

## IV.

EXPERIMENTAL COMPARISON BETWEEN CHANCE AND  
THOUGHT-TRANSFERENCE IN CORRESPONDENCE  
OF DIAGRAMS.

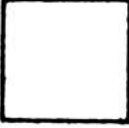
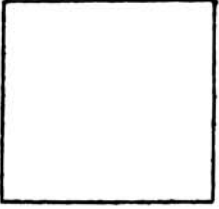


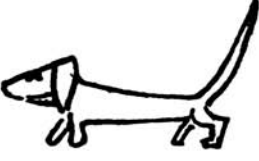



BY LIEUT.-COLONEL G. LE M. TAYLOR.

As may be seen on reference to the *Proceedings* of the American Society for Psychical Research, Vol. I., Part IV., Professor Minot has induced 510 people each to draw for him 10 diagrams on a postal card; he has thus obtained about 5,000 diagrams. These he has tabulated in various ways, and made the following deductions affecting the inference drawn in England from certain experiments by diagrams in thought-transference made by our Society. Mr. Minot finds a great tendency among his respondents to draw certain particular diagrams, and also when these diagrams are drawn there is a tendency to draw them early in a series. He thinks "that the same visual images arise in many of us with approximately the same readiness," and that owing to this tendency during experiments such as those reported in the *Proceedings* of the English S.P.R., "thought-transference might be simulated and a proof of its reality obtained which would seem overwhelming so long as the law of relative frequency was disregarded as an explanation," and adds, "Until this is done it appears premature to accept these experiments as valid proofs of thought-transference."




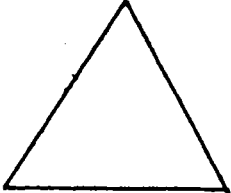
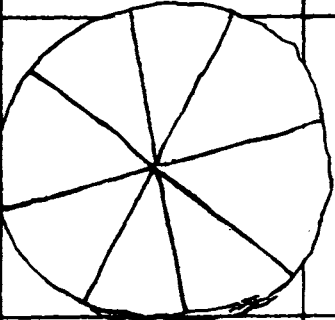
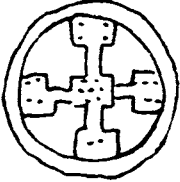
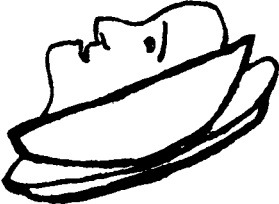

After reading Mr. Minot's paper, it occurred to me to try to put his theory to a practical test. With this object I prepared 40 sheets of paper by marking off on each side 25 square spaces headed, "Please draw 25 diagrams without receiving suggestions from any person, one in each of the spaces below, running down each column in succession, beginning at the top of No. 1." I numbered the columns from left to right, and on each paper wrote, "Begin on this side," and lastly before issue marked each paper, 1 A (agent), 1 P (percipient), 2 A, 2 P, &c., &c.

These forms I gave to my friends, who kindly did as requested, and I thus obtained 2,000 diagrams which may be imagined to represent the result of 20 experiments in "thought-transference" of 50 trials each, but with the element of the transference of thought eliminated.






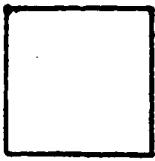


On comparing my "Agent" papers with the "Percipient" papers of the same number, I found only one absolute correspondence, namely, a square which came second in each of the two papers marked No. 13. I found 10 cases in which there was such a correspondence in idea that

	<i>Agent</i>	<i>Percipient</i>
<i>Identical</i>  N° 13		
<i>Alike in Idea</i>  N° 7		
N° 10		
N° 11.		







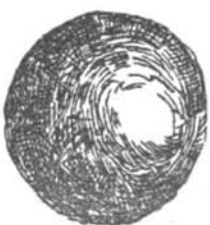



	Agent	Percipient
Alike in Idea No 12		
No 13		
No 13		
No 13		











	Agent	Percipient
Alike in Idea  N <sup>o</sup> 16		
  N <sup>o</sup> 16		 Key!
  N <sup>o</sup> 7		
Alike in Shape  N <sup>o</sup> 8		



	Agent	Percipient
Alike in Shape N <sup>o</sup> 8		
N <sup>o</sup> 10		
N <sup>o</sup> 12		
N <sup>o</sup> 20		





	Agent	Percipient
Alike in Shape N <sup>o</sup> 14		
N <sup>o</sup> 14		
N <sup>o</sup> 15		
N <sup>o</sup> 18		





does exist, those oftenest repeated in Mr. Minot's collection are not the same as those which occur most frequently in mine. Geometrical figures were preferred by Mr. Minot's respondents, while mine drew diagrams representing men, animals, and flowers more often than any others; both, however, show a partiality for words and letters of the alphabet.

If the classes were made to contain objects so nearly alike that, had any two of them fallen together as "original" and "reproduction" in an experiment in thought-transference, the trial would have been considered a success, the tendency in my collection to repetition would fall below that in Mr. Minot's. How far below it is difficult to estimate without comparing Mr. Minot's diagrams with mine, and even then the estimate would altogether depend on how near a correspondence the calculator considered necessary for a "success." If we consider only those diagrams in each collection the names of which fix both the shape and the idea, leaving only the size undefined, such as circles, squares, equilateral triangles, hearts, &c., and neglect those the short names given to which do not define them, Mr. Minot's diagrams are repeated 90 times each on an average, mine only 5. If the whole of Mr. Minot's pictures which are repeated more than 4 times are taken, the average of repetition is 33 for each, as compared with 14 in my series. The pertinent question is, of course, not how many diagrams are repeated a few times, but how many times a few of the most frequently drawn diagrams are repeated.

From Table II. it appears that the ideas conveyed by my diagrams differ from those conveyed by the American diagrams a good deal, owing, no doubt, chiefly to different surroundings. Many of my diagrams are complex rather than simple. I recognise in my series little evidence of a "mental trick," though as I am conscious of having such myself, I have no doubt that this habit accounts for some of the diagrams, as when the only 5 "mouths" pictured are drawn by three sisters. Some of my pictures owe their origin to what was easiest to draw, or to what the artists thought they could do best. Many are suggested by surrounding objects, and many are due to the mind recurring to objects constantly encountered in the daily occupations of the reproducer; but I do not think that any one of these reasons should be assigned as a cause for reproduction more than any other.


Table III. corresponds with Mr. Minot's Table VII., and shows the average place of the 10 most frequently repeated diagrams in the two collections. I have not only given the average place of the diagram "when it is drawn," but when it is omitted, taking it in the latter case as 51st. My 10 most frequently repeated diagrams, when drawn, show no tendency to come either early or late in the series. Mr. Minot's 10 most frequent come with me a little early. When every paper is

included, whether it contains the diagram concerned or not, my most frequent 10 come late, and Mr. Minot's very late in my series.

I do not find among my respondents any tendency to draw the most frequently repeated diagrams early.

If, however, a striking tendency does exist to give preference to certain diagrams and to draw these early in a series, but not to repeat them when once drawn, the preferential ones will soon be run through in a number of trials of thought-transference, and then will follow figures for which the reverse of a preference exists. If thought-transference were simulated by the tendency above mentioned, we should find in a series, first, an abnormal number of successes, then the proper number due to chance, and towards the end remarkably few satisfactory results. But this does not appear to be the case.

TABLE I.

	Mr. Minot's Series.		Present Series.	
	Order of frequency.	Percentage of repetition.	Order of frequency.	Percentage of repetition.
Circles... ..	1	4.17	20	.65
Squares... ..	2	3.47	25	.45
Equilateral triangles... ..	3	3.19	21	.60
Crosses... ..	4	3.19	12	1.25
Letters of the alphabet... ..	„	1.63	3	2.50
Diamonds... ..	5	1.59	29	.25
Oblongs horizontal... ..	6	1.55	32	.05
Inscribed circles... ..	„	1.55	21	.60
Stars... ..	7	1.53	22	.55
Faces profile to left... ..	8	1.19	10	1.45
Houses... ..	9	1.11	8	1.70
Rhombi... ..	„	1.11	25	.45
Scrawls... ..	10	1.05	5	2.10
Other animals... ..	11	.95	2	3.80
Flowers... ..	12	.91	6	2.05
Leaves... ..	13	.89	23	.50
Hexagons... ..	14	.83	31	.10
Cubes... ..	„	.83	29	.20
 Right-angled triangles... ..	15	.71	32	.05
Figures of men... ..	16	.63	1	5.20
Scrolls... ..	„	.63	32	.05
Inscribed squares... ..	„	.63	30	.15
Hearts... ..	„	.63	23	.50
Oblongs vertical... ..	17	.61	30	.15
Squares with crosses... ..	18	.59	29	.20
Octagons... ..	19	.55	31	.10
Faces not in profile... ..	20	.53	11	1.40



	Mr. Minot's Series.		Present Series.	
	Order of frequency.	Percentage of repetition.	Order of frequency.	Percentage of repetition.
 Right-angled triangles ... ..	21	.47	32	.05
Moons ... ..	22	.47	25	.40
Hour-glasses ... ..	23	.39	32	.05
Card spots ... ..	23	.37	25	.40
Spirals ... ..	24	.33	31	.10
Pentagons ... ..	24	.33	32	.05
Flags ... ..	25	.31	22	.55
Digits ... ..	25	.31	21	.65
Right angles ... ..	25	.31	30	.15
Arrows ... ..	26	.29	29	.20
Books ... ..	26	.29	16	.90
Ships ... ..	27	.27	12	1.25
Trees ... ..	27	.27	10	1.45
Tools ... ..	27	.27	28	.25
 Quatrefoils ... ..	28	.25	32	.05
Bottles ... ..	28	.25	11	1.40
Boots ... ..	29	.23	23	.50
Mugs ... ..	30	.19	31	.10
Hands ... ..	30	.19	24	.45
Hats ... ..	31	.17	7	1.90
Suns ... ..	31	.17	23	.50
Horses ... ..	31	.17	19	.70
Cats ... ..	31	.17	27	.30
Vases ... ..	31	.17	29	.20
Anchors ... ..	31	.17	29	.20
Apples ... ..	31	.17	31	.10
Eyes ... ..	31	.17	28	.25
Faces profile to right ... ..	31	.15	29	.20
Steps ... ..	31	.15	29	.20
Dishes ... ..	31	.15	—	—
Branches ... ..	32	.13	—	—
Signs of music ... ..	32	.13	28	.25
Pitchers ... ..	33	.11	—	—
Chairs ... ..	33	.11	29	.20
Keys ... ..	33	.11	23	.50
Skulls ... ..	33	.11	31	.10
Punctuation marks ... ..	33	.11	30	.15
Dogs ... ..	34	.09	17	.80
Clocks and Watches ... ..	34	.09	17	.80
Architectural plans ... ..	34	.09	29	.20
Engines (locomotives) ... ..	34	.09	29	.20

TABLE II.

	Percentage of repetitions	Number of repetitions.	Order of frequency.		Percentage of repetitions	Number of repetitions.	Order of frequency.
Men — ... ..	5.20	104	1	Glengarrys ... ..		4	
Playing ... ..		26		Cocked hats ... ..		3	
Simple ... ..		26		Cardinal's ... ..		3	
Working ... ..		14		Military helmets ... ..		3	
Complicated ... ..		14		Shah's hat ... ..		3	
Fighting ... ..		8		Military forage caps... ..		2	
Being hanged ... ..		6		Straw hats ... ..		2	
Reading ... ..		5		(Rest one each).			
Riding ... ..		2		Houses— ... ..	1.70	34	8
Fishing ... ..		2		Churches ... ..		11	
Shooting ... ..		2		Landscapes... ..	1.55	31	9
“Other Animals” —	3.80	76	2	Trees ... ..	1.45	29	10
Rabbits ... ..		8		Faces profile to left ... ..	1.45	29	10
Butterflies ... ..		8		Bottles ... ..	1.40	28	11
Asses .. ..		7		Faces not in profile ... ..	1.40	28	11
Pigs ... ..		7		Ships— ... ..	1.25	25	12
Lions ... ..		6		Cutters ... ..		14	
Cows ... ..		4		Boats ... ..		5	
Beetles ... ..		3		Steamers ... ..		4	
Elephants ... ..		2		“Ships” ... ..		2	
Rats ... ..		2		Crosses— ... ..	1.25	25	12
Lizards ... ..		2		Latin ... ..		6	
Sheep ... ..		2		St. Andrew ... ..		5	
(Rest one each).				St. George ... ..		4	
Letters and Words	2.50	50	3	Malta ... ..		4	
Birds— ... ..	2.30	46	4	Latin inclined ... ..		2	
Swans ... ..		5		Fortification plans ... ..	1.50	22	13
Ducks ... ..		5		Women— ... ..	1.05	21	14
Owls ... ..		4		Simple... ..		10	
Hens ... ..		4		Working ... ..		6	
Cocks ... ..		3		Playing ... ..		5	
Storks ... ..		2		Musical Instruments—	.95	19	15
Parrots ... ..		2		Banjos... ..		4	
Doves ... ..		2		Pianos ... ..		4	
Dead birds ... ..		2		Guitars ... ..		3	
(Rest one each).				Horns ... ..		3	
Scrawls ... ..	2.10	42	5	(Rest one each).			
Flowers— ... ..	2.05	41	6	Books ... ..	.90	18	16
Primroses ... ..		4		Fruit ... ..		18	
Snowdrops ... ..		3		Pipes ... ..		18	
Fuchsia ... ..		3		Dogs... ..	.80	16	17
Chrysanthemums ... ..		2		Fans... ..	.75	15	18
Tulips ... ..		2		Pens... ..	.70	14	19
Forget-me-nots ... ..		2		Horses ... ..		14	19
(Rest one each).				Swords ... ..		14	19
Hats— ... ..	1.90	38	7	Circles ... ..	.65	13	20
“Stovepipes”... ..		9		Boxes ... ..		13	20



	Percentage of repetitions.	Number of repetitions.	Order of frequency.		Percentage of repetitions.	Number of repetitions.	Order of frequency.
Bats (tennis) ... ..	65	13	20	Vegetables ... ..	30	6	27
Topographical plans ... ..	60	12	21	Tables ... ..	6	6	27
Digits ... ..	12	21	21	Targets ... ..	6	6	27
Jugs ... ..	12	21	21	Stools ... ..	6	6	27
Equilateral triangles ... ..	12	21	21	Spoons ... ..	6	6	27
Gates ... ..	55	11	22	Pistols ... ..	6	6	27
Fish (single) ... ..	11	22	22	Lamps (house) ... ..	6	6	27
Flags ... ..	11	22	22	Coins ... ..	6	6	27
Cannon ... ..	11	22	22	Chairs ... ..	6	6	27
Circles with inscribed figs. ... ..	50	10	23	Bats (cricket) ... ..	6	6	27
Keys ... ..	10	23	23	Cats ... ..	6	6	27
Boots ... ..	10	23	23	Brooms ... ..	25	5	28
Leaves ... ..	10	23	23	Bells ... ..	5	5	28
Suns ... ..	10	23	23	Brushes ... ..	5	5	28
Hearts ... ..	10	23	23	Feet ... ..	5	5	28
Umbrellas ... ..	10	23	23	Balls (cricket) ... ..	5	5	28
Whips ... ..	45	9	24	Carriages ... ..	5	5	28
Watches ... ..	9	24	24	Eyes ... ..	5	5	28
Wine-glasses ... ..	9	24	24	Ancient helmets ... ..	5	5	28
Hands ... ..	9	24	24	Kites ... ..	5	5	28
Guns ... ..	9	24	24	Mouths ... ..	5	5	28
Candlesticks ... ..	9	24	24	Nets (tennis) ... ..	5	5	28
Stars ... ..	40	8	25	Pencils ... ..	5	5	28
Rhombi ... ..	40	8	25	Railways ... ..	5	5	28
Squares ... ..	8	25	25	Saucepans ... ..	5	5	28
Equilateral triangles in- terlaced ... ..	8	25	25	Balls (foot) ... ..	5	5	28
Tea cups ... ..	8	25	25	Music scores ... ..	5	5	28
Tumblers ... ..	8	25	25	Diamonds ... ..	5	5	28
Moons ... ..	8	25	25	Scissors ... ..	5	5	28
Bread (loaf) ... ..	8	25	25	Tools ... ..	5	5	28
Knives ... ..	8	25	25	Teapots ... ..	5	5	28
Inkstand ... ..	8	25	25	Arrows ... ..	20	4	29
Card spots ... ..	8	25	25	Anchors ... ..	4	4	29
Balloons ... ..	8	25	25	Architectural designs ... ..	4	4	29
Clocks ... ..	35	7	26	Chains ... ..	4	4	29
Spades ... ..	7	26	26	Squares with crosses ... ..	4	4	29
Snakes ... ..	7	26	26	Ears ... ..	4	4	29
Envelopes ... ..	7	26	26	Shoes (horse) ... ..	4	4	29
Kettles ... ..	7	26	26	Locomotives ... ..	4	4	29
Forks ... ..	7	26	26	Faces profile to right ... ..	4	4	29
Spectacles ... ..	7	26	26	Vases ... ..	4	4	29
Baskets ... ..	7	26	26	Cubes ... ..	4	4	29
Bows ... ..	7	26	26	Steps ... ..	4	4	29
Axes ... ..	7	26	26	(The rest four times or less repeated).			

TABLE III.

	Average place when mentioned.	Average place, counting it as 51st when not mentioned.
Ten most frequently repeated diagrams—present collection.		
Men ... ..	25·7	30·8
“Other animals” ... ..	24·8	27·4
Letters of alphabet... ..	29·4	37·3
Birds ... ..	25·7	32·7
Scrawls ... ..	21·8	34·9
Flowers ... ..	24·9	35·7
Hats ... ..	30·0	37·5
Houses ... ..	23·3	34·0
Landscapes ... ..	21·4	35·5
Trees ... ..	23·5	36·6
Average place ... ..	25·05	34·24
Ten most frequently repeated diagrams of Mr. Minot's collection.		
Circles ... ..	16·4	37·6
Squares ... ..	12·1	43·2
Equilateral triangles ... ..	7·8	41·9
Crosses ... ..	13·1	24·1
Letters of the alphabet ... ..	29·4	37·3
Diamonds ... ..	13·2	46·2
Oblongs horizontal... ..	9·0	49·9
Inscribed circles ... ..	20·2	40·6
Stars ... ..	22·8	43·2
Faces profile to left ... ..	20·9	34·5
Average place ... ..	16·49	39·85