Original Drawings for Human Faculty. 1883

Original letters
F. Galton

X 7

f. 1v

F. 21

Corrections for the colored print

F. Galton
42 Rutland Gate

Plate VI

Fig 44 90–100 too yellow
Enlarged scale (10–20) by side, too dark; it should match what it is intended to represent & must be drawn afresh lower down for sake of greater breadth

Fig 45. Revise this as well as you can, by aid of the enclosed original sketch which had been mislaid, by making the ascending slope better marked adding in faint mountains & trees & especially putting in the dark shade over 12

46. the black wedge in the right hand of the colored circle has its sides too hard

47 the white peaks want a little more detail – blue has to be inserted in the cols. — I think the colouring of this sketch might be made ~~better~~ more minute

48. The I is made blue throughout I cant understand it; it is purple in the original. – Can the 'man be blue blind' who did it? – or did it work by colored light?
the bl of black are wrong, sh^d be yellow violet not voilet.
ng of orange are warm, sh^d be yellow.

Fig 49 take away e in Cane

o in Some is too brown
o in rode too faint.
} the three Os make sort of a ~~sequence~~
y is too blue

v is wrong the broad neutral tint bands are turned into harsh lines
q is too faint in the upper part
t and c too blue
w too brown
No 2 wants more dash of blue

Continued

Fig 69 continued

The words are not very successful; the tints corresponding to the several letters are those (pretty nearly) of the preceding specimens

FRANCIS GALTON

too blue — too blue — too blue — red-yellow cast

VISUALIZATION

too blue — though not so harsh as broken — make the blue brighter still

The figs for Grind & grand are not accurately drawn but will do.

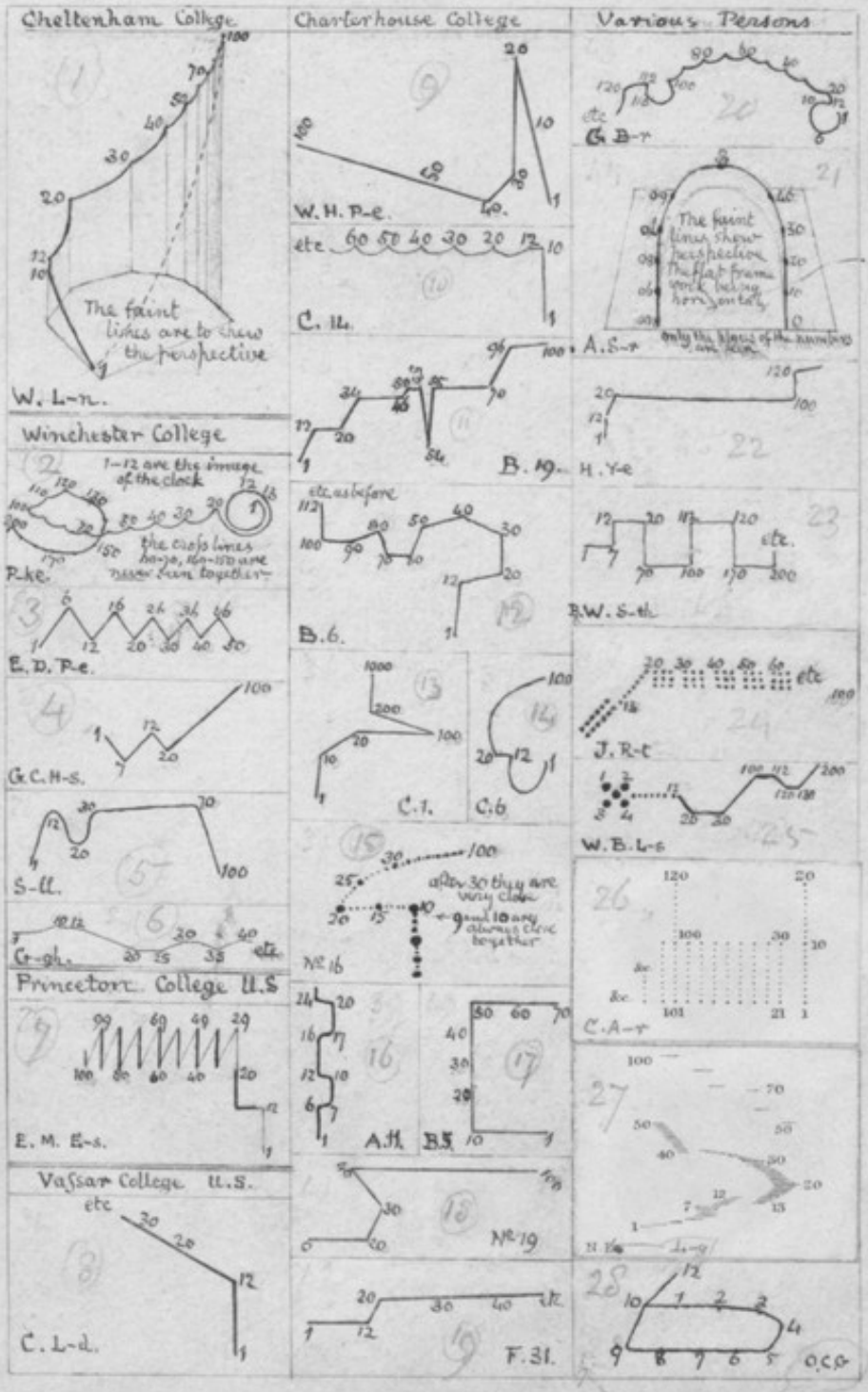
Look over all the letters G they are mostly imperfect in the down stroke & look like C (compare C in Francis with G in Galton — aque agree be)

70 71 72 73 are all quite good enough.
(I have not sent back the originals of these)

The numbers are not peculiar for the convenience of the artist. They must be inserted neatly

Plate I

Examples of Number-Forms

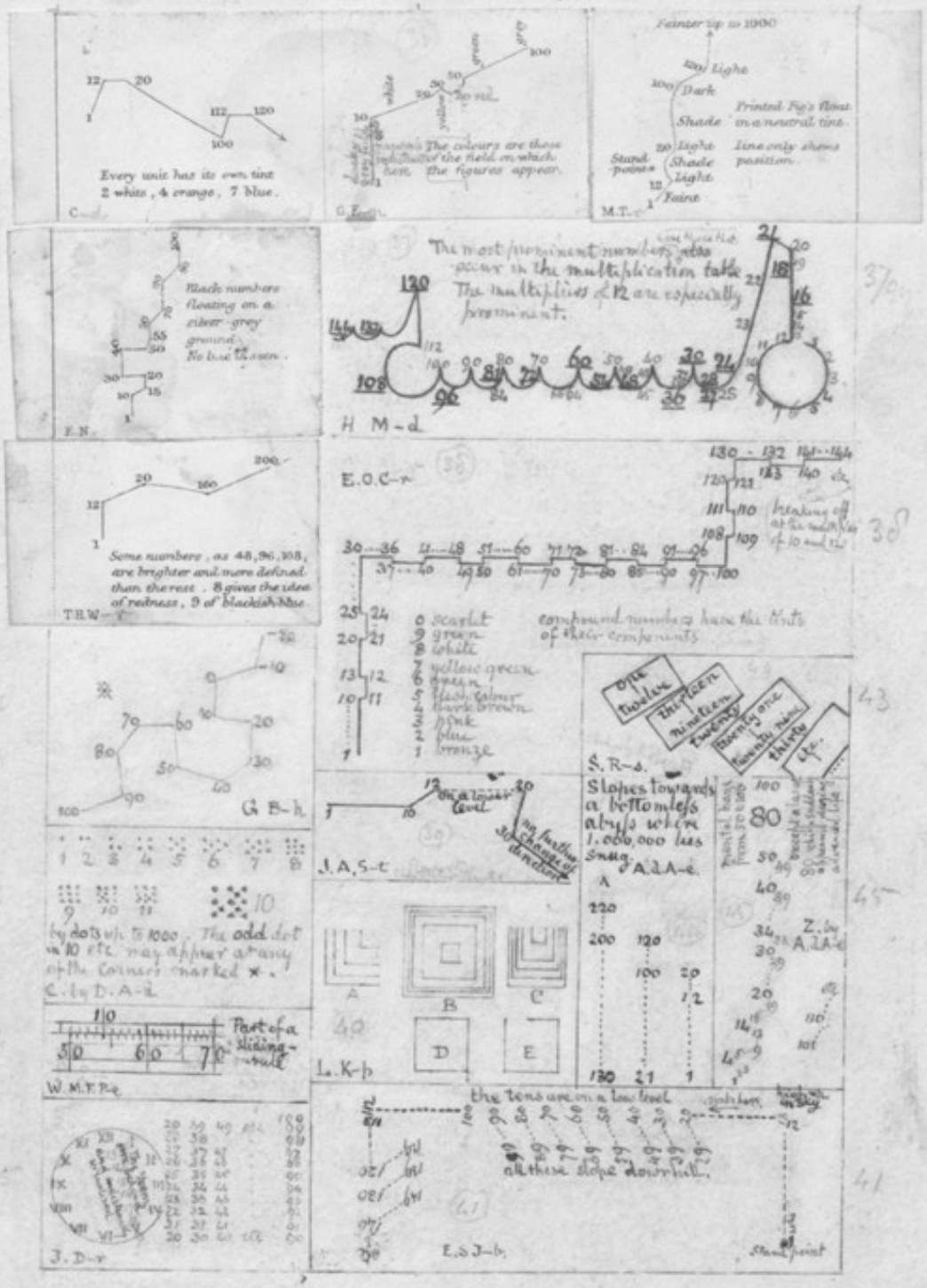


f. 4v

(The numbers are pencilled on it for the convenience of the artist who must insert them neatly)

Plate II

Examples of Number-Forms



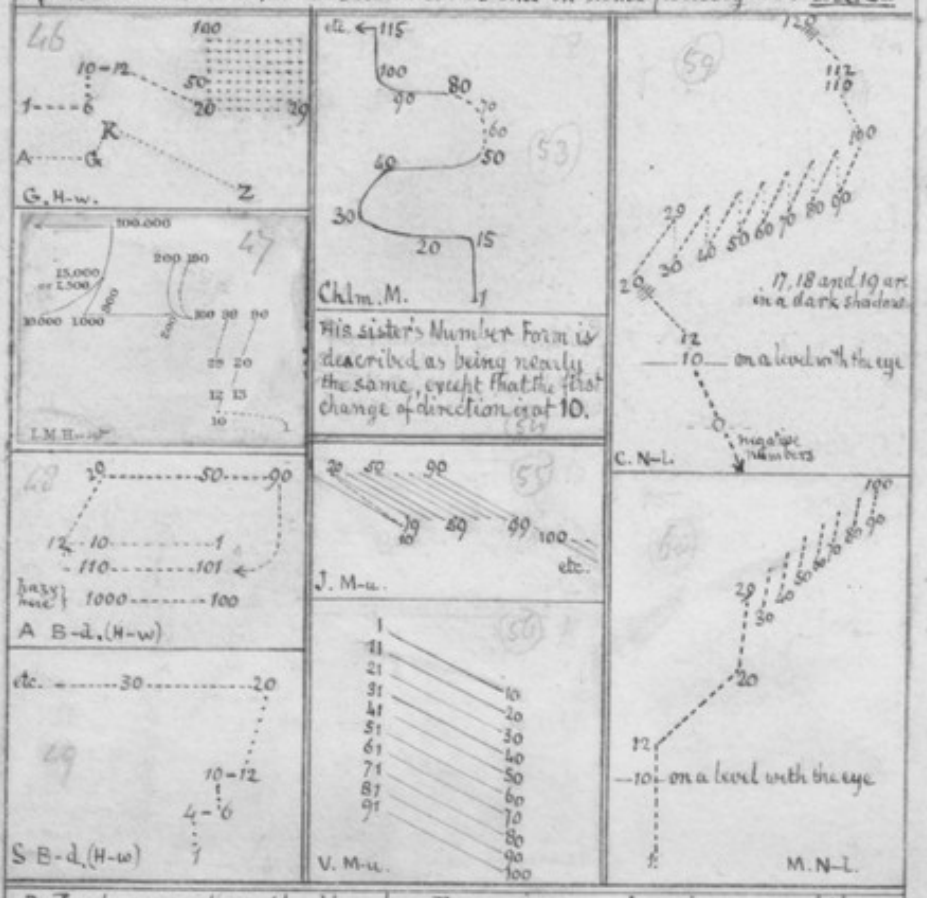
f. 5v

(The numbers are only fantastic for the conversion of U. sounds they must be inserted exactly)

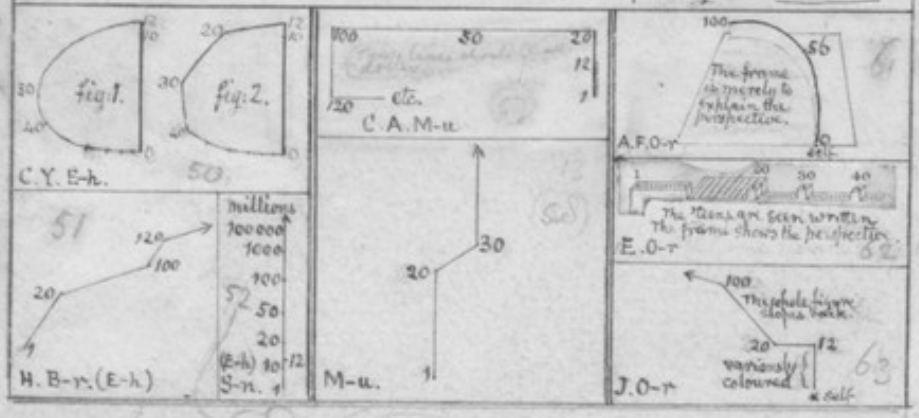
Plate III

Examples of an Hereditary Tendency to see Number-Forms

4. Instances where the Number-Forms in same family are alike



3. Instances where the Number-Forms in same family are unlike



To Printer

Bring out these main distinctions clearly

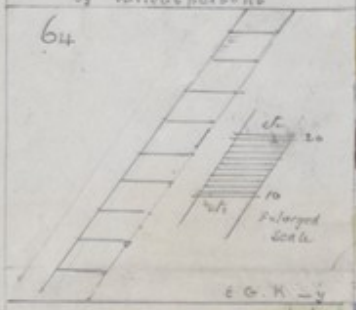
f. 6v

PLATE IV

1

Colour Associations by various persons

64



E G. K — y

65

A E I O U

red blue green

yellow purple brown

golden silver black

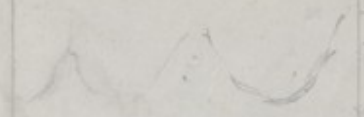
white violet orange

E S A

66

N M. o.

67



M.K W—L

68

COLOUR ASSOCIATIONS by Dr JAMES KEY

69

A	A	A	A
I	I	E	E
E	O	O	O
U	U	Y	

FRANCIS GALTON

LONDON

Exercises

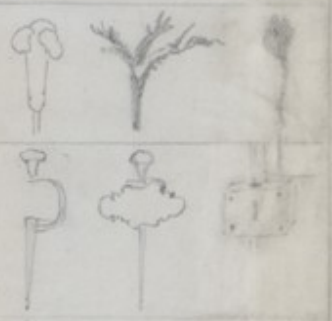
Blue Agree

CRAND ORIND

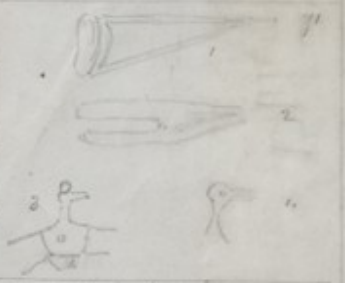
RANCE SWEET

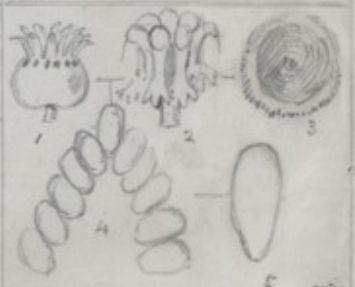
MENTAL IMAGERY by the Revd G. HENSLOW & VISUAL CYCLE

HERE



TRANSFORMATION





73

* Is this correct

f. 7v

This page shows the arrangement & general effect. The drawings must be made more carefully after the originals sent herewith

Plate IV

IMAGERY
by Rev. George Henslow
a "visual cycle"

69

Colour Associations by various persons

64

R.G.K-H

65

G.F.S.R.

This regions not shown

AEIOU
red blue green
yellow purple brown
golden silver black
white violet orange

E.S-S 68

N. M-E 66

M.K.W-h. 67

Colour Associations by Dr James Key. 69

A A A A
fame can charm all
I I E E
in time e- ven
E O O O
than some rode soon
U U Y
sure sun
R J X Z
F V G H
K L P D
B N M Q
T C W S
1 2 3 4 5
6 7 8 9 10
FRANCIS GALTON
LONDON
VISUALIZATION
Exercises in translating wall-paper patterns
AGUE AGREE
GRIND GRAND
RANGE SWEET

A "Visual Cycle" 70
by Revd George Henslow.

(here memories merges intervened)

Transformations

71

72

73

70

MENTAL IMAGERY
by the Revd G. Henslow
a "visual cycle"

To artist

Transformations

To artist

To artist

Find an arrangement ~~page~~ to the present N=66 to the bottom. In this case alter the numbers ← 66, 67, 68 – 6 ^ 69 66 67 ✗

Plate of colored drawings

The originals are in an accompanying parcel in blue paper.

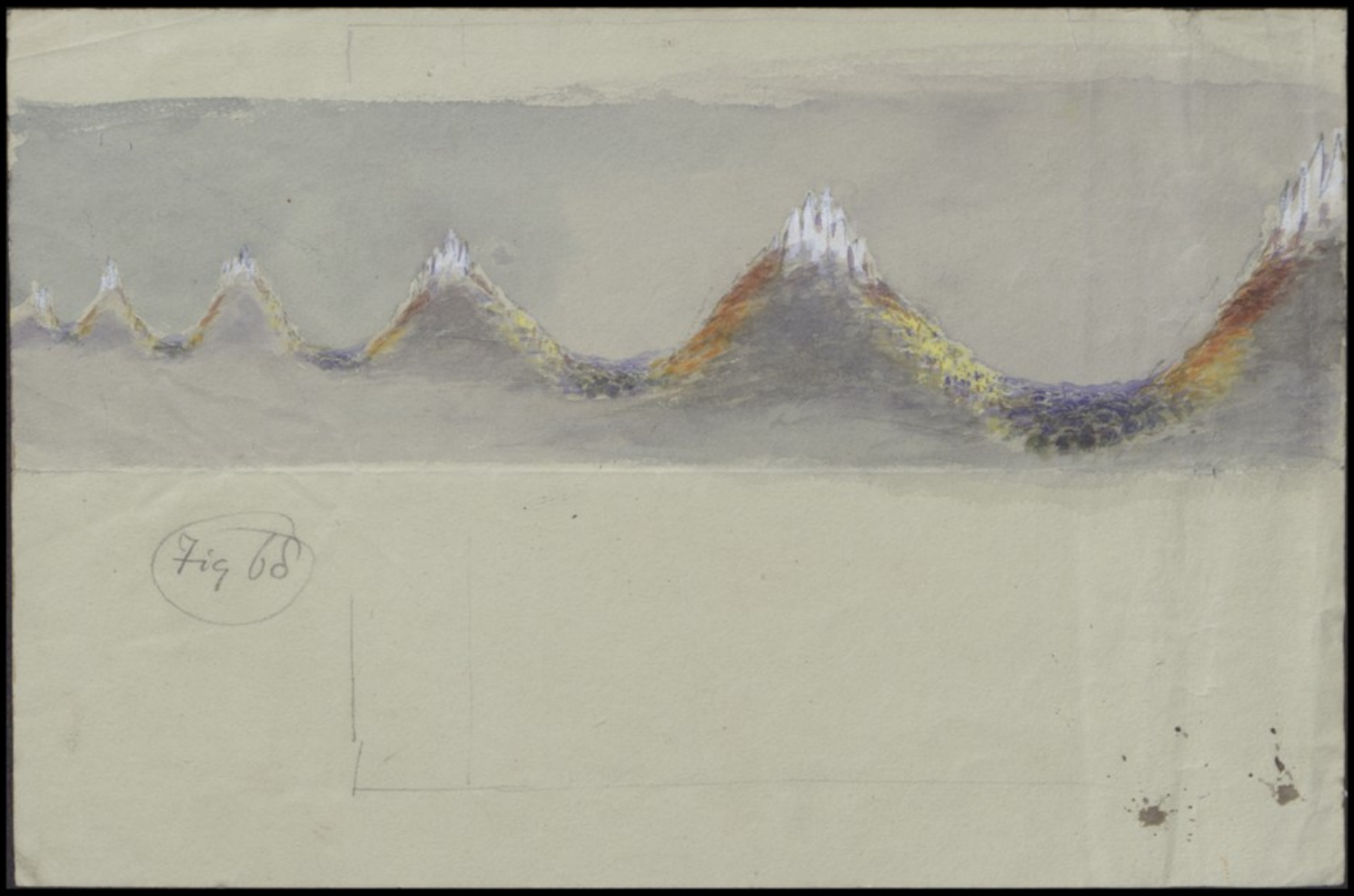
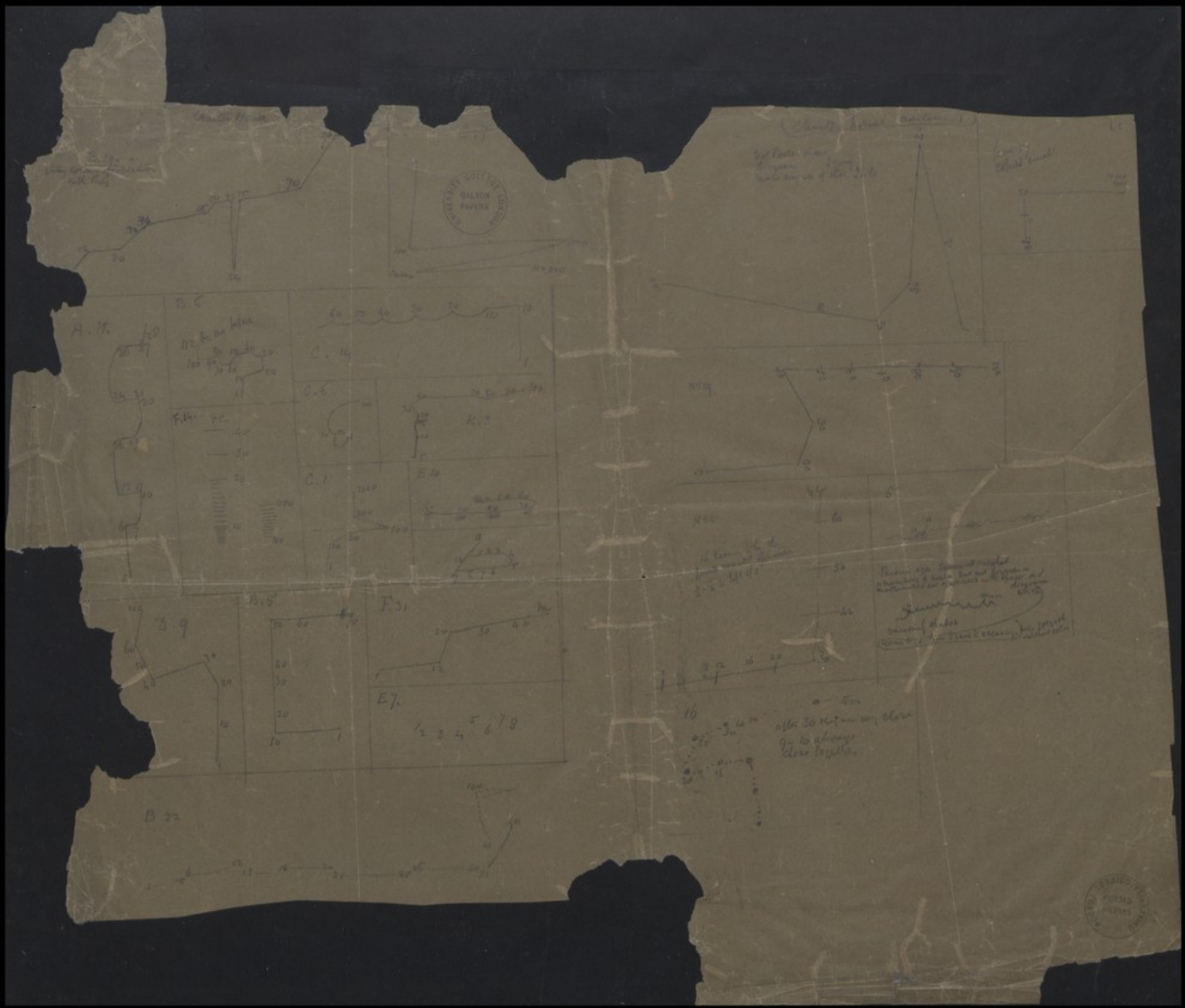


Fig 68

f. 9v

Fig 68


GALTON PAPERS

f. 1

Fig 69

To Artists

imitate these so as to give
a good general idea

Sheet VI.

FRANCIS GALTON

It may be here noticed that the R loses its redness and absorbs a reddish brown from the adjacent A, somewhat altering the colour of the sheet A too. The A'- Galton is also somewhat altered by the adjacent Q. In the instead of A_2 & A_4 of Sheet I there is a tinge of A_3 and A_5: the reflection smoke.

LONDON

the exercise

in translation

The finish that which I sometimes observe in the L of London may be supposed to be the glow, as depicted in Sheet II, which belongs to all consonant whose sound can be prolonged. But I regard it rather as the trail of white O which accompanies O with W as in DOWN. This omitted in C, Sheet I. It is more observed in O with W as in FLOWN. This is as NODE, while Node is an infinite example. The R somewhat shading some reflection.

VISUALIZATION.

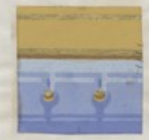
Contributed by J. Key MA., M.B.,
1880. & C.M. South Africa.

Sheet V.

abroad

rosy

Hindu



agne

induce

agree

An exercise in translation. These scraps of wall paper with little alteration would represent the words written below them.

In when considered not alone but in - and seems to have its shape altered by adjacent letters. In other cases. Sd it is decidedly wanting in the above specimen.

range

pain

lead

grind

grand

sweet.

a followed by e being the pronunciation indicates to my mind by a light brown, no separate tint is required for the e.

While coincidences seem between the real colour of a object and its visible appearance as in English words, there are yet so many apparent exceptions to explain the rise of these colour associations. Coincidences of an opposite nature are yet as common e.g. white is black. Altogether the subject has to be kept clear of the other.

J. Kay M.A.

f. 3v

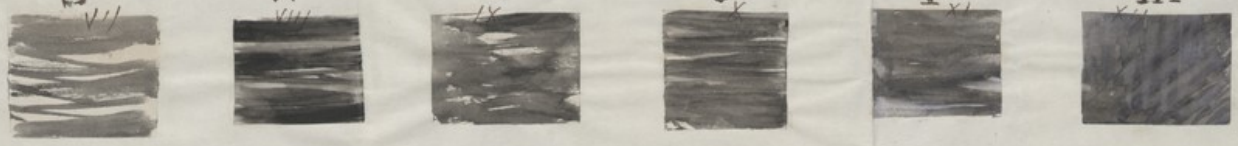
Fig 69

Sheet III.

k i | l ii | p iii | d iv | b v | n vi

Black is not so necessary a part of these letters when visualized in colours as might be supposed from this sheet. Had I employed a black background a much lighter grey would have sufficed. In either case there are differences in tone somewhat as does obtain. As to marbled appearance of some, no remarks on the figures.

s vii | w viii | c ix | t x | q xi | m xii



All these sheets were coloured by daylight

J. Key M.A.

Sheet IV.

1
I

2 white
II darker

3
III

IV 4

5
V

The marbled appearance of some of these diagrams is not to be taken to mean that any zigzag shape applies to the mind's eye. It would be difficult or impossible to throw the required colour into any shape. Neither is it intended that there are two or more distinct colours in any figure or letter. But the mottled screen & effect the marbled effect the best.

6
VI

nf (white)
VII (black)

8
VIII

The diagonal arrangement has been adopted as a hint of the fourth origin of colour — just as O is explained by the white enclosed space.

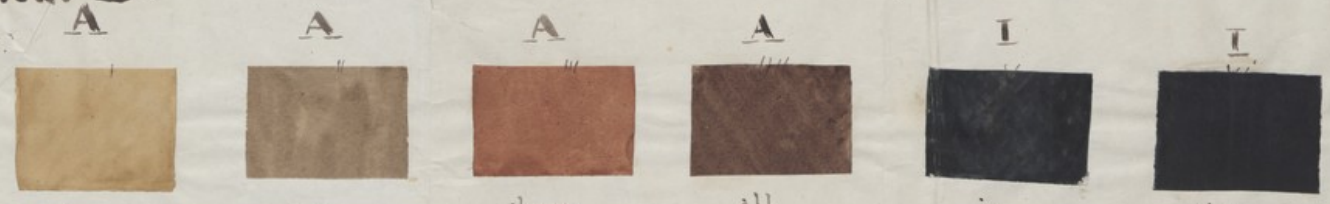
9
IX

A fourth of figures. Why 4 & 5. should be seen in just as eye-strain as A. But this of course is naturally, & so of a dark blue (it has no connection with the 3 of nine) that it seems as if it was meant in the language most familiar to me of a word when only small was 22.

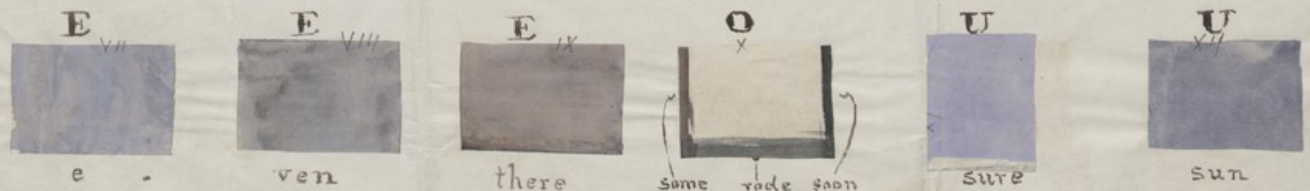
10 X

J. Ken M.a.

Sheet I.



When thought of in the abstract the color of the vowel is very fine, but in embodying this appearance might be more tastefully represented by a little dark matter (of any definite shape). This matter while helps to bring out the mental effect is probably a sort of pictorial remains of impressions of the black type clinging to the mind.



In the different from O it takes colour as white of various tints — white as one is embued with various tints of dark colouring.

J. Ruy M. A.

f. 64

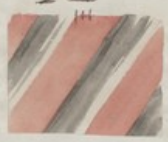
7. Letter

Sheet II.

R

J

X



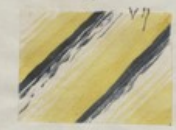
Z

F

V

The black lines or interruptions are a necessary part of the above letters and represent their continuous or semi-vowel pronunciation. Perhaps no colour but black is admissible, at least in those where it predominates. See sheet of the consonants – B, D, K & L.
The direction known of the stripes indicating interruptions is quite immaterial

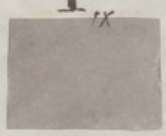
G



In this letter of the black lines are only added to give distinction to the yellow. The gray colouring belongs to it whether pronounced soft, like j, or hard; but in the latter case no interruptions exist.

H

Y



Omit

h and y are by no means so different from the other consonants as here represented. Still they are of a soft gray, while the others are of a darker hue. See other sheet – note. If it were possible to preserve the distinction at the same time, h & y might have marbling (slight) added to them as in some other consonants, perhaps the surfaces, gray.

J. Key M.A.


Francis Galton F.R.S.
42 Rutland Gate,
London.
James Key
POSTAGE SIXPENCE
CAPE OF GOOD HOPE
UNIVERSITY COLLEGE LONDON
GALTON PAPERS
27/2/3/4
AUG

his temperament to be like my own ~~than of~~ that of any member of the family or of father or mother's relations & at the same time I can supply you with the addresses of my friends in Scotland and England if you desire it.

One thing I am anxious to tell you of with regard to some sin in mentioned on back of card <u>old woman</u> <u>July 31/81</u>, I have never been taught painting or drawing except the merest rudiments of sketching from Nature. Above all things I am unable to sketch animal figures or faces, and yet when I see, instead of patterns, the head of a sheep, (to take as an instance one of a thousand possibilities) I see not only every outline and tint in distinctly as if the living animal were

before me, but the details, the depths & heights, the very hairs and the eyes, itself are perfect. I often wonder while I gaze (if we can talk of gazing with the eyes shut) why I cannot catch at least the main outlines with pen and pencil, whereas I know that without a copy I should place the eyes against and the ears crooked. Nor is such distinctness by any means limited to things recently actually seen. Suppose I have not seen sheep for ten years except in distant droves, the details of the head (to continue the illustration) would come out as if the animal were a few yards distant and observed through a small telescope.

I am &c

James Hey McB.

English Mechanic and
World of Science

June 24, 1881

p 373 Composite Portraits ——
before Photog. Soc. of G. B. 7 Galton 7125

p 374 Sleep & Somnambulism ——
before Association Scientifique de France
—— M. Regnard.

"—————— gradually sleep. Apparently sight is the first to become abolished. The outside world disappears, and a dream begins. Frequently, particularly in children, an astonishing spectacle is presented. When awake we should call it a kaleidoscope, or an exhibition of fireworks represented by various brilliant hues flames of all shapes, passing before us rapidly, then suddenly fading away. Sleep is not far distant ————————".

Montagu
August 1st 1881

Francis Galton Esquire
F.R.S.

Dear Sir,

In acknowledging yours of June 28th I have to state that I have never spoken with brothers or sisters on such subjects as visualization and having been much separated from them since my infancy I cannot say whether they or indeed any other relatives of my own could establish any fact for you as to heredity or the like. My father is in New Zealand and from what I have heard I suppose


J. K.
July 81.

f. 4v

Seen on thinking of figures of Lady 2nd or rather of my diagram thereof. ought to be more numerous and regular.

Montagu, Cape Colony.


Gas Ring
July 1881

f. 5v

The fan shaped pattern at the top was developed
as the lower part faded.
Instance of complementary colour.

Montagu Cape Colony


R. Key
July 31/81

f. 6v

As if a statuette with black background, but a patch of light res instead of features.

I.K. not infrequently sees figures – of animals, human with wing dress – &c, but never illusionary and generally partial – such as part of a leg, a distant head, or the l'ke. See letter.

Montague,
Cape Colony.


E. Key
July/81

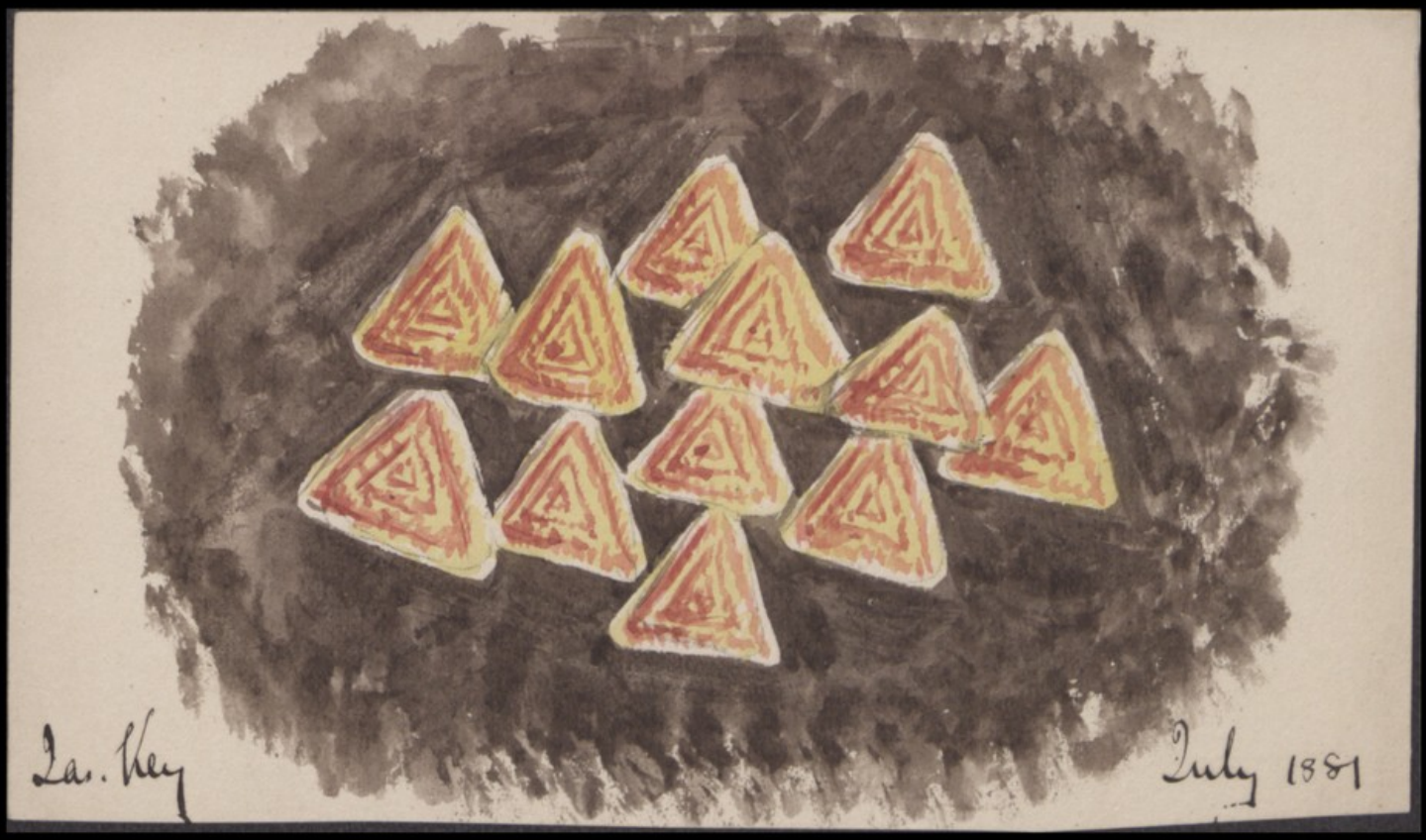
f. 7v

Mrs Hey considers such visions to be in no way peculiar — she has always seen brilliant images & emphasis every one would do so if attentive.

Background of this appearance had an olive tint, and the colours of the band were of the most bright & intense kind. The lower blue was darker than the upper, and the feathery shape was of a white & grey aspect.

No conscious association with ostrich feathers.

Montagu, Cape Colony.


Jas. Key
July 1881

Only imperfectly represented. The figures were uniform and sprang closely one from the other. They had a direction upward and to the right but whether so pointing with a side or angle I cannot recall. There was also more roundness about them. It is perhaps instructive however to note that they arose on thinking of the lower surface of a horse's hoof, when the frog and other parts may have suggested the appearances.

Montague, Cape Colony.

Jas Key. July 1881.

The diversity in the forms of keypattern
: the different arms caused by making
trials to discover what the exact vision
was like.
The arms were perhaps not eight in number.
Have vainly endeavoured to think of any
piece of delf or the like capable of suggesting
this. Had been reading of Peruvian
relics, but not of the keypattern.

Montagu
Cape Colony


Jas. Key
July / 81

An endless pattern, closer than represented, as of a tortuous green glassy tube, with pitted depressions. Association unknown. Probably subjective.

Montagu, Cape Colony.


Das Key
July 1881

Ought to radiate in all directions as from corner containing name J.K., and at same time crossed & interlaced. Background ought to be darker, and the white quite light.

It will be borne in mind that in these specimens only very simple patterns are depicted, for the reason that ribbon patterns with interwoven effects are too tedious to draw; colours are in some cases too fugacious to be caught and noted; extensive kaleidoscopic & church-window effects altogether distinct: their details at the time cannot easily be recalled except in part; and because time is not at my command to represent them adequately

While it is impossible in these matters to draw to scale, this particular specimen is out of all proportion large, on account of the difficulty of cutting paper smaller for the stencilling. At the same time the length of each zigzag must be short.

Montagu Cape Colony.


Jas. Kerp
2/July/81

ought to be more numerous, closer, more parallel, and more symmetrical. Not seen moving, but multiplying, as if (altho' no conscious breaks in vision) at every new look more figures had ranged themselves by the others. The blue stalks were added towards the end of the vision and would doubtless have developed other parts had it continued. Colours I do not vouch for accurately, having forgotten. This was seen on thinking of some flowers not in the least resembling these figures, but suggesting a garden in which geraniums are; and the variegated leaves of these geraniums I suspect to be the genetic association in this instance.

Montagu, Cape Colony.

11 Limes Villas
Lewisham
10 April 1878.

My dear Mr. Galton,

Monsr. Elie Réclus asked me, last night, to send you the enclosed memorandum relating to three cases of twins within his own knowledge.

Hoping that your paper on "Combined Photographs" will have been read at the Anthropological Institute last night, I had intended to ask your permission to mention the subject and to borrow some specimens for exhibition at the monthly meeting of our "West Kent Natural History Microscopical & Photographic Society" on the 24th April.

f. 1v

As your paper is postponed till the 30th I feel a little difficulty :— but as our West Kent Society is quite a private affair — never any reporters present and no publication of proceedings — I think I may venture still to ask you to lend me a few specimens, feeling sure that they will greatly interest the Photographic section of the Society.

Trusting soon to hear that you have quite recovered your usual good health, Believe me

Faithfully yours

E W Boalcock

Monsieur Galton demandant qu'on ~~[illegible]~~ recueille pour lui les cas de <u>bestonage</u> voici trois exemples à ma connaissance :

1er. Les Demoiselles <u>Pope</u> demeurant à Boston auxquelles Mr Galton pourra s'adresser lui même, car elles exercent la médecine d'une manière distinguée, et pourront répondre en détail aux questions qui intéressent la science. Du reste elles sont aimables et complaisantes. Leur ressemblance est extrême au physique et au moral, - cette

ressemblance ne va cependant pas jusqu'à l'identité. Quand l'une d'elles est empêchée, sa sœur fait les visites à sa place, sans que les malades s'aperçoivent de la substitution.

2°. Celui des Hausmann deux charmants jeunes gens d'une vingtaine d'années assez ressemblants et cependant reconnaissables. Si Mr Galton veut avoir des renseignements sur leur compte, il pourra bien de s'adresser, non point à leur père, mais à leur ami Mr. Gustave Vogt professeur à l'Université de Zurich. Mr. Gustave Vogt est le

père du célèbre anthropologiste Charles Vogt. —
Je conseille de ne pas s'adresser directement au père, parce que il y a une année les deux frères à quelques semaines de distance ont été près d'une attaque cérébrale au désespoir du père qui avait constaté des cas semblables dans la famille.
Il paraît que ces jeunes gens seraient issus d'un mélange de sang allemand et de sang italien. Ce mélange ayant produit un caractère remarquable par l'intelligence, la moralité et la beauté physique, mais on craint que ces

éléments ne soient un composé trop délicat et trop instable. -

3°. - celui des fils Champsaur - dont la mère, Mme André Léo est un des auteurs français les plus distingués. - Ces jeunes gens sont d'un type tout à fait contraire, il a fallu généralement les séparer, ils ne se plaisent pas dans la compagnie l'un de l'autre, ils ne font que se tolérer. Si Mr Gatton désirait à leur sujet des renseignements précis, je me ferais un plaisir de transmettre ses deman

f.7 5

dey à leur mère qui voyage en ce moment —

Elie Reclus

51 Overstone
R. Hammersmith Rd.

9 Avril 1878.

11 Limes Villas
Lewisham
11 Apr 78.

My dear Mr. Galton

Elie Réclus is brother to Elisée, and his speciality is Ethnology. Indeed, he is writing the article Ethnology for the Encyclopædia Britannica. He is settled in England - very likely for some time to come - and has become a member of our Institute. I hope we may shortly have a paper from him.

Many thanks for your kind permission to allow me to exhibit some of your photographs at Blackheath. My object in

asking permission to do so was to interest our local men in the Enquiry, and I shall be exceedingly pleased if it should produce any useful result.

Faithfully yours

E W Bradbrook

Escott

f. 1r

Paris. Oct. 3. 1882.

My dear Sir,

Your letter of the 25th reaches me here. The formal authority in the matter of publication does not rest with me, but with the proprietors of the Review. These will however, be officially & they will send you the written sanction.

I shall be equally pleased & pleased to be favoured at any time with contributions from you. & I trust you will occasionally

Yours

f. 1v

me your valuable Madras.

Lri.

I return to London tomorrow

My address is

38. Brompton Crescent SW.

& anything sh: you may have to

me here Lri always have my

immediate attention.

Yours faithfully

F. H. T. Pelle

Francis Galton Esq

f. 1

CHAPMAN & HALL LIMITED

11, HENRIETTA STREET, COVENT GARDEN, W.C.
(late of 193 Piccadilly.)

Oct. 6th 1882

Dear Sir,

In reply to your note, addressed to the Editor of the Fortnightly Review, I am instructed to say that the proprietors of the Review are quite willing to give you permission to reprint your article on "The Efficacy of Prayer", which appeared in Aug.t 1872

Yours faithfully
for CHAPMAN & HALL, LIMITED
C. Hayward SECRETARY

Francis Galton Esq.
42 Rutland Gate
W.

f. 21

CHAPMAN & HALL LIMITED

11. HENRIETTA STREET. COVENT GARDEN. W.C.
(late of 193 Piccadilly.)

Nov. 2nd 1882.

Dear Sir,

I regret the delay in answering yours.

You are at liberty to extract and reprint whatever you wish from your articles in the Fortnightly Review.

Yr faithfully
Frank Chapman
Managing Director

Francis Galton Esq

Mrs Haycock
March 9/00

f. 1r

Mrs Haycock
March 9/00

Order

Disorder

A Clue to these two. As a very small child seemed to see these graphic portraits in a "moral song" about 'Order' & 'Disorder', two sisters, and the sense probably formed the portraits – 'Order' may be the portrait of some remote nurse, from the costume –

purpose

2s

Bank

Firm

enclosed

from Mrs Hawei
March 9/80

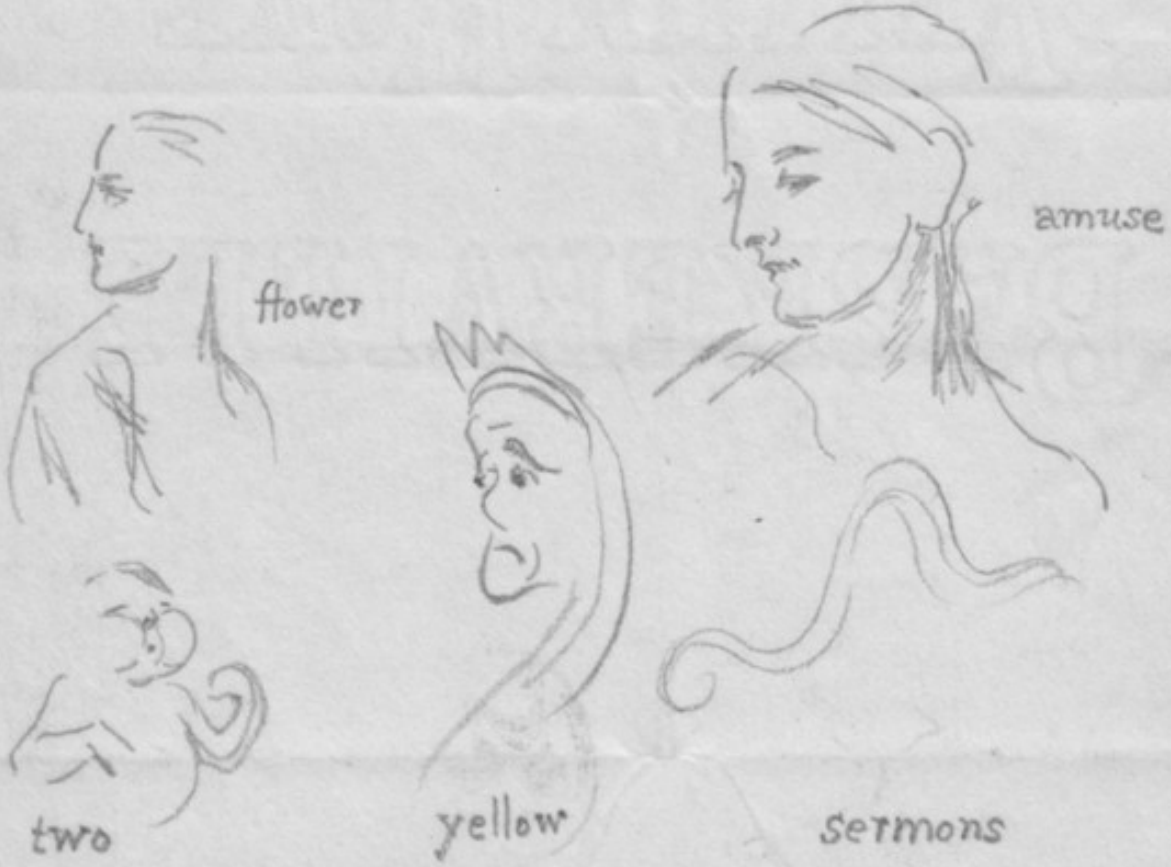
f. 2r

the or then

grinning or grig

mocking or mock

fiend or fief



flower

amuse

two

yellow

sermons or serve

f. 3

Glass With Care.

Francis Galton Esq F.R.S
42 Rutland Gate

From JOHN BROWNING
OPTICIAN &c
STRAND, LONDON,

Rev. E. Hitchfield Esq
Regents Pk
N.W.
Feb 10.

My dear Sir
I send you the replies as accurately as I can: & have added 3 pp of observations on my own mental peculiarity. I should much like to know if you have found "Mental Visions" (obs 1) to be at all common. There was a long article on the subject written in Popular Sc. Review a series forsooth - I forgot which; which

f. 1v

struck me as remarkably confirming my own impression. I will try & get some more numerical view if possible. — I have a class of medical students on Friday evenings at the Birkbeck: as also at the Birkbeck a class of 40. (men & women). —

Hoping my contribution may be of some service

Yours truly

Francis Galton

Obs 2.

I have never, that I am aware of, mistaken subjective impressions for objective, when awake; but as a child I have now and then thought what I had dreamt was true. I remember carrying to school some seeds of the Leycesteria, under the impression that the Mistress had asked me to bring them. She, of course, was surprised as she had never heard of the plant (which grew in our garden at Hitcham) I then discovered I had dreamt it!

Such, too, I am convinced is the explanation of the absurd stories of Levitation (letters in the Daily News a few years ago upon it) People fancied that when they were children they had been able to float in air. They undoubtedly had dreamt it, as everyone does. But as the confusion between subjective & objective is very common in childhood, they fancied it had been real.

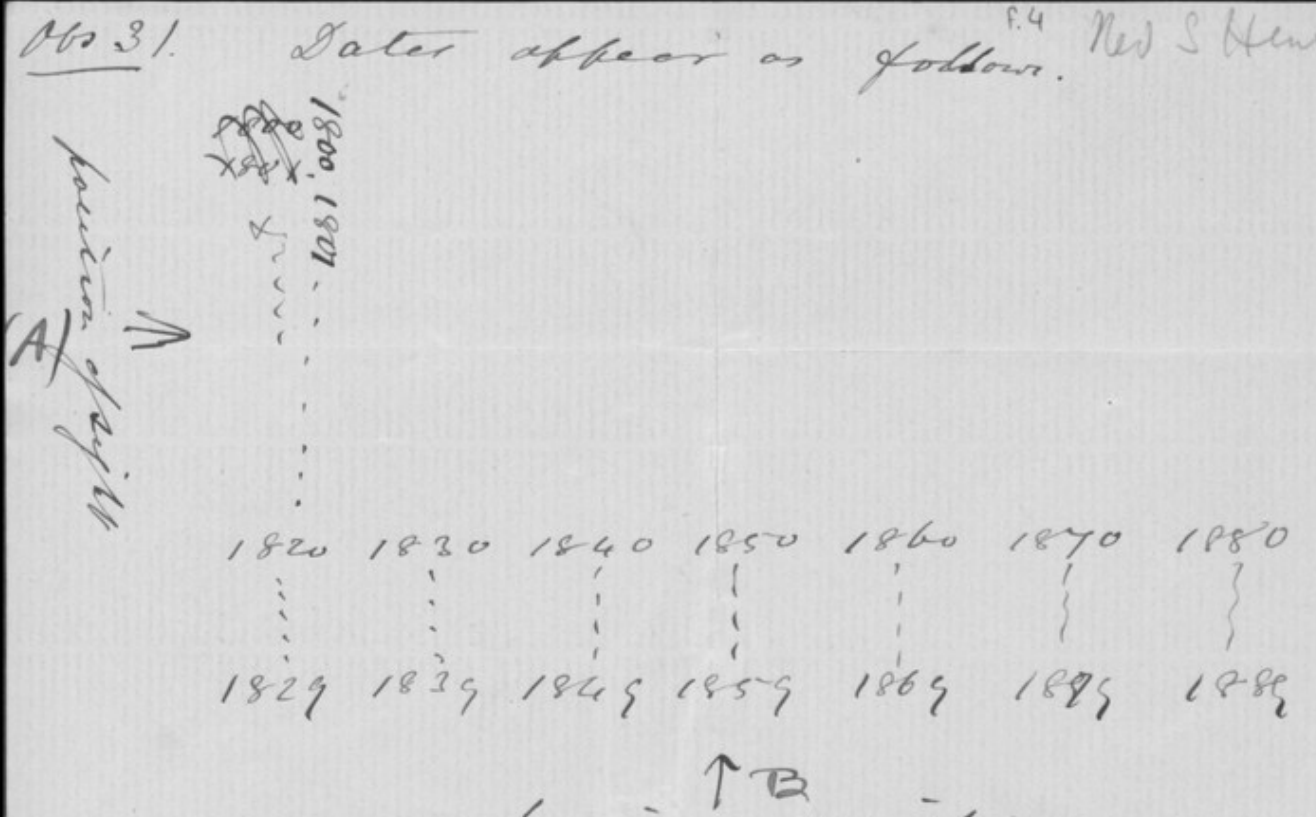
The other night I heard my name distinctly & loudly pronounced close to my bedside I woke with a violent start and said "Who's there?" There was no one. It was only a subjective impression breaking in upon the train of my dreams.

I witnessed a remarkable instance of the confusion of subj. & obj. in my poor wife when she died 6 years ago. - after 3 months ill-ness with lingering mem, her brain slowly weakened, and tho' she never left her bed: she thought she used

to take walks to Kensington Gardens or Elsewhere & describe them in detail to the Dr. Yet there was nothing irrational in what she said about people or things around her in the bed, and knew me & the Doctor five minutes before she died.

Geo Bemrose

Obs 31. Dates appear as follows. F.4 Rev S Henslow



I fancy myself at A when I see dates from 1800 up to 1820. Then I go round the corner and look at all subsequent ones as at B

Victoria ~~&c. &c.~~ H. VIII &c. &c. ... William Conq

The reigns of Kings of England are from right to left.

Rev S. Henslow

S Henslow

Rev G. Hamilton
Fitzhead Lea
Regents Pk
N.W.
Feb 14 1880.

My dear Sir

I thoroughly the nature of Visualised numerals among a class of ~~the~~ 24 medical students. Only one had any idea of the phenomenon: and he promised to write down his recollections. He was, that he was always puzzled to remember which was white & which yellow of gold colour. The O in

fold always carried the notion of wholeness, hence the impression.
In my alphabet C and O are always white; I derive from the same idea: the black circle intensifies the included wholeness.

In the Evening after lecturing at the Birkbeck Institute to 40 students, half male & half female, I asked about V. N.s & one gentleman said he always had his numbers arranged in straight lines: & he has promised to let me have his diagrams.

but no other individual of the 100 was conscious of having anything of the sort.

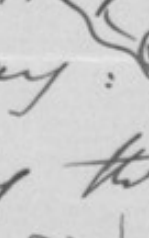
I think my sisters have visualised this & I have written to both of them to send them (if they have).

Than also written to a relation at a boarding house at Bournemouth; telling it to get some more.

Since you seem to think my visual objects somewhat peculiar, shall I write out a brief description of several examples for

hm? Some are most ludicrous [I have naturally a keen sense of the ludicrous, inherited I.— I can conjure them up at any moment, by merely shutting my eyes & excluding all transmitted light through the eyelids. I tried the Rose-bud. It came immediately, but a MOSS rose bud: & had inordinately long sepals: something like this.

I forced it mentally to expand, but I c^d not let it go further than half way: thus:—



when it suddenly threw the petals down, in a reflexed manner, the centre being all confused, & then vanished!!

Yrs very truly

J Allerton

F. 75

Revd G. Whitehead
Terrace
Regents Pk
N.W.
Feb 18/80

My dear Sir
I send you a first installment of fossilized minerals &c from my sister (Miss H) & younger & elder do (Mrs Barnard & family).
If you would send me a copy of yr questions I think my sister & Cambridge would furnish you with useful data. She is

a very remarkable individual: as far as mental peculiarities are concerned. —
I have not yet got the letters from one or two medical students who promised such to me: but will forward them with others if I can. —
I asked Carruthers (Botanist of Brit Museum) Cunny (Sec^y of Lin Soc) & Mivart (Zool): but none had any idea of what it was: the 1st & 3d are colour-blind!
I have written out several examples of visual objects & if you will kindly return

f. 8

to me the sheet of Obs I:
I will rewrite it & incor-
-porate it with others.
Mrs who lent a elaborate
sheet of illustrations to
go with it.
I have (e.g.) "raised up"
a rose bud on several
occasions: but with different
results each time!!

Yrs very faithfully

F Galton

Rev S. Henslow — Supplementary portrait of saw-fish

f. 9r

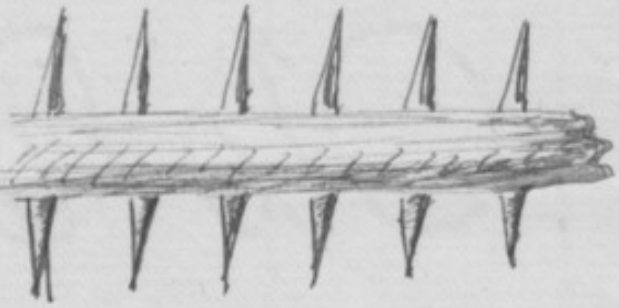
Litchfield Sec.
Regents Pk
N.W.
Feb 23. 1880

My dear Sir.

I send you by this post some of my "usual objects" — as a few specimens. I could supply you with any amount in addition if required! In describing the Sun I have left a gap as I cannot remember

f. 9v

whether the object is the point of a sword or saw fish. It is like this:—



I am quite perfectly remember.

I think sword fish: but I do not feel quite certain. So left a fact. The above at all events was the object in view of the fine barrel. I am at perfect liberty to do whatever I am like with MS & drawing.

Believe me to be

Yours faithfully

F. Galton

Visual objects

(Ophthalm.)

Though I can usually summon up any object thought of, it not only is in general somewhat different from the real thing, but rapidly changes. For example I thought of a common glass sugar-basin. For a few seconds it was distinct, but the surface ornamentation changed in character & became more e-laborate. The crenatures became more pointed, thus:- and at the same time the upright surface flattened out and  became  a handsome bowl with crimson & transparent cuttings like Venetian glass. The lump of sugar changed to flowers especially white roses. [the bowl thus to dream full of roses &c]. Then all gradually became hazy & disappeared.

I pictured to myself the sugar-tongs. They are an old fashioned pair filled like scissors. They are rather dull and without much ornamentation; but they soon became brilliantly polished and highly chased. The tips then passed into scissors in appearance sharp and bright; while the handles, being already those of scissors became appropriately adapted to them. Then all vanished.

The changes are in many cases clearly due to suggestiveness in the article of something else: but it is not always so as in some cases hereafter to be described.

It is not at all necessary to think of any particular object at first, as something is sure to come spontaneously within a minute or two. Some object once having appeared the automatism

became reflexed (fig 3).

2nd experiment:— Having remembered the first bud was of a moss-rose. This doubtless was suggestive, for the bud appeared completely enveloped in "real" moss.

3rd:— The bud came, but a decidedly ar=
=tificial rose-bud. This was not at all anticipated.

4th: (C fig 1). Instead of a rose-bud, a hollow cone with a mossy border with four green pointed structures: apparently a compromise between a rose-bud and a birdsnest!

5th:- D (1 - 4). A rose-bud came but not a moss-rose-bud: a peculiar fact: its extreme pale-green-coloured sepals. This changed to, what had apparently nothing to be derived from, viz. a mass of wool on a mass of moss. (fig 2)*. The wool & the moss became intermixed and soon

* See his subsequent notes

never turned into a birdsnest but in a vertical not horizontal position. It had one blue & spotted egg in it. Lastly the whole turned into a heap of tar! This last though quite unexpected, can be accounted for: in that same 8 hours previously I had watched a man laying down tar in a garden.

go on p 13

E (1-2). I thought of an octahedron (model of a crystal) It came at once: but instantly rotated round its long axis, to the left. It then resolved itself into boys swinging on ropes wound round a pole (fig 2). They swung round & round till the ropes became twisted round the pole and the boys were thus carried to the pole: and all became obscure!

F.(1–3). In this case I waited till an object came spontaneously and unthought of. It turned at first a wooden cross (fig 1). It rapidly spun round to the left, when a hand suddenly appeared holding the ring. It stopped, moved over into a horizontal position & changed into a Malachite cross with cylindrical cross-bars: an elaborately chased silver plate hung in the middle. — the bar, in the direction of the observer, vanished. the other assumed the form of a horn (fig 3) while the silver plate grew into the pan-like support which was most chastely ornamental filagree silver-work. Then it vanished.

G (1–5). Once more thinking of a rose it failed to appear, but a wonderful fruit smelling like a medlar appeared but with five pointed sepals (f. 1) On watching it, the sepals shortened (fig 2) and a peach stone rose out of the center! As soon as it had completely liberated itself the medlar-like fruit vanished. The peach stone then changed into the smooth form of an apricot-stone [these two being perfectly natural in shape & colour as not figured]. The apricot stone then changed into a new species (undescribed hitherto!) of fruit resembling an olive in shape & size but with a rough ash-coloured skin & tuberculat like the skin of a peach (fig 5). It then disappeared.

H (1-4). A spiral shell appeared spon=
=taneously, but out of all proportion
to normal conditions, for the mouth was
enormous as compared with the coils (fig 1)
the spiral apex rapidly became depressed
and the shell took the form of a
Planorbis (fig 2). The coil then assumed
a vertical position while the mouth
resolved itself into a lily-like appearance
with white petals (fig 3). Lastly the
whole degenerated into a brown
boulder (fig 4) and then vanished.

I 1. This is a feeble attempt to
represent a most beautiful casket
of flowers; the tracery was far more
elaborate but based upon an inter=
=lacing as in fig. The whole was
constructed of frosted silver and
in imitation of natural branches.

It changed its form, becoming more elegrecised, but always in perfect symmetry. The flowers were normal flowers;- roses, grasses, ferns &c. -

K (1 & 2). Fig 1 represents a spontaneous appearance of an oil can (apparently) with a black neck covered with a white capsule, the whole of the can being also white. The capsule changed to a white hat; the can itself to the body & shoulders of a man, who turned out to be a negro! The three parts of the white can clearly suggesting the white hat - the black face, & white coat; the shoulders also corresponding to the upper sloping surface of the can.

f. 19

Description of Visual objects
Given by Mr J. Blewett.

print-font of these 14 pages deg 8 = 8x6.5x20
= 130
1040 words
add for Vis Cycle 600
1640. –

1 page 1 Foolscap = 12x45 = 540

Rec'd G. Hepher

f. 20r

Litchfield Terrace
Regents Pk
N.W.

My dear Sir,

I enclose a few results ascertained from people at the Boarding House at Bournemouth.

I was talking to Mrs Harris this afternoon & she seems to have visual objects just as I do, & has done so all her life: She would be very glad if you would send her one of your questions papers to answer & she will also try & write out some of her visual

object as well.
Her address is
Amber House
St Johnswood Road
N. W.

Bournemouth Boarding House

Mrs G. (age 42) only sees No 1 & 100. Communicated by Dr Hughes

not intermediate numbers

1 . . . . . — — — 100

but sees figures from 50 Steel coloured surrounded with gold, i.e. as isolated numbers

---

Miss D. (age bet^n 60 & 70)

1 ——————————— 100.

also

Mrs Ar (45) & Mrs L (45)

1 ——————————— 100.

Mrs B (70)
Mr L (72) } both see numbers vertical

100
|
|
1

Miss Ar (21)

1 ——————————— 100.

Miss B (aged 78)

100 200 300 1000

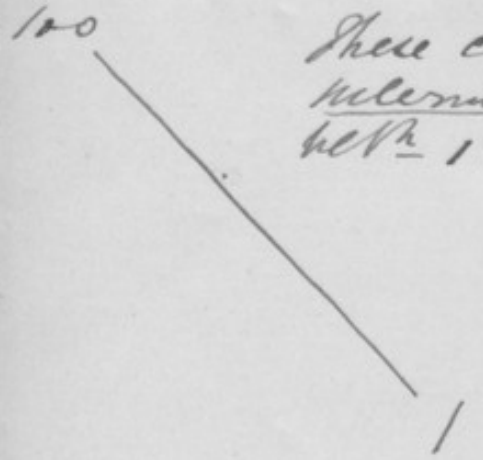
1 2 3

X. 2.

Intermediate numbers are described as being invisible – i.e. only No 1 & 100 are seen at once.

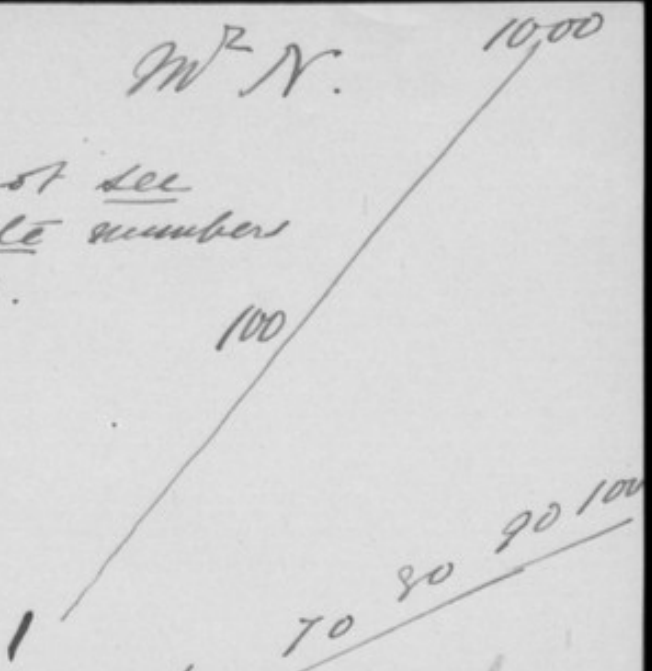
F. 22

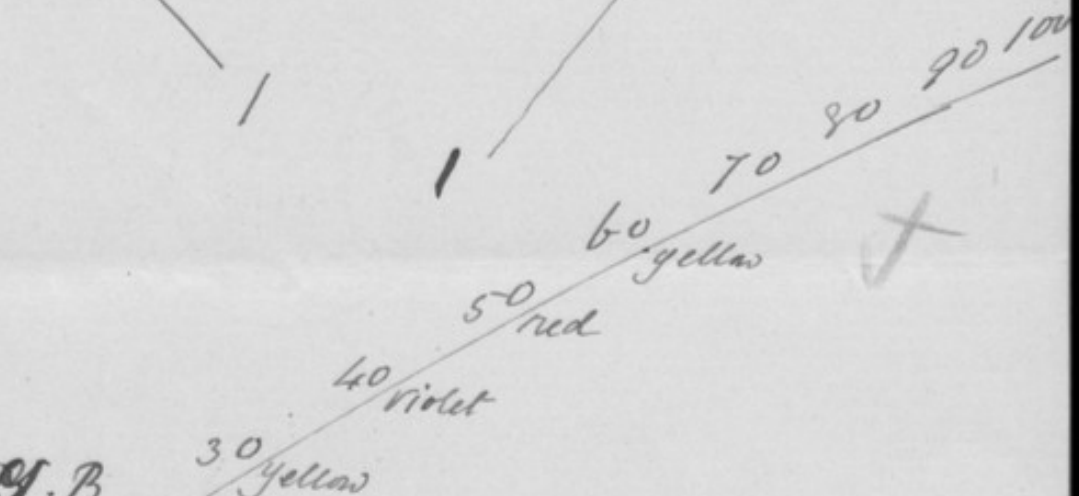
Mrs N.: age 30



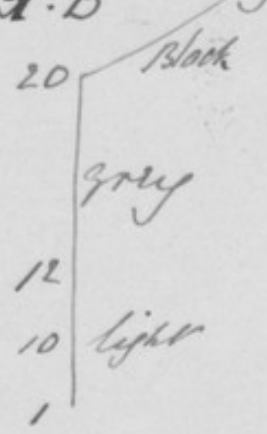
There cannot see intermediate numbers betn 1 & 100.

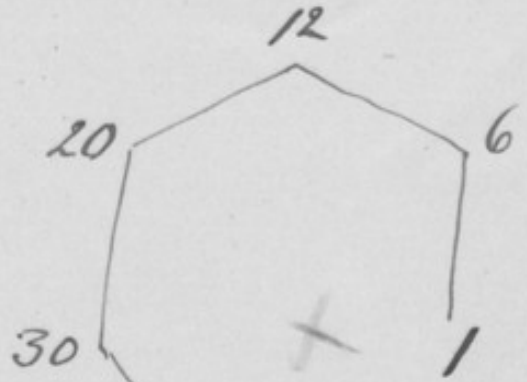
Mr N.



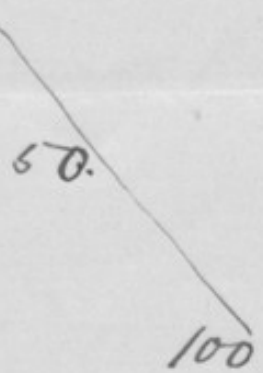


Miss A.B
(31)





Miss B.
(32)



New Q. Regulations

f. 24r

6 Titchfield Terrace
Regt Pk N.W.
Feb 20/880

My dear Sir

I send by this post a M.S. by Mr Flowers which shews very remarkable mental phenomena. — Her visual objects seem to be much of the same nature as mine, though taking a diff.t form: — thus I often see "bit-bits" of landscape: ferny dells with cascades & running brooks at the bottom: — masses of rock minutely

covered
with moss &c. Every
blade of each tiny thing
is perfectly defined,
so I "pick out" a particular
spot to look at.
I hope you get my
last communication
sope. of valuable
drawings of several
visual objects. If
you would like a "second
Edition" my automatic
author will readily
furnish any amount
of "copy"!

Yours very truly

J. Allen

f. 25

I have asked 6 more or less scientific men: — no results —

Two ladies: — no results.

Henslow

6 Fitzhugh Ter
Regents Pk
N.W.
March 3/80

My dear Sir,

I send you another set of illustrations of varied objects which formed a complete "Cycle", for by a strong effort I finally brought back the last objects to the one I started with, though entire scenes

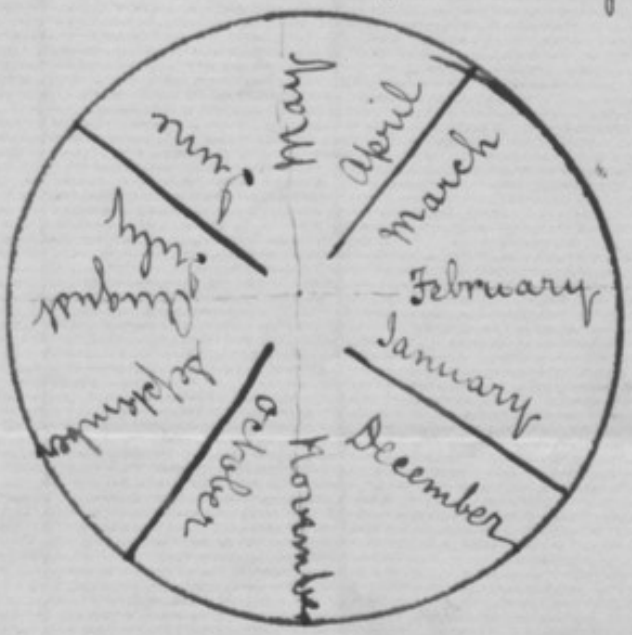
views had intervened
Noting it may be
of some interest to
Yr investigations
I try to
Yours
J Allen

f.28

Visualised Objects

Miss K. Communicated by Mrs G. Hewlett

Miss K – maiden lady, has always had a sort of pictorial representation of the months of the year. They are enclosed in a thick circle; January begins on



the right hand side, below the horizontal diameter; between every three months falls a thick black line, separating quite distinctly each three months from the adjacent three. These lines do not and probably would not meet at the centre of the circle. Whenever a month is thought of, reference is at once naturally made to this sort of chart.

Again in thinking of numbers,

she has them arranged in a long vertical row, one above the other; as she has no great aptitude for figures, but rather dislikes all figuring, her numbers are distinct only up to about ~~the~~ 200, when they get very hazy and become lost.

She does not know of any other peculiarity in the arrangement of sequent letters or events; none of her visualized objects appear ~~eto~~ to be coloured.

— .. —

Rev G. Henslow's

A Visual Cycle.

Experiment.—

The first visual object (image) that spontaneously presented itself on this occasion (to be described), was a cross-bow (fig 1). This was immediately provided with an arrow (fig 2) remarkable for its well pronounced barb and super-abundance of feathering. Some ~~one~~ person, but too indistinct to recognise much more than the hands, appeared to shoot the arrow from the bow. The single arrow was instantly accompanied by a flight of arrows proceeding from right to left; and which now, together, completely occupied the field of vision. They changed into falling stars, but not at all bright. These latter now passed into a heavy snowstorm, the flakes falling thick and fast. The ground gradually appeared as a sheet of snow. There had been no

ground previously but only space. The snowstorm ceased and the premises pond walls, poplar trees on the back of Hitcham Rectory, Suffolk were distinctly into view, but covered with snow. Every detail was clearly defined as I can remember the scene. This locality suggested another view, early impressed on my mind (when about 7 years old), of a spring morning, brilliant sun, and a bed of red tulips: but at another part of the garden. The tulips gradually vanished, except one; which appeared now to be at the usual point of sight, & not growing in the border. The tulip was a "single" one, it became "double" and the petals then fell off rapidly in continuous series, until there was nothing left but the pistil; but (as is almost invariably the case with my objects) part of the

was greatly exaggerated. ~~The~~ in that the three stigmas were too ~~long~~ large (fig 3).

The next change was a gradual passage of the stigmas into three branching broom horns (fig 4) while the green ovary became a sort of stalk to the horns. – They now contracted and formed a knob (fig 5) while the stalk became a somewhat bent stick; in fact a knobbed walking-stick! The slight bend to the right seems to have "suggested" a centre-bit, into which it turned, – but of an rather anomalous character (fig 6).

The centre-bit passed into an unknown structure: a sort of pin passing through a metal plate: ? can give no interpretation can be rendered of this (7). The plate suggested a lock, but the pin (without the wood handle, which vanished) remained still preserving

it, in a very unmeaning manner. The "bend" of the stick and centre-bit (fig 5 & 6) being apparently still "on the brain" reappears in fig 9, while the lock vanished; fig 9 is somewhat akin to a "staple" but does not apparently represent any real article at all.

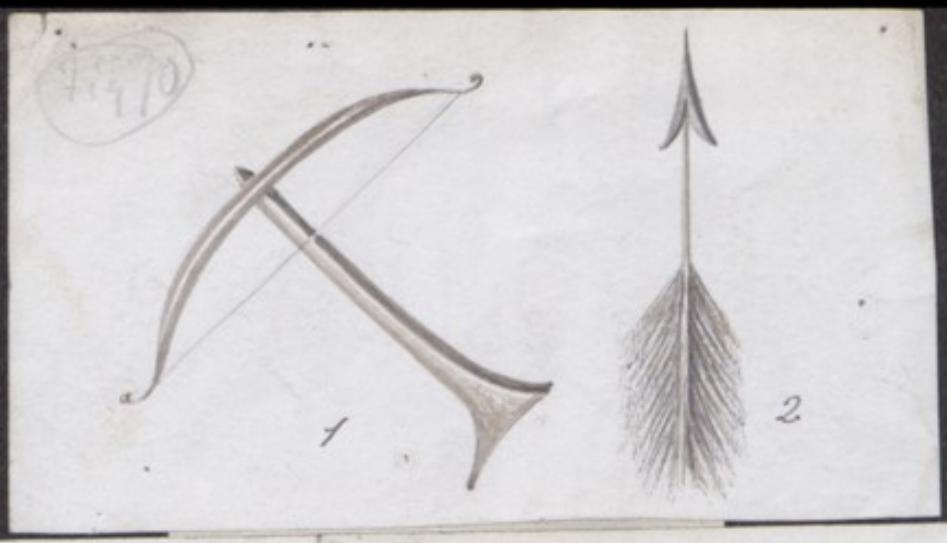
I now attempted to force my bile upon the visions. Fig 9 suggested to me the cross-bow, and I determined if possible to bring it back to my starting point.

The first attempt was an utter failure! Fig 9 disappeared, but a leather strap ~~(or rather the connecting strap~~ with loops for holding two other straps & came instead (fig 10). I still persevered and tried to think of the bow, as the curve of the strap suggested ~~it~~ ~~might come~~ ~~it came~~, but the strap broke; the

two ends were separated and a string connected them (fig 11) This was the first concession on the part of my automaton to my will. By a continued effort the bow came (fig 12). This I had, then, no difficulty in con-verting into the Cross-bow (fig 1) & thus returned to my starting point!

J Allerton

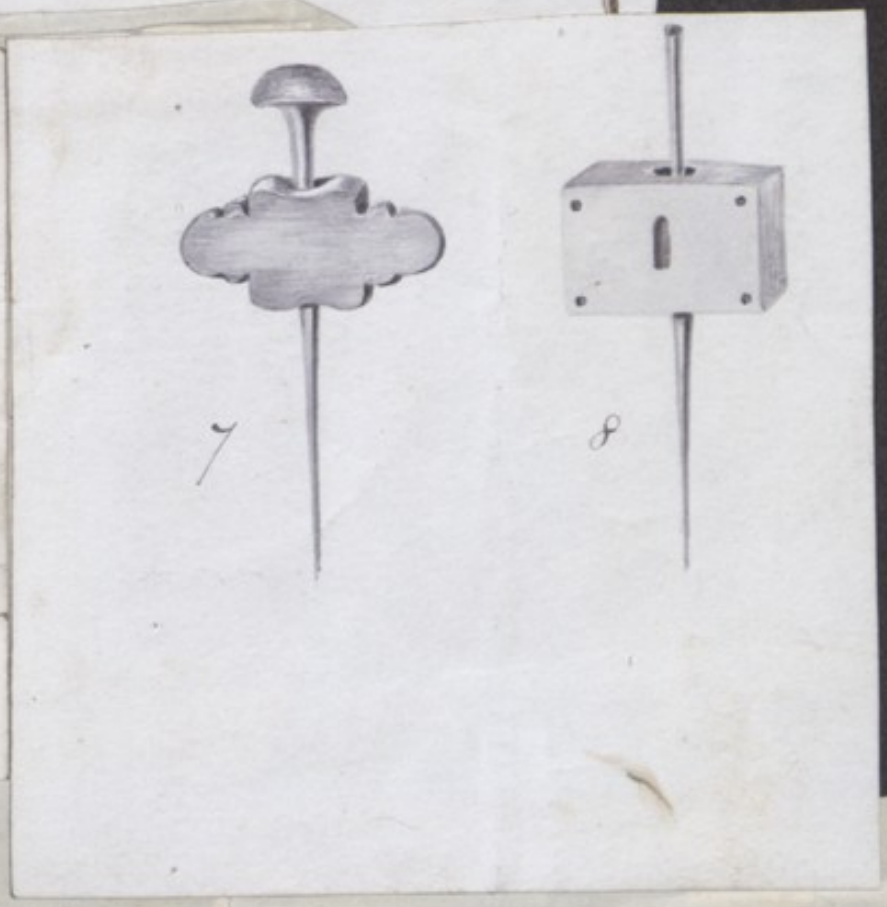
!


1
2


3


4
5


6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f. 34v

fig 70

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9

10

11

12.

"A Visual Cycle."
G. Hewlett. March. 1880.

f. 35v

Henslow f. 36r

6 Tichfield Ter
Regents Pk

My dear Sir,
I must send you the enclosed. It is such a clear case of automatic memory, as distinct from conscious memory, that I think it is worth adding to my former notes.

I am very sorry
with pleasure to
Sunday.
I have given one
of Mr. tickets to
Mrs Hawkins. I
shall perhaps see
Fawcett tomorrow

Yours
J Ruskin

Don't trouble to
reply

Insert in P.P.

Automatic Memory

[Postscript to the first series of Visual objects]

When I saw and subsequently drew the Visual object of a mass of wool upon moss, I was not in the least aware or conscious of ever having seen such a combination before.

However, about three weeks afterwards I happened to pass through the Seven Dials & observed identically the same object suspended in the window of a Birdshop, – Cotton wool and moss in bundles for sale as the material for Birds' nests.

I had undoubtedly often seen them, but never thought about them. The object had clearly become "psycho-prophed" automatically: and the brain simply reproduced it automatically with the aid

of unconscious memory.

The wool & moss are sold for cage-birds to build their nests with: hence the brain being, so to say, aware of this, the immediate formation of a nest out of the materials provided is easily explicable, but it was effected solely by automatism.

In other words; the automatic action of the brain carried out, entirely of its own accord, the object suggested by the wool & moss; which it had first recalled by unconscious memory; and so made a perfect nest of the materials; but going further than that, it proceeded - marvellous dictu! to lay an egg in it!!

Geo Stanton
March 6. 1880.

6 Petersfield
Terrace
Regents Pk
N.W.
March 14. 91

Dear Mr Galton
May we whether
you take in re. my
name as the "Visitor"
&c. I should much
like to come & hear
your lecture & to bring
a friend. Are you a
fellow? If so, may
I send two blank
(fellow) tickets for you

foreign? as I have
done that twice
save me. –
I was afraid the
clouds wd be too
dense, & wish I could
have been more
successful.
Yrs faithfully
F Galton

Rev G. Henslow May 3/00

Double Automatism

This I have often experienced, as in the following illustration. I have been reading, say a lesson in Church and while doing so the thought has flashed across me that I had (say) forgotten to bring a "Notice", or it may be something else connected with the service. This thought instantly sets up a train which pursues its course. While I have become quite oblivious of the lesson I was reading; yet the necessary modulations and change of voice appropriate to different sentiments has proceeded uninterruptedly of their own accord.

Now Volition appears to me to be quite out of the question here. As the sudden thought and the train of

thoughts suggested by it were all automatic, just as much as the reading the chapter was. Hence I call it <u>double automatism</u>.

Another illustration may be taken from lecturing. While the flow of words goes running on, ideas and suggestions crop up in the background, as it were, of the mind, to be utilised later on in the lecture. Illustrations, not merely appropriate to the moment, but for some subsequent point occur, and are mentally noted to be used, when the fitting moment is arrived.

Here, then, are distinctly two processes at work. On the one hand the audible lecture, on the other the undercurrent of preparatory note-making. But, both are, I fancy,

equally automatic; because I am not making any deliberate object of thought at the time. The brain knows what it has to say and the words come spontaneously. The suggestions arise spontaneously and mental note is immediately taken of them. But I am not deliberately trying to think of such notes and memoranda.

That the two processes which then may go on simultaneously are really automatic, I think is proved by the fact that if I open a book and read aloud and try at the same time to think of something else, I cannot do it. I, either instantly stop reading; or if I go on reading the other thought vanishes at once!

G Galton

f.45r

I have been so very busy with Lectures &c. that I have not had time to try again at the Clouds: but fear I can't succeed. — I find the hope in Science poetic is called "Prusoial Vision" by H. M. C. July 1. 1868. p. 145.

Yours

S Blackburn

f. 45v

UNION POSTALE UNIVERSELLE

GREAT BRITAIN & IRELAND

GRANDE BRETAGNE ET IRLANDE

THE ADDRESS ONLY TO BE WRITTEN ON THIS SIDE.

POSTAGE ONE PENNY

ST. JOHN'S WOOD C JU 80 N.W

VICHY

Mr. Galton

~~Hotel~~ Cherbourg

Vichy

(Allier) France

New Ed Hereditary May 3/ 80 f. 46

A Peculiarity of Mental Vision

[Point of view of mental vision] FK

If I write the letter P on my forehead, in order that my Mind's Eye may see it correctly, it must be written backwards as seen by an external observer. This applies to the whole range of surface from one ear to the other across the forehead.

If, however, I write P anywhere on the back of the head (i.e. anywhere on the semicircle from ear to ear) the P must be written correctly as seen by an external observer. The change is abrupt & exactly on a vertical line at the ear.*

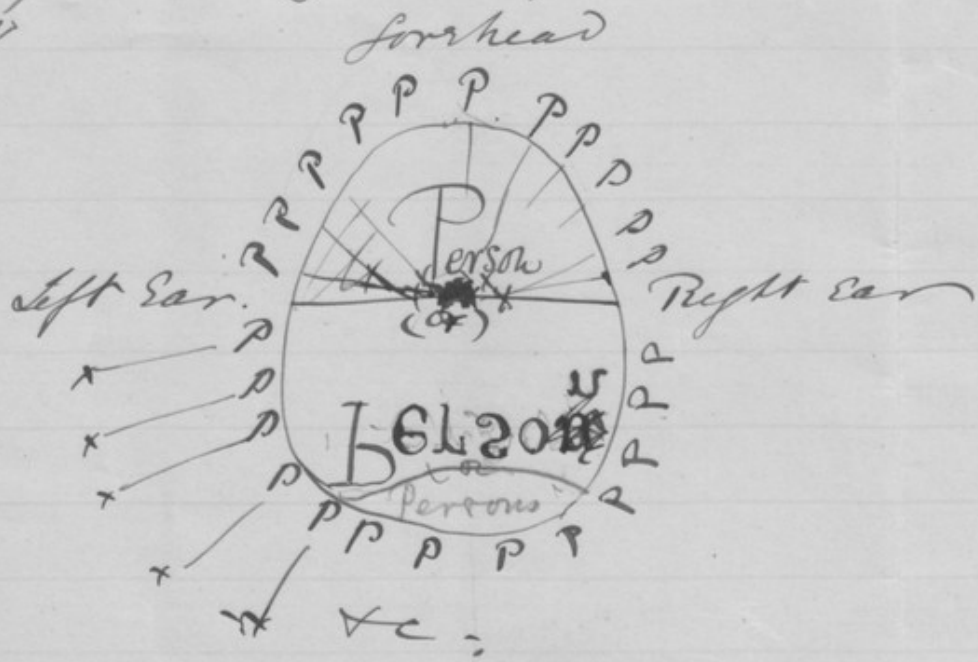
If the P be written anywhere on the top of the head, I can either mentally see it as written correctly to an external observer; or I can imagine myself

* PS In all cases it is as though the visualizer were behind the object & the observer in front of it FK.

looking upwards (as through a skylight!) but in that case the P is inverted and backwards (b) and if it be a word the letters are all inverted and backward.

The interpretation seems to be that the mental eye has the same range of vision as the bodily. Hence I seem to look through the skull, as if it were transparent, anywhere within the frontal half, or upwards through the top. But I must (as it were) get outside and walk round the back of my head to see the P. correctly written there!
By no effort of the will can I turn round inside and look through the back of the skull, as I can through the forehead.

The following diagram will illustrate it



× is the position of the mental eye i.e. in the centre of the Brain for all the Ps on the frontal semicircle; but outside for all on the back of the head.

The word "Person" is written in two ways: as I can see it either way

F. Galton

Rev. G. Henderson May 3/50 f. 50

Simultaneous mental utterances

I find it is by no means difficult to say mentally two sentences at once. Thus e.g. "How do you do" and "I am going home". I can readily hear both sentences at once, just as if two people were speaking at the same moment. By a careful effort I can manage three sentences, but not more, nor is it easy to hear the three voices at once.

The mental process is as follows. I first say distinctly (in my mind, not aloud, of course) "How do you do?" I then think of the sentence "I am going home" while I repeat "How do you do?" and then both sentences are mentally audible

together. Having got the two sentences well together, I repeat them and think of a third sentence, just as I thought of a second; the mind being now more concentrated on the 3rd part as it was before on the 2nd. The first sentence being somehow left to take care of itself.

It is by no means easy for me to "hear" all three sentences simultaneously distinctly, but by practice and care I have succeeded fairly satisfactorily.

Geo. Bentham

6 Fitzhugh Terrace
Regents Pk
N.W
Dec 18. 80

Dear Mr Galton

I send you some attempts at Clouds &c. It is a total failure. I get a young lady artist to do them: but I cannot get what I want. I also

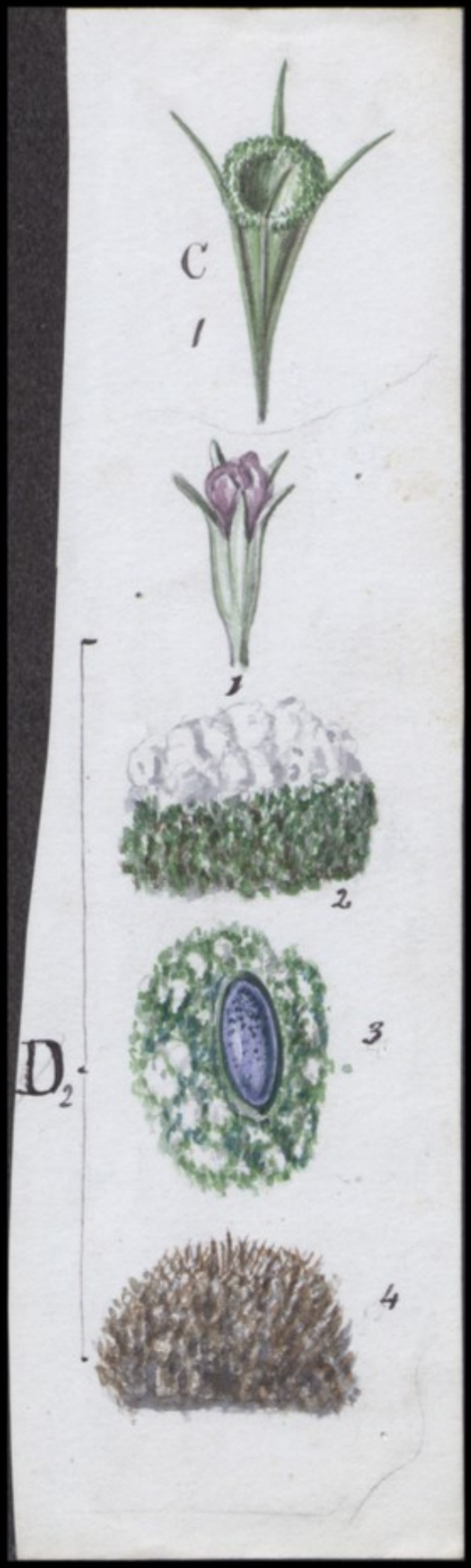
Send some numerals that man sent me.

How are you getting on with the results?

Have you published anything yet?

Ever yours sincerely

J. Allen


C
1
3
2
3
D2
4

f. 56v

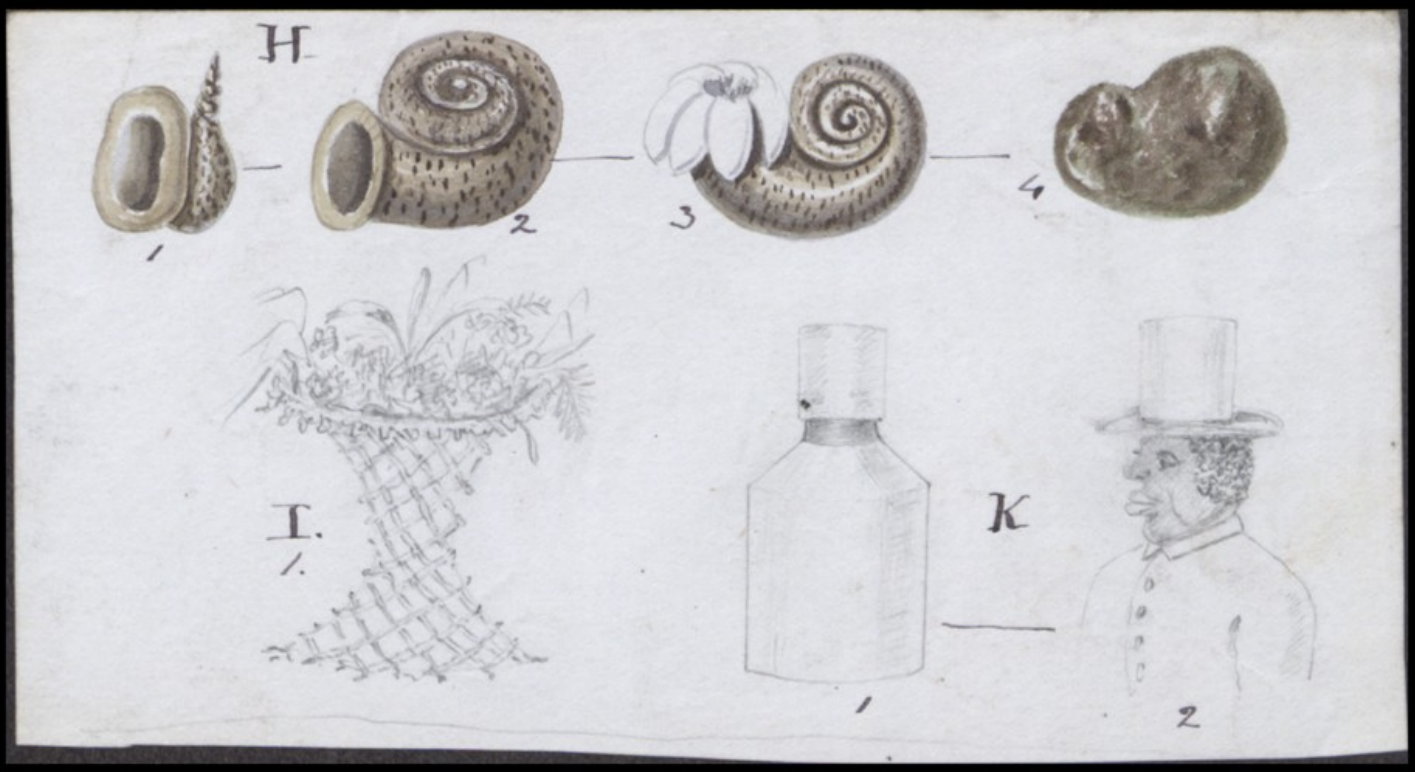

Fig 71
A
1
2
3
4
Fig 72
B
1
2
3

F.57v

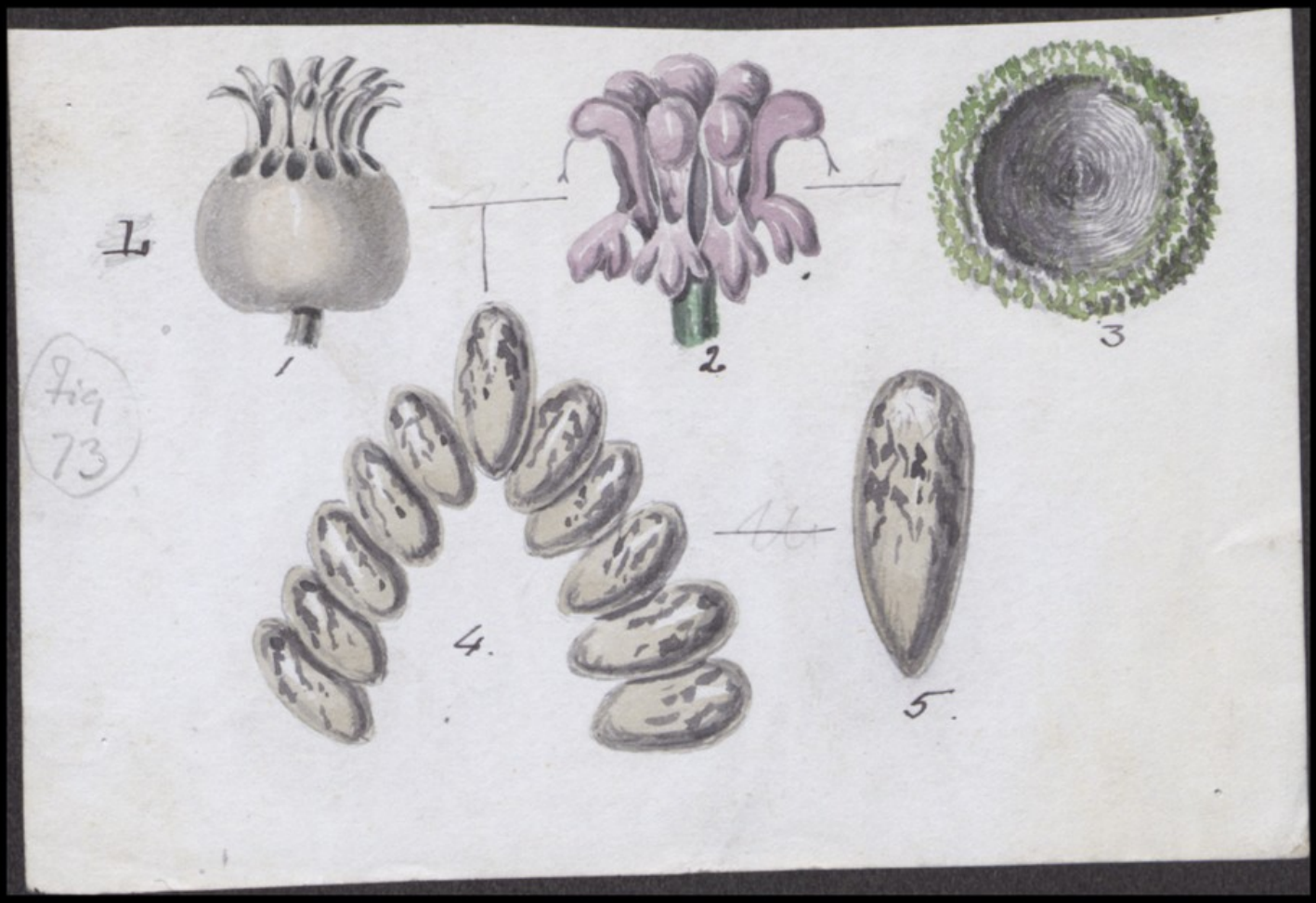
Fig 71 & 72

Fig 71

Fig 72


H
1
2
3
4
I.
1.
K
1
2

f. 58v


1
1
2
3
4.
5.
fig
73

f. 59v.

fig 73

73

Mrs G. Hettefield Lee
Regents Pk
N.W.

Dear Mr Gallon

I enclose a Newbury
Year from Mrs Norma
Moore (Dr Moore is
Warden of St Paul's. Hosp:)
& she tells me she has
filled up Dr Quantiss
when she was "Miss Smith."
She also tells me that
she & her sister both
experienced visual objects
will describe some for
you

I thought of lithography
these drawings but I
should not have time

at this season of the year; but if you will let me look at the proofs I should like to do so.

Her drawing will remind you of ~~this~~ one ~~the~~ I sent ~~per~~ Tailer, where monkeys were unequally distributed in a circle. – She always sees the words written as she has placed them.

What did Darwin think of the writing on the head-dr.?

f. 61

Yours truly

J. Ellerton

We tried the 'clouds' but am not satisfied with the results. Shall try again

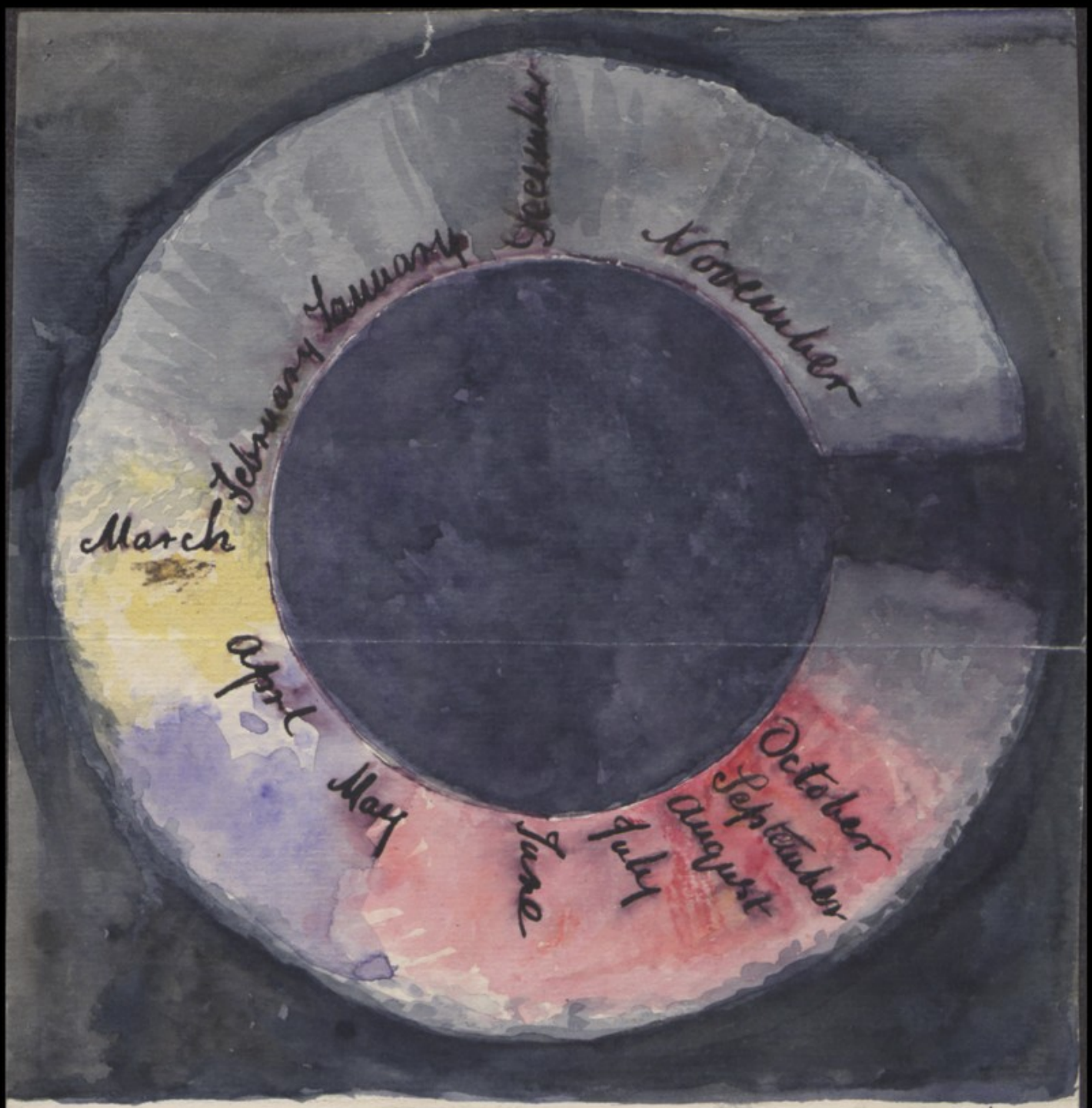


Fig 67

Communicated by G. Henslow

Amy Leigh Smith
(Mrs Norman Moore)

F. Galton

f. 63v

Fig 67

Statistics Visual ⁿ
Collected by Ned G. Henslow

	Total No.	Of whom bisexual
Chap. of 24 medical students	24	1 rest had no idea
Birkbeck Institute	20 male 20 female	1 only none
~~Dr Hunter's Botanist~~ Maclachlan Hort: Gardens Office (Ngman are given in letters) A ~~Elder sister~~ ~~Younger sister Mrs Barman~~	6 ~~4~~	none ~~one~~
Carnarvon Curry Mivart	3	none
Younger sister Mrs Barman & family	1	1
~~Husband~~ ——	1	0.
Mary Arthur Leonard Ethel	4	0
Henslow ——	1.	1
Harriet Rose ——	2	partly
Charlotte ——	1	1
Sedgwick ——	1	1 (distinct)
Eldest sister Mrs Henslow	1	1
Self (Ned G.) 2 friends ladies - - -	2	~~opposite~~
	27	5

Bournemouth Boarding House

no herd? A 73.2 / 2:73 = 1236 all cases 5:27 :: 1:17

Rec'd Yr Hentley
at Major Barnards
Beckhamblin
Wm Chellenham

f. 65r

Dear Mr Galton,

I return the book: for wh. many thanks. I found it extremely interesting. —

I have come across a new phenomenon & should like to know if it is new to you; viz: the faculty of unconsciously reversing objects.

Mrs Hawes showed me a picture of her father's family which he did from memory after staring at it in the National Gallery; but on

taking it there for comparison found that everything was reversed. It was a sunset on sea with a steam-tug towing a ship: & he had put all on left side which ought to have been on the right & vice versa -

2d case:
I showed a wood cut to a lady made from a pen & ink sketch, which I had previously shown to her: & she thought the engraver had reversed it!

3d case -
My little niece aged 6½ wrote the enclosed to her sister Mary, but my sister did not send it as the writing is from Right to

left a knot of the letters are reversed! She was not aware of doing anything wrong in so writing it.
The following is the page deciphered

NEW DOLLS HOUSE PIANO
new dolls house piano

THERE ARE LOTS OF COW=
there are lots of cow=

SLIPS.
slips.

YOUR AFF
I AM

C. S. B

Yes very long

MY DEAR MARY
I HOPE YOU
ARE QUITE
WELL
I HAVE GOT A

1864

left a knot of the letters are reversed! She was not aware of doing anything wrong in so writing it.

The following is the page deciphered

NEW DOLLS HOUSE PIANO
new dolls house piano

CRCHT ARE LOTS OF COW=
there are lots of cow=

SLIPS=.
slips.

I AN YOUR AFF

C. S. B

Yrs very truly

This is written backwards (p. 2

NEW DOLL
(new dolls house) !

HOUSE PIANO
(there are lots of cowslips!)

at the Committee (Scientific) meeting
today at Hort. Gardens, Sth Kensington:
I asked Mr Grieve (before we all
assembled) if they had received Mr
Not one of the 70 persons had the
slightest conception of what is meant
by it!! Dr Masters (Botanist), Mr Melachlan (entomologist)
Mr Crew & Wilson (Horticult.) Mr W. G. Smith
(artist & engraver) Mr Edgeworth (Botanist)
Hope for better luck next time they
F. 671

Yrs - G Henslow

Mr Grieve

f. 67v

POST CARD

THE ADDRESS ONLY TO BE WRITTEN ON THIS SIDE.

F Galton Esq
49 Rutland Gate
42 W

Rev G. Hensley

f. 68r

Filthfield Terrace
Regents Pk
N.W.
Friday 20.

My dear Sir

I send you the returns of Failes (the medical student) who has a very elaborate one he obtained from some friend (Oxford) & I thought he would prove so good a "subject" that I gave Failes a copy of the questions in order to get his friend to reply. I also suggested his asking him to write out his usual

(1)

Mesmerals a second time to see if it agreed with the one enclosed. Of course I cannot say whether he will take the trouble.

Another Med: St: gave me the enclosed return from a Lady friend.

(3)

One of the students said his only peculiarity was that he could not mentally concrete of colours in the abstract. That if he wanted to think of Violet as a colour he could not do it without thinking of the flower & so on

f. 69

he must have a concrete object of thought

Yours truly

J Tennyson

Henrietta Litchfield Esq
Regents Park
N.W.

My dear Sir.

I am glad to find my visualisations interest you. I will procure some more as occasion permits.

I am much obliged to you for your kind invitation, which I have much pleasure in accepting & shall be very glad indeed to hear your paper afterwards.

Yours very truly
G Allen

6 Fitchfield Ter.
Regents Park
N.W.

Dear Mr. Gallon

I have tried twice with clouds, but cannot bring out what I want. I hope to see an under artist this week & thought of asking him to try his hand at it. — Can have I get found the sort of paper I want: but have tried to

f. 72r

f. 72v

Sir W. — I shall
[illegible] reserve, &
perhaps by the time
you return, something
may have come of
it. Meanwhile Mrs Galton
may be prepared
by her Mr & Lady
Asterie we told
Yours very truly
Geo. Sherlock

P.S. The only fresh bit of mental power I've met with, is a friend who can go on with his drawing (he is an architect) & can listen to a discussion, or a book read aloud at the same time: but I doubt whether he ever sufficiently analyzed the process in his mind, or out whether to find ~~that~~ the two things — Thinking of the drawing and attending to the reader — were absolutely simultaneous.

Fig 64

To the artist
The background colour should be a smoky gray not so brown as is represented here

up to Thirty I see the numbers in clear white.
To 40 in grey. 40 & 50 in flaming orange
50 & 60 in green. 60 & 70 in dark blue.
70 I am not sure about. 80 is reddish I think & 90 is yellow: but these 3 last divisions are very indistinct in my mind &c.

R. Kingsley

the remarks in the table are her own (optitude in mathematics)

Fig 64

Macmillan & Co.
Publishers,
29 & 30, BEDFORD STREET, COVENT GARDEN, W.C.

LONDON, April 25. 1883.

Dear Sir,

In accordance with your request we herewith return the list of names to whom you wished your book sent. They were despatched yesterday, on which day the book was published.

Yours faithfully,

Macmillan & Co

Francis Galton Esq.
42 Rutland Gate.

Published April 24/83 f. 2

MACMILLAN AND CO.

Human Faculties

June 7/83

Sales	247
Agents	31
Presented	48
America	
	326

740-F.Y

Galton

Sent 24. April 1883.

X √ Professor George Darwin FRS
Trinity College
Cambridge.

√ Miss Galton
5. Bertie Terrace
Leamington

√ Mrs Haweis
Amber House
Lord's
Regent's Park

√ Herbert Spencer Esq
(Athenaeum Club)
to further address if can be found

√ The Revd George Heathcote (140 Kensington Park Road)
b. Titchfield St. W. 02
(6. Titchfield Terrace
Drayton House, Ealing. which
I will write to-day)

√ Dr James Key
Montague
Cape Colony
South Africa

X √ Sir John Lubbock, Bart.
Lombard St.

X √ Prof. G. Croom Robertson
31. Kensington Park Gardens. W.

√ General Strachey FRS
Stowey House
Clapham Common

√ Mr Galton

X √ ~~The Revd~~ Moncure D. Conway
Inglewood
Bedford Park – Turnham Green

f. 4r

29 and 30, Bedford Street, Covent Garden,

LONDON, W.C., Oct. 18 1883

Sir,

A Review of Human Faculty

appears in the Lancet

Oct 13. *We shall be happy to forward a copy, if required.*

Cannot find? Very

Yours faithfully,

MACMILLAN & CO.

f. 4v

POST CARD

THE ADDRESS ONLY TO BE WRITTEN ON THIS SIDE.

HALF PENNY

OCT 8 89 S.M.P.

F. Galton Esq
42 Rutland Gate
Hyde Park

f. 5r

Macmillan & Co.

Publishers,

29 & 30, BEDFORD STREET, COVENT GARDEN, W.C.

My dear Dalton LONDON, May 12. 1881.

I was so sorry that our short interview was interrupted by my poor friend who had not seen him

f. 5v

I open my note to suggest that you might call your new Science Photophysionomy or ology.

967 Willson Avenue
Cleveland Ohio. U. S. A.

Mr. Francis Galton
42 Rutland Gate, London

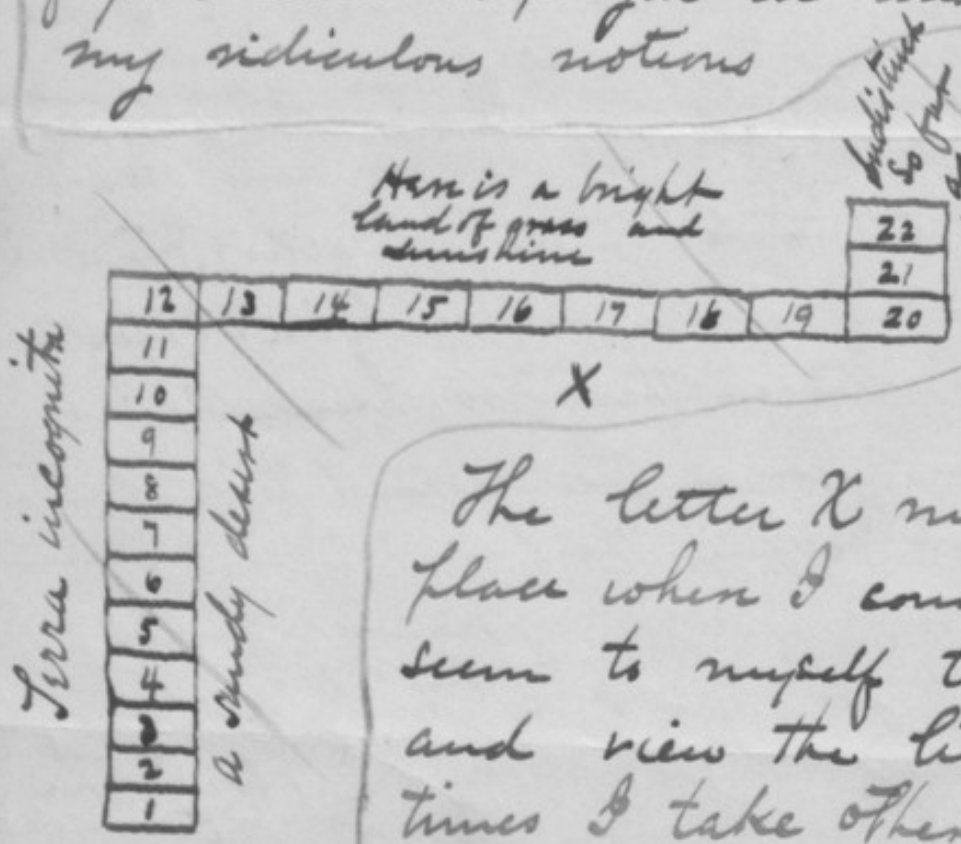
Sir:

In answer to your request published a few weeks ago in "Nature" I send you here an account of some of the peculiar notions which I associate with numbers.

To me the numbers from 1 to 20 lie on a level plain, but from 20 they slope up to 100 at an angle of about 25°. Beyond 100 they are generally all on a level, but if for any reason I have to think of the numbers from 100 to 200, or from 200 to 300 &c, then these numbers, between these two hundreds, are arranged just as those from 1 to 100 are. I do not, when thinking of a number, picture to myself the figures which represent it, but I do think instantly of the place which it occupies along the line. Moreover, in the case of numbers from

f. 1v

1 to 20 (and, indistinctly, from 20 up to 28 or 30) I always picture the number, — not the figures, — as occupying a right-angled parallelogram about twice as long as it is broad. These numbers, all lie down flat and extend in a straight line from 1 to 12 over an unpleasant, arid, sandy plain. At twelve the line turns abruptly to the right, passes into a pleasanter region where grass grows, and so continues up to 20. At 20 the line turns to the left and passes up the before-described incline to 100. This figure will help you in understanding my ridiculous notions



The letter X marks the place where I commonly seem to myself to stand and view the line. At times I take other positions.

but never any position to the left of X nor to the right of the line from 20 upwards. I do not associate colors with numbers, but there is a great difference in the illumination which different numbers receive. If a traveller should start at one and walk to 100, he would be in an intolerable glare of light until near 9 or 10. But at 11 he would go into a land of darkness and would have to feel his way. At 12 light breaks in again, a pleasant sunshine, which continues up to 19 or 20 when there is a sort of twilight. From here to 40 the illumination is feeble, but still there is considerable light. At 40 things light up, and until one reaches 56 or 57 there is broad daylight. Indeed the tract from 48 to 50 is almost as bad as that from 1 to 9. Beyond 60 there is a fair amount of light up to about 97. From this point to 100 it is rather cloudy.

If the numbers refer to degrees of the thermometer my standpoint is to the left of 40°F. and I am obliged to change my ideas of 1–9 being a sultry region. But here it is evident that I am not thinking of pure numbers, but rather of the temperatures which they indicate.

As to the figures, I think of 2, 4, 6, 8 and 9 as good-natured, open-hearted fellows, while 1, 3, 5 and 7 are shrewd, tight-fisted, sarcastic. 9 is a particular friend of mine, but I dislike 1.

To me the months are arranged in this order

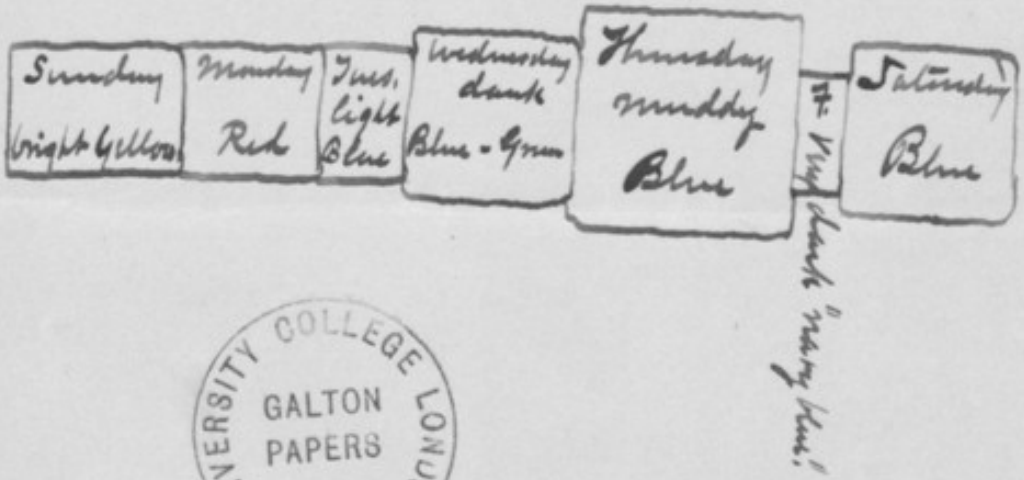
January December
February
March
April November
May October
June July August September

In reading this line my standpoint is always the date then present.

George E. Smythe

f. 35

The days of the week are arranged along in a line and have a shape, a color, and a relative size. Thus



I have many color associations with names, and times often suggest to me tastes – or rather, certain combinations and successions of notes are thus suggestive. Of course all these notions are utterly absurd, still I would not willingly lose them. I cannot remember a time when I did not have them. They are old friends. I am instructor in Physics at the Central High School in this city, and have also a private laboratory as an analytical chemist. My parents, I know, have some such notions about numbers as I have and if I can get a statement from them

F. 3v

I will forward it to you. I remain
Very Respectfully Yours
George F. Smythe

February 21st 1880.

967 Willson Ave.
Cleveland, Ohio

Francis Galton Esq.

Dear Sir

Last winter I wrote you a letter in regard to my way of seeing numbers, and in due time received your reply accompanied with certain questions. Before I could find time to reply I was taken with severe illness which laid me up for a long time. On recovering I found so much work on hand that I have not, until within a short time had any leisure to answer your questions. The two pamphlets which you have

so kindly sent me, and which I received a few days ago, have stirred me up to write to you again. I have put down in my paper a number of things which may not be of interest or value to you, but it seemed to me worth while to write them on chance of their being of use. After September first my address will be South Williamstown Mass. I shall there be engaged in preparing boys for admission to Scientific Schools, and will, if you desire it, make careful investigation among my pupils upon these matters.

I remain Very Sincerely Yours

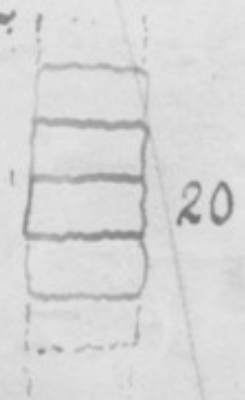
George F. Smythe

August 12th 1880.

1 E. F. Smythe (Robins O.) F.71

The engraver in reproducing my "form" has left out one rectangle to the left of my usual Stand-point. I find that when thinking of degrees of the thermometer my Stand-point is at the left of 0°C. or 32°F and that the rectangles and indeed all my ideas, undergo considerable change. When I stand over against 32°F and look up and down the line I notice no change except from 14 or 15 downward. The rectangles become indistinct and I associate with them a notion of being pinched with cold, and of a pale blue-white color. But when I am using the Centigrade scale

I lose all my ordinary conceptions of place and see the figures (indistinctly) printed at the right of the rectangle of the corresponding number of the Fahrenheit scale. Thus, if I think of 20°C I see something of this sort.



The 20 is here opposite 68. Suppose I am thinking of 170 C, I do not have in mind just what it corresponds to, but I know that it is somewhere about 62 or 63 and I form a corresponding ~~dim~~ indistinct picture of it and its place. All this evidently comes from my not having learnt the Centigrade

scale until I was eighteen or twenty years of age, and from the habit which I then formed of always reducing degrees of one scale to those of the other.

(B)

I enclose a picture in perfection and color of my "form". I have taken great pains with this, but am far from satisfied with it. I know nothing about drawing and consequently am unable to put upon the paper just what I see. The faults which I find with the picture are these. The rectangles stand out too distinctly, as something lying on the plain instead of being, as they ought, a part of the plain. The view is taken of necessity from an unnatural stand-point and some way or other the region 1–12

does not look right. The landscape is altogether too distinct in its features. I rather know that there is grass, and that there are trees in the distance, than see them. But the grass within a few feet of the line I see distinctly. I cannot make the hill at the right slope down to the plain as it ought. It is too steep. I have had my poor success in indicating my notion of the darkness which overhangs the region of clouds. In reality it is not a cloud at all, but a darkness.

My sister, a married lady, thirty-eight years of age, sees ~~[illegible]~~ much as I do, but my indistinctly. She cannot draw a figure which is not by far too distinct. ~~[illegible]~~

 E. F. Smythe 1.95

who is a good deal of a poet and has contributed poetry and stories to some of our leading magazines, such as Scribner's, does not visualize numerals at all. Neither does my mother. My father says that he does, but he cannot look them fairly in the face before they are gone, and he cannot tell how he sees them. Several of my pupils have contributed their views upon the subject. I shall enclose two of the papers. They were drawn by a boy 14 years of age and his sister a year younger. The boy has studied Algebra: his sister has not. I have no doubt as to their honesty. I also enclose a paper having upon it, in reduced size, the forms as seen by four or five

other pupils. Had my health permitted I should have followed the matter up with care, and systematically.

I commonly visualize my "form" with great distinctness. I see it just as anyone sees any room or field with which he has long been familiar. Just as I can, for example, see at this moment the garden at my grandmothers, where I used to play when a little boy. I have learnt from your paper "Mental Imagery" that not all can do this. This surprises me greatly, for I can in the briefest fraction of a second call up any familiar scene just as clearly as though I were there looking at it. And I carry in

my hand perfect portraits of all my acquaintance. I cannot think of one of them without the picture rising before me in my minds eye, — but not with relation to external space. And whenever I read of a place or a person or hear of one, I form instantly a picture of that place or person which I always retain unless I afterwards see the place or person in reality. And it is often hard for me to give up my immagined picture and accept the true picture. I never wish ~~to read~~ a novel which I am reading to have pictures. They disturb my own pictures. I read, some years ago, a number of the novels of Charles Dickens in editions that had ~~not~~ no pictures; and to this

day if any character or situation mentioned in those books is called to my mind I <u>see</u> the man or place or whatever it is just as I first saw it, and with perfect distinctness. This is often a source of much annoyance to me in recalling persons and places spoken of in the Bible. I cannot remember a time when the Bible stories were not familiar to me. Well, away back when I was a little child, I pictured to myself these places and persons and these pictures stay by me and will not be replaced by others. They are so utterly absurd, - many of them, - so inadequate, so false that I would gladly forget them. But they will not go. If anybody says "Noah" to

me, I behold that patriarch in my grandmother's garden, clad much as the gardener used to be, and hammering away at an ark about ten feet in length and modelled strictly upon the toy "Noah's arks" of my infancy. And so with everything else.

I have put to myself the questions which were put to the Charterhouse boys and here are my answers.

1. I can see the breakfast table as I sat down to it this morning <u>exactly as it was</u> if I make an effort and bethink myself as to the whereabouts of each dish. Without this effort I have a very clear picture of the table, with light and color all as they should be, but I do not locate any dish, — I simply get the

general effect, — just as a painter does not paint every leaf on his trees, but rather their general effect. I ought to say that I do not think that I visualize the colors exactly as they are, for I cannot "carry colors in my eye," (as the expression is) very well. When it comes to a question of slightly different shades of color, I am unable to say whether this or that corresponds with the color of the thing which I have in mind. Therefore I cannot visualize colors with perfect exactness. I think that this is probably true of many others.

I can see with my minds eye the whole room at once. But the part behind me is not perfectly distinct. I can see ~~the whole~~ all the surface of a globe or a die at once, these objects seeming then to be transparent.

Mental images are to me outside my ~~fa~~ head and either in front of me or behind me, near at hand or far off, just as I please to have them appear. I do not think that I can do the thing which you mean when you speak of projecting an image upon a piece of paper. If I hold up a sheet of paper and think – for example – of the view of Lake Erie from Lake View Park, the image will not stay on the paper. I can make the image as small or as large as I please, but I can't fix it on paper, although I can see the paper and the image of the lake at the same time.

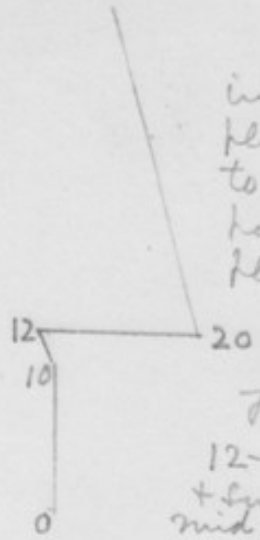
You asked about my associating tastes with musical sounds. I have tried to investigate this matter

that I might send you an intelligible answer, – but I have had little success. That certain combinations of musical sounds do call up the taste of apples, or celery or cinnamon or something ~~else~~ else then can be no doubt. But if I listen to music for the purpose of studying this matter I cannot get honest results, – I can make anything taste like anything. So I have tried to catch myself off my guard and have recorded several bits of tunes which have suggested tastes, but now when I think over the sound I find that I can make it taste in any way that I please. I have tried to record these things and then forget them, so as to leave my mind fresh for a new test, the results of which I might compare with my previously recorded

results. But I cannot do this. I cannot forget what I recorded. However I will say that the sensation which I seem to have is one of <u>pure taste</u>, unaccompanied by ~~taste~~ any sensation of <u>odor</u> or <u>touch</u>. Perhaps I ought not to say that I really seem to taste this or that but rather that the taste of this or that is suggested to me. None of our family have these notions about sound and taste.

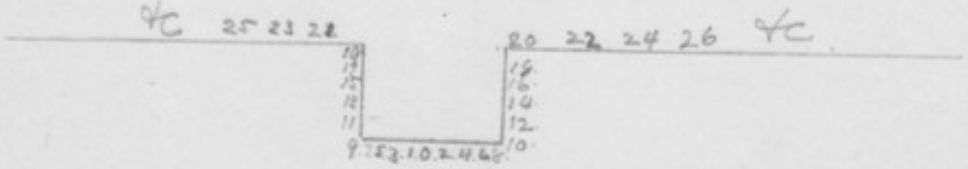
Geo. F. Smythe.

Seen in a vertical plane & distinct above 100

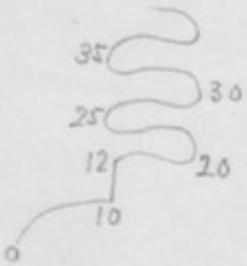


From 0 to 10 in a vertical plane. From 10 to 12 upon a horizontal platform.

The line 12-20 is horizontal & suspended in mid air.



This form is so remarkable that I can hardly bring myself to believe in its genuineness. Still the boy seems to be honest and stands cross-questioning very well. The figures lie on a horizontal plane



These slope upward at about an angle of 45°.

G. F. Snyllie

From F. Galton
42 Rutland Gate
for fig 65 in the
Coloured sketch.

(this is the Mitchin original
first found Nov 2/82)

f. 16

I never saw
this region.

The * indicates my
standpoint, but the plan
is not absolutely fixed.

Mrs Stevenson

f. 1r

SCOTTON.
RICHMOND,
YORKSHIRE.

Dear Mr. Galton,

I must apologise to you that I have not sooner fulfilled my promise to send you the impress of my twins' hands, which I now enclose. If they are not sufficiently distinct pray return

them & I will try again.
I shall be very happy
to show you the children
to-gether when I return
to town. I shall be
in London during November
& December in all
probability & shall be
glad at any time to

f. 2

See you at 65 Queen's Gate.

Believe me

Yours Sincerely

Ellen E. Stevenson

Augt. 14th.

f.3

SCOTTON,

RICHMOND,

YORKSHIRE.

Ethel

f. 5v


Mabel
Nail
Nail

f. 6v

f. 7v

Mrs Sleeman
Inspection of Turing Hall
ask me to call in Nad
in Queen's Gate.

Francis Galton Esq
42 Rutland Gate
S.W.
London

f. 5v

Engraved by Miss Hodgkin

Ellen Stones

Fig 66

April 25th 1881

A E I O U A E I O U

aa æ ai ao au aw

ea ee ei eo eu

ia ie ii io iu

oa œ oi oy oo ou ow

ua ue ui uo uu

Ada met me in your garden and said, Take those roses, they are sweet. Do not touch my dog Cæsar, or you will annoy him. I caught hold of her shawl. Cræsus was rich. Paul hurried in, running.

Red, blue, green, yellow, purple, brown, golden, silver, black, white, violet, orange.

The colours of these letters varies with the different way in which they are sounded. "Au" and "aw" have the same colour, quite distinct from "a" and "u" or "w" separately. "E" is blue when short as in "net". "O" is more crimson when followed by "i" or "y" as in "annoy".

f. 1v

Fig 66

f. 15

Sally

Hollywood Hills
Stamp postcard
2 Feb: /83

Dear Mr. Galton.

I don't know whether I ever sent you some observations I made on my little girl teaching her way of discriminating numbers

She was 6 years & 4 months old. One day I overheard her talking to herself about numbers "Two is a dark number, forty is white number" & so on. I then questioned her & found her (by putting the questions again & again) to be certain about the following.

1 is white number
2 " dark "
3 " white "
4 " dark "
5 " pink "
9 " pointed & dark "
11 " dark green "
14 " bright "
20 " gray "
40 " white."

about others she hesitated &

f. 1v

way clearly uncertain. At this time she did not know numerals by form except by means of the clock. She had learnt a good deal by playing dominoes with me.

I am very glad that you are working at anthropometric psychology. I am convinced that much may now be done in this direction, if exact results are pretty needed for the proper working out of the theory of education, with which I am very pretty acquainted.

Wishing you all success,

I am,
Very truly yours
James Sully

Sully

f.3

Stoke and Hons
Hampstead.
18 Feb: /83

Dear Mr. Galton,

Nothing but pressing
engagements I have received
my little girl about her
way of visualizing numerals.
I find that forms of the
colours are the same as
before, which seems arise
unmodified (or perhaps commonly by being more
clearly discriminated), & &
others added. I appreciate
results. Yours very truly

James Sully

See over

	6 yrs 4 mos.	9 yrs 3 mos
One	white	white
Two	dark	black
Three	white	gray
Four	dark	darkish red
Five	pink	pink
Six	—	—
Seven	—	—
Eight	—	dark brown
Nine	pointed & dark	—
Ten	—	—
* Eleven	dark green	bright yellow
Twelve	—	—
Thirteen	—	—
Fourteen	light	like four
Fifteen	—	— five
⋮	—	—
Twenty	gray	—

— signifies that no colour was assigned with the number.

Albemarle St
27 Feb. 1882

Dear Sir,

The Woodcuts may be in your charge as long as you wish.

Yours truly
Wm Vincent

Francis Galton, Esq

Mrs Kemp Welch

F. 1r

Ledge Point
Westgate on Sea
Monday.

Dear Mr Galton,

My sister asked me to send you my mental vision of the year. Here it is as well as I can represent it on paper; it is rather difficult to give it fully without making it too definite. The

the grey on each side means a total blank. I have given you a distance of five years receding as they do in my mind.

I enclose a card for the loan Exhibition of pictures to be held in St Judes School-rooms through this, and Easter week. There was quite a second

Bethnal Green Museum held there last year & the poor people so fully appreciated it (the pictures chiefly) that Mrs Barnett (the Vicar) has again organised an Exhibition.

I hope you may be able to go. I have been staying with Mrs Meinertzhagen & her children but return to town to-day.

Will you tell me

f. 2v

if I have been faithful
to the description I first
gave you of my vision
of the year.
Our address is
32 Onslow Gardens
Yours very truly
Mary Kemp Welch.

77, Grosvenor Street, Grosvenor Square,
W.

Twin brothers Messr. N — Ob. 23 at time of death — They closely resembled one another in every particular both physically & mentally as well as always having the same ailments together. During the ~~cold weather~~ month of March one of them was seized with acute pleurisy which involved the diaphragm & then travelled over to the other side. From this he died in nine days. It was not known that he had caught cold, the cause of the attack not being very apparent —

his ~~turn~~ brother sat at his bed side
assisting in nursing him. On the day
of his death the turn ~~sick to~~ was apparently
~~perfectly~~ quite well but said to his
father, who was making preparations
for the funeral, that two graves had
better be made ready as he should
soon follow his brother. This was said
deliberately & calmly. On that night
he was seized with acute pain in the
chest & the medical man found
pleurisy as in the other case. The disease
extended, passed over to the other side

proved fatal in nine days. There was not a single symptom different from what had been observed in the brothers case.

A young lady, now at my house, says there are twin sisters who closely resemble one another. They have been always together following the same pursuits & pleasures. They have always had the same ailments at the same

time - When twitted on account of their attachment they used to tell their brothers & sisters that the latter had no conception of their love for one another - ~~A few months after~~ Latterly one of them has married & gone to Scotland but she has taken her twin sister with her. The husband has twice since marriage mistaken her for his wife & said he had found the mistake until the sister came into the room -

Samuel Wilks

Nov 26. 1880