can be injurious. This colour is injurious in therapeutics when there is already an inflammatory condition of the system, such as the predominance of red hair, a very rubicund countenance, or a feverish and excitable condition generally.

The exciting effect of red objects on various animals is, of course, well known, and red light has the same exciting effect

on some human beings. When violent and maniacal patients are placed in rooms where a red ray predominates they become worse, but when removed to a room where a blue ray predominates they become calm and quiet.

Some colour-healers, owing to the difficulty of using red light, leave it alone, and even Dr Pancoast said: "We seldom employ red light to the exclusion of the other rays, and it should never be so employed, except in extreme cases, when prompt action is the first consideration." But Dr Babbitt is the advocate of more boldness. He regards red as a powerful healing force, and avers that any danger there may be in this light can be averted by using the red glass only a few minutes at a time, taking the precaution, directly the system becomes too hot, to put blue glass in its place, or a wet bandage over the head.

Even some seriously mentally affected cases have been greatly benefited rather than injured by the use of red light. Dr Babbitt tells of certain experiments in this direction by Dr Ponza, director of the lunatic asylum at Alessandria, Piedmont.

Dr Ponza prepared a red room, as well as other coloured rooms, and had very satisfactory results in the red chamber. More will be said about this later on.

The Healing Power of Yellow and Orange

Dr Babbitt regards yellow as the central principle of nerve stimulus, as well as the exciting principle of the brain, which is the fountain-head of the nerves. Yellow, however, is not as violent a stimulus as red.

Dr Babbitt frequently cured costiveness by letting sunlight pass through some yellow-orange glass on to certain parts of the body. In ten minutes the body would break out into a free perspiration, and in eight minutes more there would be effective relief.

Perhaps a more interesting example of the remedial use of yellow light is that of a case of bronchial difficulty. Says Dr Babbitt: "In a case of chronic bronchial irritation I used the chromo-disc over the breast, straining a hot sunlight, thus concentrated by reflection, through yellow glass. In less than a minute I was able to

lubricate the skin. I used it about fifteen or twenty minutes each day for several days. The patient felt uncommonly animated and clear in his mental perceptions, and his bronchial difficulties gradually decreased. The same result would, of course, be produced by means of yellow glass without the chromo-disc by taking a longer time."

According to Dr Babbitt yellow light is also effective in alleviating and curing cases of hæmorrhoids.

But yellow can, like red, be injurious in therapeutics. It has the drawback of exciting a system which has the nervous condition already very active and perhaps irritable. Cold, paralytic, chronic and stupid conditions are greatly relieved by yellow light, but it is harmful in cases of fevers, acute inflammation, delirium, neuralgia, and palpitation of the heart. Therefore yellow needs to be used with judgment and care as a curative agent. Dr Hale, as quoted by Dr Babbitt, says: "I have had patients who begged to have the yellow shades removed from the windows; it 'irritated them so.'" Again, the same medical man

says: "In the asylum there were a number of persons afflicted with melancholy. Those placed in the yellow rooms complained that it made them feel badly. They became morose."

Healing Power of Blue and Violet

Dr Babbitt turns next to the cold, electrical and contracting potencies. He says that it is obvious that if the red arterial blood should become over-active and inflammatory, blue light, or some other blue substance must be the balancing and harmonising principle; while again, if the yellow and orange principle of the nerves should become unduly excited, the violet and also the blue and indigo would be the soothing principles to have applied.

Dr Babbitt gives a number of examples of the alleviation, and even cure, of certain serious ailments by the application of blue and violet coloured lights. He draws his examples from the daily Press. I quote three of these, the first having appeared in the correspondence column of *The Chicago Tribune* on 12th January 1877.

Dutton of New York is the correspondent. He says: "A lady of my family, about six weeks ago, had a violent hæmorrhage of the lungs, and for ten days raised more or less blood daily. She was very much weakened by the loss of blood and considerably frightened withal. I obtained some blue glass and placed it in the window where she was in the habit of sitting, the blue glass constituting one-half of the lower sash of the window. The lady sat daily in the associated lights, allowing the blue rays especially to fall upon the nerves of the back of the neck for about an hour a day. The second day, the sun's rays being unusually strong, she got 'too much blue glass,' and at night felt peculiar sensations in the back of the neck, among the nerves, and an unpleasant fulness in the head.

"These sensations wore off next day, and since then she has not remained so long at a time under the blue glass. But from the first she began to grow stronger, her face soon gained its natural fulness, and in a week she was, to all appearances, as well as ever. Of course she was not cured of the trouble in her lungs in so short a time, but

the soreness in her chest has passed away and she begins to feel well again. After sitting in the associated light for a week a large number of red pimples came out on her neck and shoulders, an indication that the treatment was bringing out to the surface the humours of the blood."

Commenting on the foregoing case, Dr Babbitt remarks that the expression in the narrative, "she got too much blue glass," was incorrect, and that Dutton should have said "too much blue and transparent glass," as the stimulating white rays of the sun were wrong for such a case. Instead of having "too much blue glass," according to Dr Babbitt she had too little of it. More blue light simply would have helped the cure.

The second case of treatment by blue light I would quote appeared in the Providence Press of 14th February 1877. It reads: "An elderly lady in Hospital Place, off Lockwood Street, has been afflicted with a sciatica for eleven years, and has not been entirely free from pain a single day during that time. Her age was fifty-nine, though she seemed to be seventy. The disease was

confined to the left limb, and the knee, ankle and foot would be swollen to twice their natural size. A week ago three panes of blue glass were inserted in a west window, and the first bath was applied to the ankle, where the pain and soreness were located. In two or three hours a large lump on the ankle, the size of a hen's egg, and of a purplish colour, entirely disappeared, as did also the pain and soreness. During the following night the pain reappeared in the foot, and the light being poor during the following two or three days, this point was not so easily relieved, but a bath of strong light soon drove the peace destroyer away.

" But the most remarkable effect of the blue glass sun-baths on this patient was witnessed on Sunday. The disease attacked her knee on Saturday night and she suffered the most excruciating agony. On Sunday morning the knee was very much swollen, and the least weight upon her affected parts nearly threw her into spasms. As soon as possible the blue glass bath was taken and in less than three quarters of an hour the pain had left, the swelling and soreness had disappeared and the limb was, to all

appearance, as healthy as it ever was. Yesterday she walked about the house as lively as a girl of sixteen. Another remarkable feature in this case is that for over a year the toes of the left foot had been entirely useless, being benumbed; but the blue glass sun-baths have restored to her the full use of those members."

The third case I would mention has more special reference to the healing power of the violet rather than the blue light. It seems that Dr Ponza, of the lunatic asylum at Alessandria, Piedmont, already mentioned, on the suggestion of Father Secchi of Rome, resolved to experiment on the insane with violet light. Father Secchi had said: "The idea of studying the disturbed state of lunatics in connection with magnetic perturbations, and with the coloured, especially violet light of the sun, is of remarkable importance. Violet has something melancholy and depressive about it, which physiologically causes low spirits; hence, no doubt, poets have draped melancholy in violet garments. Perhaps violet light may calm the nervous excitement of unfortunate maniacs."

Dr Ponza, at any rate, resolved to experiment, and not only with violet, but with red and blue as well. Says Dr Babbitt: "Dr Ponza, following the instructions of the learned Jesuit, prepared several rooms in the manner described and kept several patients there under observation. One of them, affected with morbid taciturnity, became gay and affable after three hours' stay in a *red* chamber; another, a maniac who refused all food, asked for some breakfast after having stayed twenty-four hours in the same *red* chamber. In a *blue* one a highly excited madman, with a strait-waistcoat, was kept all day; an hour after he appeared much calmer. The action of *blue* light is very intense on the optic nerve, and seems to cause a sort of oppression. A patient was made to pass the night in a *violet* chamber; on the following day he begged Dr Ponza to send him home because he felt himself cured, and, indeed, he has been well ever since."

The last was a remarkable cure. Says Dr Babbitt: "Dr Ponza's conclusions from his experiments were these: 'The violet rays are, of all others, those that

possess the most intense electrochemical power; the red light is also very rich in calorific rays; blue light, on the contrary, is quite devoid of them, as well as of chemical and electric ones. Its beneficent influence is hard to explain; as though it is the absolute negative of all excitement it succeeds admirably in calming the furious excitement of maniacs.' "

Dr Babbitt's comment on the foregoing reference to *blue* is: 'The idea that blue light is devoid of 'chemical and electrical rays' shows the prevailing ignorance on the subject.'" Dr Babbitt does not consider the soothing power of blue light, therefore, hard to explain, for as in violet it is due to its chemical and electrical rays.

*The Healing Power of Blue and White
Sunlight*

Dr Babbitt turns next to the combination of blue and white light, and maintains that it is more rousing and animating than blue or violet light alone, as it contains the electrical power of the latter and the healing power of all the rays combined in the ordinary white light.

General Pleasanton is the great authority on the action of blue and red light, for he experimented with this combination of lights extensively, and published his findings in a volume entitled *Blue and Sun-Light*. The error the General fell into was his advocacy of the therapeutic use of this combination of lights for everything, and on that score his book was adversely criticised, but all the same this patient investigator did a good thing for humanity by calling such emphatic attention to his discovery of the alleviating and curing properties of blue and white sunlight combined.

Dr Babbitt gives many extracts from General Pleasanton's book. I will just quote two of them. Says the General: "About this time (September, 1871) one of my sons, about twenty-two years of age, a remarkably vigorous and muscular young man, was afflicted with a severe attack of sciatica, or rheumatism of the sciatic nerve, in his left hip and thigh, from which he had been unable to obtain any relief, although the usual medical as well as galvanic remedies had been applied. He had become lame from it, and he suffered much

pain in his attempts to walk. I advised him to try the associated sun and blue light, both upon his naked spine and hip, which he did, with such benefit that at the end of three weeks after taking the first of those baths of light every symptom of the disorder disappeared and he has had no return of it since, a period now of three years."

The second quotation from General Pleasanton's *Blue and Sun-Light* reads thus, and is particularly interesting: "Some time since two of my friends, Major-Generals S. and D. of the United States regular army, were on duty in this city. On making them a visit at their official residence I saw on the window-ledge as I entered the room a piece of blue glass of about the size of one of the panes of glass in the window. After some conversation General D. said to me: 'Did you notice that piece of blue glass on the window-ledge?' I said I had observed it. 'Do you know what it is there for? S. and I have been suffering very much from rheumatism in our forearms from the elbow joints to our fingers' ends; sometimes our fingers were so rigid that we

could not hold a pen—we have tried almost every remedy that was ever heard of for relief, but without avail.

“At last I said to General S. : “Suppose we try Pleasanton’s blue glass,” to which he assented—when I sent for the glass and placed it on the window-ledge. When the sun began about ten o’clock in the morning to throw its light through the glass of the window we took off our coats, rolled up our shirt sleeves to the shoulders and then held our naked arms under the blue and sunlight.

“In three days thereafter, having taken each day one of these sun-baths for thirty minutes on our arms, the pains in them ceased and we have not had any return of them since. We are cured.”

But the question might be asked: Did not the pains return at a still later date?

On this point Dr Babbitt quotes General Pleasanton as saying: “It is now more than two years since the date of my visit to these officers. Two months ago General S. told me that he had not had any return of the rheumatism, nor did he think that General D. had had any. General S. in the

meantime had been exposed to every vicissitude of climate, from the Atlantic Ocean to the Washington territory on the Pacific, and from the 49th degree of north latitude to the Gulf of Mexico, and General D. was then stationed in the far north."

As in the cases of red light, and yellow and orange lights, blue and violet lights can be injurious as well as beneficial, and this must be carefully noted by colour-healers.

Says Dr Babbitt: "All the electrical colours, including the shades of blue, indigo, violet, and even blue-green, are too cooling and constricting in general cases of paralysis, costiveness, chronic rheumatism, gout, consumption (the acute forms excepted) and all cold, pale and dormant conditions of the system, although the brain, especially its upper condition, may quite generally, even in those conditions, be put under blue glass to advantage.

"In all cases of melancholia and depression these electrical colours are contra-indicated, as a person who has what is called *the blues* is already sufficiently supplied with that article without any more of it."

Practical Instruments for Colour-Healing

Having considered in the various directions we have mentioned the wonderful healing power of light and colour, Dr Babbitt goes on to deal with some of the instruments by means of which this power can be best utilised. Having regarded the different colour potencies as a science, the next step is to regard them as an art.

Undoubtedly the material through which colours are transmitted is a matter of great importance. General Pleasanton recommended the use of mazarine glass—that is, a glass coloured with cobalt. Dr Pancoast, however, declared that there is no special virtue in, say, one blue pane of glass over any other of the same shade, and that there is no special advantage in any particular method of arranging the glass in any particular sort of frame, an ordinary sash placed upright in the window-frame being as good as any other frame in any other position.

Dr Pancoast affirms that cobalt-blue is the best blue, and that glass coloured in the process of manufacture is better than painted

glass, because the pigment applied externally imparts more or less opacity to the glass.

Dr Babbitt, however, begs to differ from these two experimenters in all save the matter of painted glass. He says: "What is the use of coloured glass excepting its power to transmit certain colours, and why have not these gentlemen inquired into the colours which different kinds of glass transmit?"

Taking cobalt-blue glass Dr Babbitt criticises it thus: "This same cobalt glass through which people fondly suppose that they are gaining the cooling, soothing principle of blue almost solely, transmits nearly every colour in the spectrum, both visible and invisible, hot and cold." It follows, then, according to Dr Babbitt, that cobalt-blue glass "is not perfect for a hot, excitable brain, or for a very sensitive and over-nervous system, and is by no means the best for inflammatory conditions, although it would be excellent for persons with some degree of nervousness from its predominance of electrical colours, and also with some dormant conditions of bodily function."

If cobalt-blue glass is not the perfect medium for treatment, what blue is, then? Dr Babbitt would answer this question thus: "Deep blue glass coloured by cuprosulphate of ammonia has a rich, deep colour and is the true vehicle of the colour electricities almost entirely unadulterated by the thermal rays. Consequently it should stand at the head of all the colours for the general calming and cooling of the brain, nerves, or inflammatory sections."

With respect to other colours Dr Babbitt recommends the following as being as nearly perfect as possible:—

"Deep iron green," which admits the violet, blue, green and orange freely, and some yellow and red.

"Very brilliant copper green," which admits violet, blue, a small amount of orange, a fair amount of yellow and a full amount of green.

"Violet glass—manganese," in which the yellow rays are nearly wanting, red is shortened, green fades into black shadow and all the other rays are blended in an intense oval patch of blue.

"Red or pink glass—gold"; "red-

orange—silver"; "pure yellow" and "yellow by iron." The foregoing are the usual names of the colours on the market. In all experiments it is wise to secure, when possible, the purest colours for healing purposes.

Dr Babbitt is a strong advocate of the chromo-lens in colour therapeutics, to focus the light on different parts of the body. Dr Pancoast, in his book, *Blue and Red Light*, asserts that the *blue* ray cannot be focalised, that it refuses to be modified or changed or concentrated by the most powerful lens. But Dr Babbitt says: "I find by experiment that the blue light can be brought to a focus just as readily as red or yellow light, although, of course, it does not form so brilliant a focus as the more luminous colours."

Dr Babbitt's chromo-lens is double convex and hollow, seven inches in diameter and capable of holding forty-two ounces. It does not constitute a lens until filled to the neck with water or some transparent or translucent liquid. Such lenses are made in different colours, and when hanging in the sun receive the most exquisite medical

elements into the water within, according to the colour used.

What are the substances which are conveyed by the different colour rays? According to Dr Babbitt they are as follow:—
“The yellow rays contain iron, phosphorus, sodium, carbon and other animating elements. The red rays convey iron, strontium, zinc, barium and rubidium. The blue rays convey sulphur, copper, chlorine, nickel, cobalt, cadmium and manganese.”
The contention is that these substances when conveyed through colour rays are so refined as not to injure the stomach, whereas those in the drug form are often injurious and are too gross to reach the nerves in an effective way. As Dr Babbitt puts it: “The solar rays are never poison, but their dry forms often are.”

A Word to Physicians

Dr Babbitt at the close of his remarks on chromo-therapeutics has a special word to physicians. Ere coming to this let me say that though I have sought in a measure to summarise the teaching of this great master

of colour-healing, and have quoted somewhat freely from his book, I have not dealt with a tithe of the valuable information contained in his *Principles of Light and Colour*.

I would advise students of the therapeutics of colour to go to the volume itself. The pity is that it is, as I have already stated, out of print. Surely a new edition would be a paying concern. It would certainly be warmly welcomed by hundreds, if not by thousands, of people. It is a veritable storehouse of information on the science of colour, and especially on chromo-therapeutics.

The word to physicians is as follows:—
Dr Babbitt says: "While some grand natures among the medical fraternity are rejoicing in the newly discovered power of light, yet it is very common for practitioners to turn from the matter almost without examination and exclaim: 'Fanaticism! Humbuggery!'"

And again he says: "I appeal to physicians in behalf of humanity, in behalf of their ~~town~~ own ultimate success and their own full-orbed development as men of power

and skill and truth, to give loving audience to the great achievements of light and its sublime source in the sky, whose chariot wheel is hinged upon the heavens and must continue to roll on with its almost omnific power, however much puny man shall oppose.

“Mount the great wheel of nature and it will bear you onward triumphantly; oppose it and it will crush you.”

In England to-day, as in the United States, the medical profession is not now antagonistic to colour-healing, but wants more information. Medical men, as a whole, are sympathetic as regards colour-therapeutics, and some are taking the matter up in their practice.

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