Correspondence A

Publication/Creation

1852-1909

Persistent URL

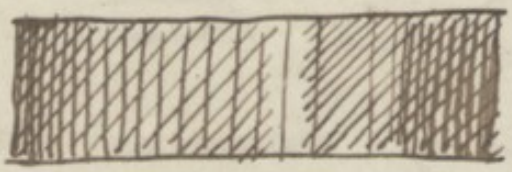
https://wellcomecollection.org/works/h2vmt76z

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

Capt Abney ? 1892 f. 1r

Dear Galton

I have often wondered what you propose and I honestly say that I have never worried at a solution of the problem as I have I prefer to leave a clear space of standard lines



This is the nearest approach that I have made to it

the present colour by
mine, & light & shadow by
natural mine.

Don't you think it
the Lord. might make a
bold change - and have
3 chromos prepared to
illustrate. Normans. G B
& R.B. & (perhaps) Blue
perception only. This W. make
4a I don't think it W
lost very ~~[illegible]~~ much
& we have a return

f. 2

amount of money left.
I think you have a copy
of Polk's charge of his
own. Colonel-Major. Perhaps
I might get some R.H.B.
person to ~~do~~ assist their
& the thing will be done

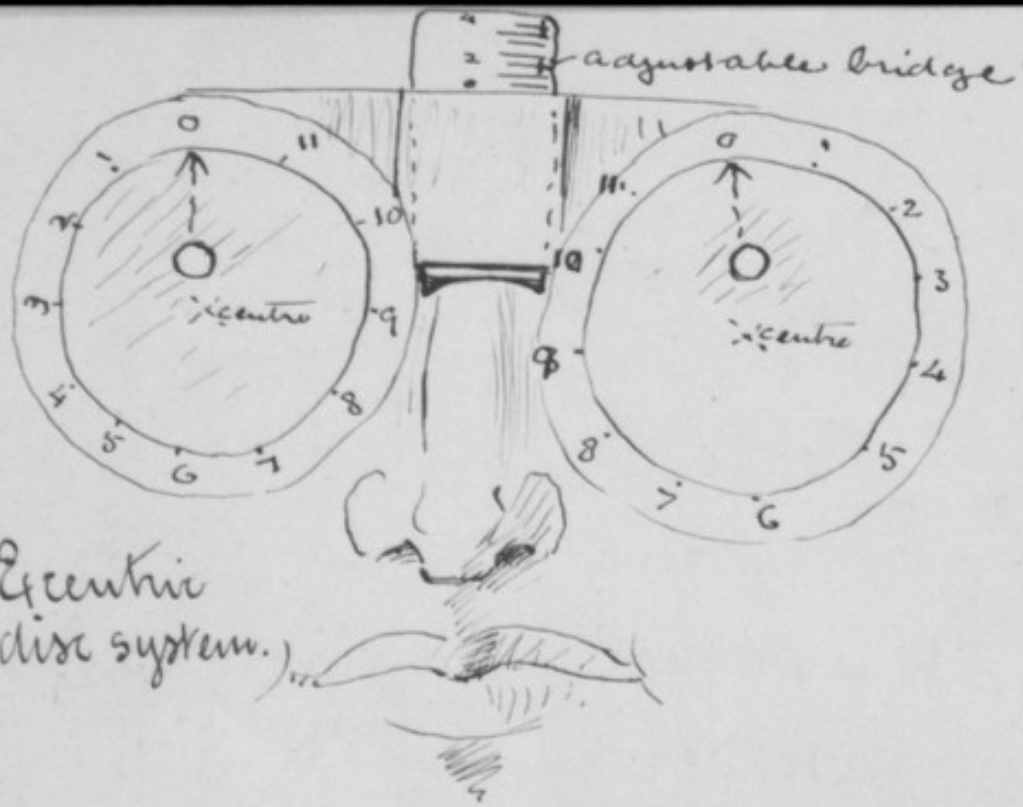
Yr. sincerely
W. W. Mr. Abney

(Ackermann) 122 Sinclair Road
Kensington W.
Octo 19th 1894

F. Galton Esq F.R.S.
Dear Sir
I enclose a few photos of your useful institution at S. K. Museum, taken whilst there awaiting some measurements.

I have noted allready the value of such an institution in several cases under my own observation. and all folks I have taken there have declared their thankfulness and expressed their interest in its future success, tho at first there is a reluctance to go there as if the tests they would be put too were something to be dreaded.

B.



Eccentric disc system.

Sliding scale in millimeters

A.

Suggested test for centre to centre of eyes.

The same object might be attained by making holes excentric, readings wd then be more accurate but bridge would have to be adjustable, see sketch B.

your assistant has his hands so full I scarcely like to suggest any further measurements, but in my own case it was years before I found out, why I could not see tho Stereoscopes or ordinary spectacles, I then discovered that my eyes are centred wider apart than the general run of humanity & tho my eyes have been under examination at numerous times by professional men it never occurred to any of them to test the distance apart of the eyes, which your system of head measurement might have indicated & a further simple test by looking thro perforated spectacles have confirmed.

Thanking you for your generous exertions on behalf of humanity

Yours faithfully A. W. Ackermann

H. Adams

H. Adams

60 Queen Victoria Street,
London, E.C. 27 Aug. 1892.

Francis Galton Esq. F.R.S.

Sir,

I obtained your "Human Faculty and its Development" about four years ago & was intensely interested in the contents. I made a few notes at the time intending to forward them to you, but something else came in the way & they got put aside. I have just come across them again, and as I see no reason to modify them after this interval I send you the substanceof them.

I have always had strong powers of visualisation, or what I have hitherto called eye-memory, e.g., passing persons in the street without noticing them & afterwards recalling & studying their features. My profession of Engineer & Surveyor has doubtless strengthened this faculty and I have frequently astonished my confreres by describing details which I had taken in by a cursory glance and quite unconsciously at the time. Last summer I was in Belgium and visited some twelve or thirteen of the principal towns. On my return home I remembered that a cheque had been sent me by a correspondent which I had put by at the time and had apparently lost. I had not the slightest idea where it was but I retravelled the whole ground by mental pictures and saw the envelope containing it lying in a drawer with other papers and various odds and ends at a Brussels hotel. My wife thought it could not be so & said Antwerp was the place, if any, where I had left it. However I wrote the Manager of the Hotel at Brussels & in a few days had the satisfaction of receiving the cheque &c. which had been found as described.

I have some doubt as to the classification of vividness which you make with regard to visualisation as it appears to me that it is impossible to compare it with actual sight. In my own case I should say that my visualisation is precisely similar to the appearance of objects in dreams, the vision is generally concentrated over a small space at the time but can travel rapidly to any other part far or near When extended over a large area there is an absence of detail. I may say that I am very myopic, I have to bring the type of "Human Faculty" within four inches of my eyes to be able to read it without glasses.

I had not heard of "number-form" before reading your book & was at first inclined to ridicule the idea, but I found that if I shut my eyes & thought of numbers I visualised them as standing vertically on the table one behind the other in front of me and a little to the left, like a row of bankers' pass books, unity nearest, the tens stronger than the intermediate figures, and 100 larger than the others, the figures black, on misty tablets with indefinite margins. Beyond 100 requires some effort & I lose the previous part, in fact the same tendency to strong local visualisation appears. A whole number and decimals appears thus :- 8·5343 fading from view on the right. Years ago I used to practice rapid casting & mental arithmetic & after a short spell of practice I could unconsciously add up column after column, putting down the correct total. In the same way in more advanced work I used to find that if my conscious brain got muddled & made a pause my unconscious one (if I may so describe it for lack of a better phrase) went on with the work & intimated the correct figures to me without any personal effort or rather in spite of a personal effort to pull myself together again & proceed with the work I had in hand. Sometimes if I wanted to multiply two quantities, my unconscious power set to work & before I could make a start by conscious effort

would give me the answer. After recording my number-form these facts of unconscious cerebration came up in my memory & I felt a great desire to find out more about the method. I said to myself and pict--ured the figures in front of me 8·5 / 2·3 to be multiplied together. Im--mediately there seemed a confused jumble of figures lying flat and superposed on the table with 19·55 lying on the top, which was the correct answer. Picking out the different layers of figures they seemed to be 16·15 at the bottom i.e. laid down first, then 2·4, then 1·0. Upon subsequent analysis the method appeared to be the upper line of figures, 8·5, multiplied by those below, 2·3, each by each, then the ~~three~~ 3 by the 8, and lastly the 5 by the 2, and the whole added up. The decimal point kept its position all through. I have heard the term cross-multiplication but am not aware whether this has anything to do with it & have no recollection of ever having learnt or conscio--usly used such a method as this. In this and many other things I find that I do best when I lose all sense of self & am thoroughly absorbed ~~[illegible]~~ in my work.

The personification of numbers appeared to me an exceedingly grotesque idea but I found that I unconsciously attached certain qual--ities to them as follows:- 1, immature: 2, dandy, fop: 3, mean: 4, workman: 5, tall, thin, lank hair: 6, motherly: 7, irritable: 8, baker: 9, crossing-sweeper: 10, lawyer: 11, old maid: 12, beneficent. This seems absurd & I cannot account for the associations. Dwelling upon the subject appeared to introduce a personal element that affected the spontaneity and suggested doubt as to whether these attributes were not pure fancy, however I give you them as they occurred to me. I have no colour associations with the individual numbers.

Replying to your Questions p.378 I may say further :-

1. Fairly clear, exactly as appearances in a dream.
2. Sharpest definition over a contracted area.
3. Colours quite distinct and natural, with the proviso above.
4, Can place myself in any position with regard to external objects and see the whole of an interior at the same time but the whole of an exterior seems to be partly by a quasi transparency.
5. Images appear in front of the eyes or in any position according to will but mostly at a distance corresponding to reality or as a diminished view about 18 inches from the eyes. If the object is at a distance I mentally travel to it & then it appears close. By a strong effort I can project the image on paper but it is like looking at a solid and trying to fancy it is flat.
6. The mental picture requires an effort to maintain, the smaller the part over which the attention is concentrated the brighter it becomes The image is the same whether the eyes are open or closed. The dif--ficulty of maintaining it for a long time seems similar to the dif--ficulty of directing the gaze upon an actual object for a length--ened period. Without any special reason to maintain it the mind wanders.
7. Features recalled distinctly and can be made to speak and act in any desired way. The voice & change of expression being vivid as in dreams.
8. Scenery retained with such detail as could be observed with near-sight. Mental pictures so vivid from descriptions that many new places seem to have been visited before.
9. Difference precisely same as between dreams and reality. Have never mistaken the two but have had some curious experiences which I take to be cases of "thought-transfer".

10. This is given above. The association of this particular number--form may be through infantile letter blocks, dominoes, number labels for dia--grams, &c. but not knowingly.
11. I have a strong aptitude for mechanics and construction generally. My memory seems to consist far more of visualisation than of what is commonly known as memory. As a student sitting for exams I could often read off mentally from the text book, and where my memory was defective it seemed as if the printing was shadowy. I have had some thousands of students under me during the last twenty years & scarcely a dozen could be named without his visualised counterpart appear--ing instantly. I was much struck when I was a youngster upon reading the account of Robert Houdin training his son in rapid observation, and this may have caused me to develope a strong power of visualisa--tion in the effort at rivalry that was naturally induced.
12. A to F all good, i.e. as vivid as a thing can be that is not reality.
13. Yes. The inside of a rumbling omnibus can be made an effective substitute for a full orchestra, it seems more real than the purely mental music, there seems like a power of selection of the notes in harmony from a confused jumble of sounds.
14. Always good but have improved. For many years have impressed upon my students the necessity for picturing the subjects of their drawings as solids, knowing how useful it had been to me.

I send herewith a copy of "Machinery Market" containing a short biography of myself as the readiest means of putting before you such of my antecedents as may bear upon the above notes.

Trusting these notes may be of some interest although pro--bly of little practical use,

I am, Yours faithfully,

Henry Adams

Cross, Stone,

Staffordshire,

29 May 1904

ested in reading
address to the
iety on Eugenics.
too busy to write
I have had some
personal acquaintance with your
advocacy in this direction but it
has always seemed to me that
altho' your object was desirable
the mode of procedure proposed
appeared so impracticable as to
render it useless. Any new
developments in moral practice
is so blindly and bitterly opposed
by the clergy and they also encourage

Oulton Cross, Stone,

Staffordshire,

29 May 1904

Dear Sir,

I was interested in reading the report of your address to the Sociological Society on Eugenics. but I have been too busy to write until now. I have had some previous acquaintance with your advocacy in this direction but it has always seemed to me that altho' your object was desirable the mode of procedure proposed appeared so impracticable as to render it useless. Any new developments in moral practice is so blindly and bitterly opposed by the clergy and they also encourage

the laity to meet these proposals with deeply inherited ~~prejudice~~ prejudice rather than by openminded and logical reasoning, and moreover the subject dealing in this case with the relations of the sexes and the liberty of the individual that it makes one despair of accomplishing any improvement in the human race on the lines you advocate.

Altho', if the line you take were the only practicable way, I for one would be prepared to support and spread the ideas if it took till doomsday to accomplish the object in view. My opinion is that some method of sterilizing the unfit would be far more practicable and would receive much more support. Because—

1. It would not prevent the natural intercourse (the right to which probably most of the unfit would refuse to surrender)

2. It would not upset present ideas on the relations of the sexes. 3. It would directly prevent the propagation of those who are known by their antecedents to be unfit & likely to be a burden on the ratepayers.
4. Two or three weeks in a hospital would be the only expense to the ratepayer, labor colonies would be a great expense and the sexes ~~would~~ would rebel against the denial of satisfaction. 5. It would not interfere with the <u>natural</u> developing of the race. 6. It would leave room for the increase of the more fit.
7. In a large number of cases the unfit (who were not bad enough for state interference) would probably offer themselves for operation so as to relieve themselves of any trouble about parentage. 8. I think the ~~for~~ Government would have a strong interest in sterilizing the rejected recruits for the army seeing that they would be weeded out and leave room for a stronger race to be produced for army purposes.

Dr Rentoul of Liverpool has in his pamphlet advocated a simple method of sterilization for both sexes and my object in addressing you is to ascertain if there is any difficulty in proceeding on these lines – It may be that your proposals would be the best if carried out but you might agree that Dr Rentoul's proposals would perhaps be more practicable and find a readier acceptance.

I have noticed in recent years a more widespread concern at the rapid increase in the number of unfit and I feel sure that the time is ripe for a concentration of efforts to combat the reproduction of diseased and degenerate types and I believe that if a general agreement on the best way of attaining the object could be arrived at among reformers that the time is ripe for the formation of an association for its special advocacy.

Oulton Cross, Stone,
Staffordshire,

(Cont.) 190

I have done something in the way of writing to the newspapers and other means to promote the discussion of this subject and should esteem it a favor if you could say in what, if any, way my ideas are open to criticism. as I want to ascertain the best means of attaining the object in view and to know the worst that can be said against such means.

Scarcely a day passes but one may see physical degenerates and one cannot open a newspaper without seeing cases which indicate

mental ~~degeneracy~~ degeneracy.
If the system of sterilization
is practicable we might
~~not~~ ~~advantageously~~ ~~to~~ ultimately
adopt the practice of
sterilizing the lowest 10%
of the population, so that
the increase would always
take place from a rising
standard of efficiency—

I am a Railway Engineer
and have no professional
interests in this subject and
take it up entirely philanthropically

Yours truly

Thos. Adams.

12 Ashburton Pl.
Boston
Mass U.S.A.

Francis Galton Esq.

Dear Sir

In reading the "Memories of My Life" my attention was again called to your remarks on breeding animals for intelligence. This is a project that I have long wished to undertake, and it is possible that I may be able to see my way to start in to do so next winter. I should very much like to know whether you consider dogs the best animals to experiment with? I should like to try monkeys if I knew of any method of procuring especially intelligent ones in sufficient quantities. My means are such as to enable me to undertake the Ex-

periment in whatever manner seems best, within reasonable limits. Any suggestions that you might care to give me in the matter would be greatly appreciated by me. I am the more tempted to take up this work now, as I had the pleasure last winter in Santa Barbara Cal. of helping a young alienist, Dr. Hamilton with some experiments he was making on the intellegence of children and animals, with an apparatus of his device which he calls the four door method. In this method an enclosure has four doors equally accessible to the subject. After the subject has become thoroughly familiar with the apparatus with the doors unlocked, he is then placed in the enclosure with all the doors locked but one, and a morsel given him for visiting

to get out. This experiment may be repeated as often as desireable - the same door never being left unlocked in each succeeding experiment. In practice it was not found advisable to repeat the experiment more than ~~once~~ ten times in one day to any subject. As Dr. Hamilton has not yet published the results of his experiments, I will not go into this matter in detail, beyond saying that it has proved a very efficient method of comparing the intelligence of animals. I have been devising an apparatus based on this method that I hope I shall be able to test ants with later, but I have not as yet been able to find time to do so.

It has occurred to me that this method

would furnish an excellent means of testing one's results in breeding for intelligence. Trusting that I have not bored you in writing you of my little project, I am

Yours very truly

G. R. Agassiz

Dr. F. Galton

f.3r

SPECIMEN MORAL LESSON

(*Under the auspices of the Moral Education League*)

by

Mr. F. J. Gould

(*Author of "The Children's Book of Moral Lessons"*)

A Specimen Moral Lesson to a Class of Children,

followed by Discussion,

will be given at

70, Prince's Gate, S.W.

(*By kind invitation of Mrs. Eric Hambro*),

on

Thursday, July 1st,

at 5 p.m. prompt

The Chair will be taken by Mr. St. George Lane Fox Pitt.

R.S.V.P. to Hon. Sec., The Moral Education League, 6, York Buildings, W.C.
Tea at 4.30 p.m.

Intelligent and
Conformable Dogs.

Breeds of
Decorles & Mastiffs.
Eugenic dogs

Tender – south west – gay
Inquisitiveness (curious)
Teachability – of specialist with, of others
~~Attitude~~ Deference.
Dog problems, bordering
Wolf master Gamma
as thoroughly
Special aptitudes. (subjects)
Sources known & distinguishable

Gamma's family dying a dog
family on his death is ...

Science of eugenics well developed & man
nature thoroughly, all the family seem as a type to dogs

Reference from. Diploma to dogs of class A
first class in general subjects
-- class & the particular subject of ....
Height & weight. color & age.
Romance – development of child mind.

Trifles senior
Prizes, must have one
letter-sequence
Fetch & carry
Swimming

Obedience & Gentleness
as per master's choice
& show off his dog at his best
under instruction, & confidence

Sheep dogs
retrievers
pointers
greyhounds
Obstacle race & show agility
& intelligence.

A letter from an American correspondent expressing willingness to undertake experiments in breeding dogs or other animals for intelligence in response to a passage lately published in Memories of my life induces me to address you.

The following an extract from the passage in question.

It seems well ~~in many accounts~~ to write a little more full on the matter, because ~~but~~ it appears that because of the extraordinary experiments are really about to be made in America, it is most important that the details of the procedure should be well discussed and ~~considered~~ before hand by the lovers of breed.

I venture therefore to give some of my own ideas, very tentatively to a person with little knowledge on the subject. This I have considered that a pure breed would be best.

The end I should propose is to be able to choose from those certificates for intelligence ~~certificate~~ dogs, to belong to one of other of a few specified classes such as small, medium or large size, with further subdivisions.

A form such form as specification, height length weight, age, colour & hair

First class certificate of general qualities, specially commended for - - -,

I suppose the dogs to be submitted to a well thought out & appropriate examination

dog, and the certificate granted to be

The examination to be, of the dog as directed by his owner, or a person or assistant & the results

tested to be such as are desirable in a dog, considered as an intelligent & agreeable companion.

The following outline will serve as a basis for the contemplated essay.

Scientific development of which is partly the aim of these and other pamphlets

General tests for all dogs

1	Affection to master	
2	Good temper	3 stars
3	Courage	5
4	Attention and perseverance	4
5	Teachability, shown by performing tricks	7
6	Obedience to voice and gestures of master	1
7	Seeking by smell, & carrying to master,	6
8	Success in one or more obstacle races, where judgment is as important as agility.	2

Special & extra subjects

for sheep dogs

retrievers

pointers

greyhounds

&c.

They bring out the same qualities but by different methods, as by the teaching dogs by scent & carrying dogs by the master's hand.

With some reservation the same may be said of the terriers & greyhounds. In brief, methods of examination have already been arrived at, that perhaps might be improved here & there and brought more to a common standard, ~~than they are~~, but which as they are enable dogs of the specified classes to be ranked justly according to their merits. One important class of data ~~which~~ the value of which is awarding prizes, must however be wholly omitted here. It includes all that relates to external appearance & to pedigree descent. For the purpose in view, namely to reach an just as eligible prize winners, as beautiful & high bred animals.

Teachability, is a quality, not overlooked in the above, but more emphatically displayed by the tricks of performing dogs.

I ~~should deal with dogs of single behaviour of perfect breeds, but as would~~

~~interbreed with mixed results.~~ Thus I should utilize as far as possible the results obtained at sectional dog trials, not caring a bit for the points of appearance that tell largely in an ordinary dog show. It would be found that the ~~accepted~~ many in all trials dealt with nearly all the ~~points~~ faculties that deserve consideration from our present point of view.

Take as an example the ~~trials~~ of sheep dogs, in respect to ~~temper~~ temper, courage ~~and~~ good temper, judgement, and perseverance, obedience to voice or gesture of master. These are all tested ~~shown~~ in what is ~~practically~~ a form of an "obstacle race", ~~with great call on the above qualities are all of high importance~~

Three sheep have to be driven by the dog, helped by the voice and movements of his distant master, ~~into~~ through a ~~broken~~ course of many hundred yards of broken ground into a small fold of hurdles (made of a fence). The intelligence shown by good sheep dogs in driving and managing these recalcitrant sheep is surprising. ~~I saw~~

On one occasion as which I was present, the sheep were driven by the dog to the front of the hurdles, but they obstinately refused to enter the fold. The dog quietly lay down facing them, but upon in a moment if the sheep moved either to the right or to the left of the door until their patience was exhausted or they worked in. Then the dog ~~approached~~ came on closely enough to ensure that they could not escape. This common ~~enough~~ experience shows how scarcely good temper, perseverance, and judgement are exercised. The dog's willing obedience to the voice or whistle of his master or to the wave of his hand ~~shows the~~ various other faculties.

Much of the same general description may be said of the tests for retrievers

G. R. Agassiz

f. 1r

D. H. Avery
Stoke House.
Woodbridge.
13 June 1895.

Dear Sir,

Finding your letter of this morning awaiting me on my return from an expedition which has occupied the day, I have only just time to write that I recognize the importance of the questions which you ask concerning my old phyllotaxy studies, and that I will endeavour to answer them if I can.

By a curious coincidence

f. 1v

I am coming to London tomorrow (to stay a few days with James Stuart M.P. at 24. Grosvenor Road, Westminster Embankment, S.W.) — for the express purpose of studying Leaf-arrangement in Kew Gardens. It will therefore be entirely congenial to my immediate purpose, to consider the points which you put forward, and to do my best to deal with them.

I will look up such correspondence as I can find relating to the reception of my papers by the R.S. in 1873 and 1874.

f.2

~~My recollection is~~ .

and will tell you what I find.

I am faithfully yours

Hubert Airy

P.S. – I have only now at last (after 22 years) secured leisure to take up this subject again and I find a great deal of dust on my old papers, – and also on my old spectacles, – which will require a spring-cleaning before they can be used. But I am more convinced than ever of the main truth of the theory which I first put forward some 22 years ago.

address: c/o James Stuart Esq. M.P.
24. Grosvenor Road. S.W.

Francis Galton Esq. F.R.S.

F.H. Avery

f.3r

c/o James Stuart M.P.
24 Grosvenor Road.
S.W.

18 June 1895.

Dear Sir

I fear I have not yet ~~hitherto~~ followed out the investigation of the geometrical and mechanical ~~(foot note we ought to consider also the mechanical)~~ relations among the embryo leaves and florets in a bud, with sufficient accuracy to justify me in attempting to give a confident answer to your first question, – viz. as to "adequate proof of the exceptional <u>stability</u> of the 3 - 5 - 8 - 13 - 21 - &c series."

It would be easy to urge that, as a matter of fact, the series in question is of most frequent occurrence, which is, so far, evidence of great stability; but I think that is not what you want. — I think you would wish for mathematical (geometrical or mechanical, or both) reasons for expecting a certain species of plant to conform to a certain phyllotactic series. — Well, how about the <u>teazles</u> and the <u>Scabious</u> family? — True,

they don't belong invariably to the 3, 5, 8, 13 &c series, but I think they are all the more instructive on that account. — They belong though not invariably to a series exhibiting 6, 10, 16, 26 &c ranks or spirals, — just the doubles of the above numbers, be it noticed; — and with good reason, for they can show (on opposite sides of the 'head') two florets, for every one that would be found in the ordinary series. — Still, I feel that doesn't answer your question, and I fear I must take a little more time to consider it.

As to the "points in my original papers that made the Council hesitate about publishing

them in full" — that was a sore point at the time, and a great disappointment and dis-
-couragement to a young man who had been taught to regard the Royal Society as the Salt of the Earth. However, there were other things to be done, and though I should have been glad if the R.S. could have adopted the theory, I was obliged at last to lay it by in my desk.

I tried the R.S. once more, — in 1874. — with a paper on the leaf-arrangement of the Crowberry (Empetrum Nigrum), about which I had taken a good deal of pains, but when the day came on which it was

June 18/95 f.5r

down for reading, the then Secretary, Prof. (now Sir George) Stokes, smilingly told me that my paper had met its fate in the "massacre of the innocents."

An Abstract was printed in the Proceedings, but of course my hope of exhibiting the instrument which I had devised for making my observations, and, of exhibiting the actual twigs which formed the material I was dealing with, had to be given up.

I think the Crowberry paper, and I presume also the earlier ones, — were referred

f. 5v

to the judgment of the Revd. George Henslow.

I would rather not write any more about that, ~~except that to my mind his criticism seemed unfair and inadequate~~. But I find I have kept (and have here with me) almost all the letters and papers relating to the matter, and my host, James Stuart, recommends me, and authorizes me, to ask you if you will be good enough to come here one day to lunch,

when I should be able
— and should be extremely
glad — to produce any of
the papers and letters for
your inspection.

Stuart suggests that next
Thursday, the 20th, at 1·30 pm, might
be convenient to you, and
that is a day when he might
expect to be disengaged. He
bids me add that you have
on one occasion met Mrs
Stuart, but I now find that
she is on the point of leaving
for Norwich, and will not
be present on Thursday.

If Thursday is not con-
-venient to you, would you

f.6v

kindly name another day when you could come? My only engagement is on Wednesday evening.

I am yours faithfully
Hubert Airy

P.S. Yes; I know Schwendener's work. The R.S. Critic made no mention of that or any other paper as having anticipated my views.

Francis Galton Esq. F.R.S.

F. H. Airy

F.7

24. Grosvenor Rd. S.W.

19 June 1895.

Dear Sir,

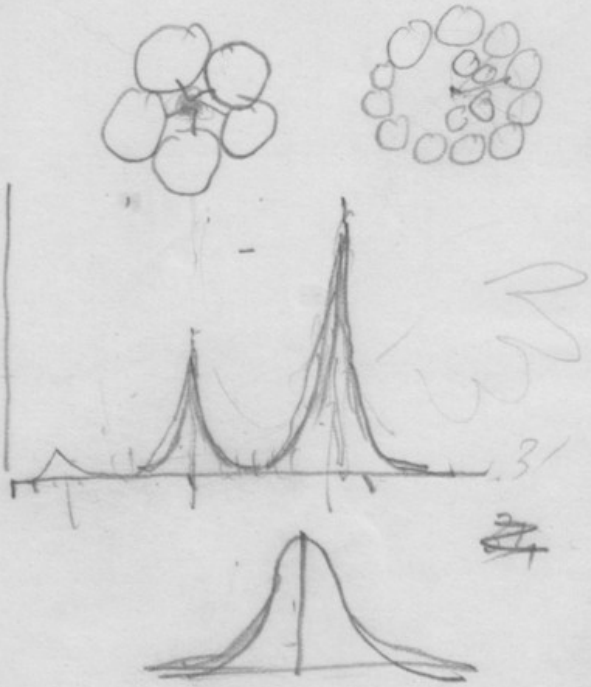
I have told Prof. Stuart the purport of your letter, and he is very glad to hear that you will come to lunch tomorrow. He will endeavour to be present himself.

I shall be very glad indeed to accept your invitation to tea at the R. Soc. at 4. p.m.

Very faithfully Yours

Hubert Airy

Francis Galton Esq.
F.R.S.



8 13 21 34

f.8r

B. H. Airy

f. 9r

J. James Stuart Esq. M.P.
24. Grosvenor Road S.W.

20 June 1895.

My dear Sir

Let me say how much I enjoyed the rendezvous at Burlington House this evening and how much I am obliged to you for the agreeable introductions you gave me. I shall wish to take advantage of them to write again on some of the points that arose in conversation between us.

I entered the meeting-room, and had the pleasure of getting a handshake with my chief Thorne Thorne and my sub-chief Power.

You are aware that the meeting of the British Assoc: is to be held this year in Ipswich, which is only 9 or 10 miles from my home at Woodbridge. Needless to say, I shall be interested in the proceedings. I almost think I might venture to

offer a short paper to the Botanical Section, probably on the phyllotaxy of monstrosities, for which I have accumulated some material.

I am, my dear Sir,

Faithfully yours

Hubert Airy

Francis Galton Esq. F.R.S.
42 Rutland Gate S.W.

14, Great Queen Street,
Westminster. S.W.

Dec. 1. 86

My dear Galton,

I am delighted to learn by the Times this morning that the Royal Society has done you definitely the honour of awarding the Royal Medal for your distinguished services & achievements in the Intelligence. Long may you

Francis Galton

f. 1v

may you live to enjoy
both your inherited & your
acquired honours & the
congratulations of a very
circle of sincere friends
of which you know I am
always one &

Yours truly

Rutherford Alcock

I am delighted dear Mr.
Galton, & wish you & your
dear wife joy of your new
honours with all my heart!
I have just seen the Times,
but Pall Mall has just brought
me the news of his death, etc.
I hope you will not think
I shirk by my P.S.

Very sincerely yrs
Lucy Alcock

Cliff Wilmot

Jan 27.09

f.1r

St Radegund's,
Cambridge.

Dear Sir Francis

During the brilliant Charles Darwin Celebration — a wonderfully successful occasion — you were often spoken of & your absence deplored. It is

f. 1v

Therefore with peculiar
pleasure that we
see this tutorship
distinction fall to the
lot of one of the
most modest & self
effacing of examinees
men of science.

f.2

Without your name in honour the "Darwin book" would have been incomplete

Hoping you are family well

Yours cordially

Alfred Russel Wallace

Prof Allbutt

11/July.

f.3ar

SYSTEM OF MEDICINE.

ST RADEGUNDS,

CAMBRIDGE.

My dear Sir

Pardon the error of my address: I do not know how it arose;

I cannot plead ignorance.
(I once knew an Arthur Sallon.)

I feared you might feel unwilling to tackle medical questions but

f 3av

I see you are with me
as to the need of such studies
directions for study.
Dr Billings of Washington
is sending me an article
on Med. Statistics but
he will not, I think, go
into any appreciation of
the values of published

I think two factors introduce some uncertainty into Med. Statistics besides the usual carelessness & perversity &c

1. The assumption of no previous phenomena in fam.y tree ~~[illegible]~~ when none are known – i.e. negative becomes positive evidence. Dr. Galton assumes that a hospital patient gives a proper account of his ancestors.

2. Concealment, deliberate & half deliberate, especially as to cancer & insanity. An insuperable

F.3br

f.3bv

medical man whom you & I probably both know well, who had an obvious cancer in his own stomach (& must have known it, & & palpable every one else knew it) declared in respect of his own & daughter's dying of cancer, that he could not ~~no case~~ understand it as there was "no cancer in the family"!! There had been also other cases but he would conceal the disposition if possible

to blow but will add to
them his own: I hope as
a good example to follow.

I trouble you with a
reply to a letter you
happen to think any medi-
cal man who is the relied
upon to deal carefully with
medical questions of
heredity &c. He is a

f.4v

subject – I have not kept
up with.
Chas. Roberts is I fancy
not altogether the allied
person. If you do not
know any such person
pray give the matter no
more trouble: if you do the
name & address on a postcard
will suffice to oblige.
Yours faithfully
Alexander Ewart

f.5r

Broomhill House,
Ambleside
Apr. 7. 1915 & 1920

Dear Mr Gallie

Away from my books may I for the present content myself with giving you my own impressions – they can scarcely be called opinions, & certainly not more.

1. Mem
d. may be standard

β. Emasculated –
If α. be performed – say by
excision of the vas carrying
the semen from the testicle,
I believe no harm is done.
– the internal influences
(chemical?) of these glands
still reach the system, by
blood vessels & lymphatics.
β. If the testicles themselves
are removed the results
– seem in elderly persons
as in my experience

f. 6r

disastrous. In all cases I have known of, mental deterioration has set in, often of a very grave kind. One young physician, who had both testicles removed for tubercle I know personally & see occasionally. Fortunately he is in partnership with his brother or he would be quite stranded — so he tells me. Beyond a certain sadness of manner & speech I should not notice much. but

he says (though now quite well physically) (+ well for years) he is good for nothing. He was a cultivated man, but his interests in reading much have flagged. He has no enterprise; he can just keep his brother a little, but not with any efficiency. And this is I think as good a result as any. Others have gone into lethargies + dementias of sorts: two ^ become suicidal.

2. Women.

There is I believe no α (no learning of occupations but promoting ~~occupat~~ vigilation?)

f. 7r

If bitter then I believe it
is only B. spaying. For
a bad husband a young lady
friend of mine has just
had to have a "clean
sweep" made. Both o-
varies were found diseased. It
will be curious to see
what happens, poor thing.
Speaking generally I have
known a few such cases,
the effects were un-
favourable, though no

means as bad as in men.
But I should say the
worst are of perverted
affections, obsessions or
hardness or unkindliness.
Sexual sins I know less,
but these may have been
often causes of perversion
e.g. heredity, or disappoint-
ment & offsprings &c. I
am ready to believe that
dipsomania <u>may be</u> com-
paratively harmless

f. 81

except I suppose for de-
gree of specialism?

As to the books I will
write later & I am sending
your letter to Walter Heape (FRS)
who is as likely as anyone
to know what is the current
present-herein

With kind regards
Yours very
[illegible]

PS I think we might

not forget the moral
effect of stimulating up
the surgeon? & the
assenting parties generally
I dont feel sure that
it cod. not be too short
a cut to self defence on
behalf of the community – wh
consistent with the higher
ethical standpoints? Is
it not rather like chopping
off a homicidal persons
right hand?

f.1a

Telegraphic Address-
"DEUCALION LONDON"
Telephone No. 6554 CENTRAL.
GEORGE ALLEN & SONS.
Publishers.

Ruskin House,
156, Charing Cross Road,
London, W.C. April 22 1909

Francis Galton Esq.
42 Rutland Gate S.W.

Sir,

In view of the acute state of the various problems bearing on and the resultant of national degeneration, and the increasing demand from thoughtful readers and citizens for pronouncement on these and kindred subjects from those whose study of them gives their dicta authority, it has occurred to us to approach you on the matter, with the object of ascertaining whether you would be willing to write for us a book on

Nature and Nurture:

the philosophy of racial progress and improvement. This, roughly stated, is the idea as it comes to us — though, doubtless, you could suggest a less crude generalized statement of the lines on which such a work should be written.

Your labours in the cause of Eugenics and the national interest which the subject claims must be our excuse for venturing to make this proposal to you. Should you be inclined to give it your consideration and to fall in

f.1a

Ruskin House,
156, Charing Cross Road,
London, W.C. April 22 1909

e of the various
resultant of
e increasing demand
citizens for pronouncem
subjects from
ives their dicta
ns to approach
bject of ascertain
illing to write

re:
ress and improvement
ea as it comes to
could suggest a
ent of the lines on
e written.

Your labours in the cause of Eugenics and the national interest which the subject claims must be our excuse for venturing to make this proposal to you. Should you be inclined to give it your consideration and to fall in

f.1b

Sir, I am not, at present, disinclined ~~at first sight~~ to consider your proposal, but before ~~going further~~ saying more, desire to be fully informed as to your terms.

It seems to me, at first sight, that I could write a ~~small~~ book in the sense you desire, but not a large one, under some such title as "The ~~Kinship of Nations~~ Conscious of National rise & decadence ~~of Nations~~". ~~but~~ Before ~~stating any terms~~ stating definitely, I ~~must~~ have ~~more time~~ closely ~~the subject~~ consider the subject, ~~which~~ I would do if satisfied with your proposal. I am too old a veteran to place confidence in my powers of ~~limiting~~ limiting any thing sharply to date, but, barring accidents, I still continue to work ~~to get a~~ fairly steadily though slowly. I should expect to finish the MS of such a book as I have in mind, in 2 months, but at the end of 6 months.

August 23/1909

E. Allen & Sons
156, Charing Cross Rd, W.C.

with it, we shall have further pleasure in entering into negotiations as to terms of publication and other details; but should you be unable to entertain the idea, we should appreciate from you any suggestion as to the writer (or symposium of writers) who would in your opinion be the best fitted to treat for general appeal the subjects to be dealt with.

Awaiting the favour of your reply

We are, Sir

Yours faithfully

George Allen & Sons

P.S. Since writing this we see that in 1874 you published a book on "English Men of Science" with a sub-title similar to that suggested by us as the principal one. But we do not consider this would matter.

Allen 1

Allen 2

E5

Telegraphic Address:-
"DEUCALION LONDON."
Telephone No. 6554 CENTRAL.
GEORGE ALLEN & SONS.
Publishers.

Ruskin House,
156, Charing Cross Road,
London, W.C.

April 26 1909

Francis Galton Esq.
42 Rutland Gate S.W.

Sir,

We are gratified by your favourable reception of our letter of 22nd inst., and by your willingness to consider the writing of a book for us as suggested. The amount of text upon mention — from 40,000 to 60,000 words — coincides with that we should consider sufficient for the work.

As regards terms — we are giving our consideration to these and other details, and

hope in the course of two or three days to make you a proposal in due form.
We realise that, apart from the question of your health, such a work could not be unduly hurried. And in your case we should be happy to fall in with your views, provided the term allowed for the delivery of the manuscript did not exceed the six months named by you.

We are, Sir
Yours faithfully
George Allen & Sons

f.9

Very! declined. FG

Telegraphic Address-
"DEUCALION LONDON"
Telephone No 6554 CENTRAL.
GEORGE ALLEN & SONS,
Publishers.

Ruskin House,
156, Charing Cross Road,
London, W.C. April 29 1909

Allen 3

Francis Galton Esq.
42 Rutland Gate S.W.

Sir,

We have now given our full consideration to the question of terms, etc, for the book referred to in the previous correspondence between us, and we have pleasure in making the following proposal of publication for it, roughly stated for the present, but to be followed by a detailed draft of agreement for your consideration should the general terms fall in with your views:—

The sum of £100 (One Hundred Pounds) to be paid on publication on a/c of a royalty of fifteen per cent of the published price for all copies sold in the United Kingdom to be increased to twenty per cent after the sale of five thousand copies. Half the profits if the work be copyrighted in America — or a royalty according to the price obtained for copies sold for America. The published price of the book to be not less than five shillings —

We shall be glad to know whether these terms, generally stated, meet your views.

We are, Sir, Yrs faithfully George Allen & Sons

Allen 4

Telegraphic Address:-
"DEUCALION LONDON"
Telephone No: 6554 CENTRAL.
GEORGE ALLEN & SONS,
Publishers.

Ruskin House,
156, Charing Cross Road,
London, W.C.

May 3 1909

Francis Galton Esq.
42 Rutland Gate S.W.

Dear Sir,

It is with regret that we learn your decision to relinquish the work we had suggested to you. The wording of your letter makes it clear that it is not due to any question of terms, but rather that of your health — for which please accept our sympathy.

Should it be merely, also, the mention of a time-limit which prompts your refusal,

we should be prepared to waive that, and to leave the matter in abeyance for the present. But should you wish us to treat your decision as final, we trust that in the event of improvement in health causing you to rescind that decision you will ~~[illegible]~~ allow us to reopen negotiations on hearing from you to that effect. Or perhaps you would prefer to send us your MS. whenever the inspiration and power for work seizes you.

With our renewed regrets

We are, Sir

Yours faithfully

George Allen & Sons

answered

Robin Allen F.Ir

Woodberrie
Langton Spey.
22. Aug. 89.

Dear Sir,

I am not sure whether I may not be committing something of an impertinence in addressing you on the subject of heredity, since I have not yet had the opportunity of reading what you have written on it; to say nothing of the doubt whether I should be able to grasp the significance of it if I had;

but-

Francis Galton Esq. F.R.S.
&c. &c. &c.

but as a humble worker in my own age towards better social arrangements I hope I may be forgiven if I ask whether your researches throw any light upon the relative responsibilities of the man & the woman in the production of satisfactory issue?

It would seem to be indisputable that after birth, – so long as the child is dependent on the mother, whether for milk nutrition or upon mental & maternal care – it is she who influences the

development, or non-development, of character the most; and it is reasonable (altho' somewhat hypothetical) to consider that during the time she carries the embryo within her, that every one of her sensations & thoughts must affect it so much, that during the period anterior to birth she is actually creating its character.

The occasionally striking resemblance of the child, both physically and morally, to the male parent would seem to militate against this; but this might arise from the woman's love for the father, from her recognition of

and admiration for his characteristics and it would be very interesting if, upon research it should be found that the resemblances of the father are strongest where the intimacy, both physical & moral, of the two parents has been greatest, and least where the mother knew less of the father (as in the case of posthumous children) or nothing — neither seeing him before nor after impregnation — as is said to be not infrequently the case with women of the town.

Now that the intelligence of humanity is beginning to cast off its superstition, and, instead of being influenced by the old Semetic ascetic degradation which, when it partially apprehended a fragment

fragment of Truth declared" thus saith the Lord.'", it now desires to learn, thro' the accuracy of Science "what doth the Lord?"; — and now that Womanhood is asserting itself in so many ways (blindly enough in some but pathetically in all), it becomes profoundly desirable to know what the Creator-Spirit or permitted has done, in regard to the function of that Sex. If it be indeed, to a far greater extent than is generally apprehended, the Woman that is responsible for the character of the Child, then one of our chief aims in Social Organisation should be so to Educate every maiden that the

she should regard herself, before she accepted maternity, as 'Ancilla Domini', and after maternity so to direct the wealth and guide the consideration of Society towards her, that every mother should have opportunity to give her child the fairest play.

It may be that with the best men and women this is now, practically, the case; but if our religion of the future is to be an acceptance and furtherance of the purposes of the Creative-Spirit as manifested thro' organisation & Law and the law of reproduction is in effect a burden of

responsibility upon the woman, then a pervading recognition of this fact, by both sexes, would surely go far to solve the riddle of this very perverse Earth, and create a millennium upon it.

I write, as I have implied, as an old man, and probably have but little power to influence society left in me, but the infinite pathos of failure and misdirection throughout the hurly-burly moves me very deeply; and as I still keep some touch, by voice & pen, with people willing to listen to me I venture to approach you

f. 4v

you for any light you may be able to throw on a great question, which seems to me to affect & ~~cover~~ cover nearly all the rest.

Believe me
dear Sir
Very faithfully
J. Jevons

Robert Allen.

Ardmore,
Parkstone.

Aug 15 1897

My dear Galton

I was greatly interested in your paper on the contributions of the ancestors to the heritage of the offspring in the last No of the R.S. Proceedings. There can I think be little doubt that Galton's Law will be accepted as an important factor in the phenomena of heredity.

The Darwinian Theory has lately been occupying my thoughts

a good deal and I have been met with many difficulties in its ~~adoption~~ acceptance to the extent demanded for it by Darwin and his followers. Chief among these is the alleged transmission uninterruptedly through inconceivably great lengths of time of the sexual functions. The sexual organization is probably the most complex and the most precarious in its functions of all the systems of the body. If we confine ourselves to the Vertebrata alone we find abundant evidence of this precariousness even where around us in the extinction

without assignable cause of families and tribes and the gradual diminution in numbers of whole population, and yet if the Descendence theory be correct we must believe that every sexual individual now living on the globe has come down to us uninterruptedly from the first appearance of sex upon the earth, a postulate which it appears to me cannot be accepted. The alternative is to admit that there are numerous breaches in the continuity of succession or to find ourselves placed in the dilemma of admitting that we have to deal with a period

which if long enough for evolution is too long for persistence.

I should be much obliged to you if you would think over this and that if you can detect the weak point in the argument you will let me know.

Believe me
very sincerely yours
Geo. J. Allman

Dr Allman

f. 31

Ardmore,
Parkstone.

Aug. 24 1897

My dear Galton

Most sincerely do I sympathise with you in your bereavement. I can now say nothing more than to hope that you may find in time the great assuager of such sorrow as friendly and efficient help.

It was very good of you to write to me on the subject of my letter. I have already had before me

what you say in explanation of the difficulty but perhaps in a different aspect from that in which it appears to you. I should like to send you my own views of the matter but I could not think of now intruding them on you in your sorrow.

Believe me
always sincerely yours
Geo. J. Allman

I hope to send you the register very soon now

Dec. 8. 91

f. 1r

Almond

Dear Sir.

I have to thank you for your two very kind letters of Nov. 23. & 28.

I see I have been wrong on some points.

And yet it seems to me quite preposterous that only bookish qualifications should be taken into account in selecting for active services.

This is esp. the case when Bengalis are chosen by the same test – for these are restoring one of the lowest races on the earth in all the essentials of character – though as intellectual as a devil.

I shall sometime rewrite or alter my article. I am bent on getting a hearing, but

don't know how.
I shall send you our
physical registers soon.
They are at present wanted for
our December measurements.

I also always during Xmas
holidays look carefully over
the chest girths.
If any boy has not improved
in this respect during the year.
(unless he has a very big girth)
esp. between the ages of 15-18.
I always make a note in the

medical officers both to have
his chest sounded on his return.
In this way several otherwise
unsuspected cases of chest
delicacy have been discovered
& taken in time.
When the chest is duly increased
there is never lung delicacy.
Our measurements have since
1874. been taken by the same
Sergeant major.
Each boy is measured on entry –
& three times annually.

As you will see, our average boy is about 2 inches better than the average new boy at the same age.

The measurements establish the fact that nearly every boy may be given a good chest girth.

Taking all our boys over 18 last December (when there were an unusual number of big boys) we will find the following girths

40. 41. 37. 36¼. 37. 35.
38½ 39 36 36¼. 37½. 36½
37¾ 38¼ 40¼ 38 38. 38½
39 39 40¼ 40½.

These were taken on the bare heart
of Sheen, in the usual rueling
way.

Now I do not consider ~~a tall~~
as
~~the~~ of the boys under 38 inches
Tall enough for a Soldier
with 2 exceptions, & they were as
life 5.5½ & 5.2½ feet in height
A at least of 38 inches been
made a minimum there

would be felicity to finish of
chorus fare — if there were
in all our schools a proper
system of education
~~before~~ our system is simply
— natural.
I.e. boys by & hundred ½ hour
daily in gymnasium, he must
be out about 40 minutes before
dinner — & on fine days.
1½ hours in afternoon. On very
wet days a 4 a 5 mile
compulsory run — which no one
will cover with. Also has once
experienced the after flow.
The chief also has something to

do into the chest gentles
Flannel shirts. Open at the
back. & no waistcoats
– even coats off. whenever
warm enough. outside – in school
– or at meals. Given the
chest a fair share of growth
it does not usually get.
Of course we sacrifice to costume
for an a go to meeting costume
for a few hours on Sundays.
But I am naturally keen on
insisting that we shall have
fine men physically for our

active service. when
1st I have proved
practically that they can
be grown. by following
the general lines laid
down by Herbert Spencer
in his Essays on Education
— lines which he says we have
ever traced.
2ds when I see that
our boys turn out, as a rule

leading & governing character
wherever they go.
I hope I am not bragging
but their little eleven of 120
has won 4 times in 8 years.
Oxford its football
Captain - & once to Cambridge.
We have also in the ~~last~~ same time
captained Oxford Eleven Eight
& athletics. besides constant
College Captaincies.

3. When I find that old boys when we get back here have been more governing power than masters generally have.

4 When I think I have proved that consumptive tendencies may be entirely eradicated.

I omitted to mention the extreme unfortunate tendency to 'ventilation', but to open windows. I believe in oxygen. My might as well on my day.

and how can a gentleman
commoner who can't sleep
with his window open – as
is our rule. in almost all
weather.
I hope I have not hesitated in
yr. estimation – but it is very hard
on a man living far from London.
to lose a hearing for his views.
that you may not think I am 'the
athlete v. the scholar' I may perhaps
add that last March I did row in the
Varsity boat. I also got 2 firsts +
2 seconds:
I don't want to advertise. You may
use any of my observations if you please
– but without my name or that of Loretto
I do wish to propagandize. I think I have
discovered something. Yrs Tr HH Almond

Almond

f. 7r

Nov 10. 82

Dear Sir.

I herewith send the gymnastic chest measurement books.

The only thing I have worked at is the chest, because it involves such important issues

I believe that the books confirm with my experience

f. 7v

Prove 1st
That the chest girth of growing boys at average ages could be increased on the average from 1½ to 2 inches.
2nd That the means taken for such improvements acts favourably in many ways. upon health. morals & character.

3rd. That such improvement decreases the liability to Chest disease

4th. That when a boy's Chest does not improve ~~also~~ in measurement, he should be sounded.

5th. That when it is improving steadily, the boy is in no danger of tubercular lung disease.

I think that the boys laboured in themselves pretty well.

f.8v

I believe that similar boys are helped at the best athletic & football school for its size – in the world

Meanwhile castle. Lanhydrock

Yours truly

H A Almond

I send Mr almond's M.S. separately

Nov 11th. 9.

Dear Mr Butler.

I gladly send you my paper.

If Mr Galton would ever come to see our physical revivers. I shall be most glad to send them. I believe they are unique. I.e. I do not know of

any others containing the measurements, taken 3 times a year. of all boys who have been subject to a system for 15 years. Here boys. as I observed are taken separately. The system taken clearly establish that a system may make a difference of

about 2½ inches in the average chest girth of boys of 15 & 16. i.e. Cambridge boys who have been subject to it for some time. with them who have been under all sorts of systems.

There is nothing however of the nature of discovery in the system.

It is simply an attempt to grow what human animals

on physiological principles.
a thing which Herbert
Spencer ~~says~~ said nobody tries.
& which therefore I tried.
It is in fact merely a
matter of oxygenating the
blood. by exercise of
various kinds & fresh
air inside the house.
and more or less "Sanitary"
feeding. and ~~constantly~~
loose free dressing. and
~~constantly~~ bathing &c

NORTH ESK LODGE
MUSSELBURGH

but about the rationale of their lives.
Be this as it may the results are on the surface of the registers.
Further, on comparing the physical with an carefully kept medical registers. I can clearly

Show the effect of a good physical system on the prevention & cure of lung delicacy – & the close connection of which exists between such delicacy & the absence of proper growth in chest girth.

I regard myself ~~as~~ however as merely pioneering in an almost unknown direction. I know that there are several faults in my system I am finding them out every year.

I refer ~~that~~ in the accompanying paper. I have avoided anything like

advertising. But it is very hard to make public the results of independent research without advertising.

Very truly

H H Lillemand

f. 13

MS on Physical Tests in Competitive Examn.
by Hely Hutchinson Almond Head Master of Loretto School, North Lek Lodge Musselburgh
(was sent to me by George G. Butler to read)

1. Cannot understand why further more active services at least; competition shd be purely intellectual
2. In dealing with natural of our dependencies present system is inadequate
4. Qualities sought are intelligence, special information, assiduity, business habits, force of will, power of command, high principle, temperance, courage, endurance, courtesy, high spirits, physical robustness & vigour.
5-6 Governing power and the more strictly intellectual powers are not correlated, with intellect + physique they are rarely equally known with a low intellect
7 They
8. Schoolmasters choose masters with consideration to physical qualities - phys: & energy are likely to influence boys.
9. Tom Brown illustrates the evil effects of choosing prefects on intellectual grounds only.
10. Applicable to any Headmaster whether his experience does not show that all his prefects have been chosen with double grounds
14. The recommend of the Commission was quietly shelved through a languid debate. {the clearly has not read it}
15-16. In greatly against going too much to mere athletics, and against in p. 17
a 25 or 30 miles walk required from all candidates for the Woolwich & Forests is with right direction
18-19 The gladiatorial character of modern athletics is greatly to be deprecated - most look on idly more at themselves actual praises of prowess
20 any healthy youth ought to cover 30 miles within 7 hours by the help of his legs alone {?}
21. Would make candidates camp out & attend to themselves. camps on military principles. - Even a cape.
23 marks the lung capacity. - He has kept a register of chest girths - here proves to have scarcely
24 ever been a prefect with less than 35 inches girth - would they have mind more - refers to Mr Larson
26. Believes by his plan we shd get substantially the same men, but they would be greatly improved in will. he also the ancestral would have gained health - many of these are now worn down by undue strain
27. The aim of the schools shd be to produce not a few athletic prodigies but a high level of health & manliness
28 I wish to point together what should never have been parted (health & intellect.)

June 28th 1897

from C P B Alsop
97 Bartholomew Road
Kentish Town

Sir Francis Galton.
K. C.B. D.C.L. F.R.S

Dear Sir

having read your article on the Planet Mars. in the New York Journal which appeared January 17th.
I wish to say that I was much interested in your communication to the Journal on the subject of the possibility of signaling from that Planet to our earth, it reminded me

f.1v

of what I had read in
a Book some two or
three years ago upon a
similar subject and
feeling so much interested
in your letter to the Journal,
I sent a manuscript to
the Journal which I had
copied from the Book
I had read. the journal
would I think have published
my manuscript but at the
time they had more letter
press on hand than they
could well manage at
the time. I enclose you
their printed reply which
they sent back with my

manuscript which I requested them to return should they not be able to find room for it. So I now take the pleasure of forwarding the same manuscript for your perusal, as I think if you will do me the favour of reading the information it gives on Mars & its inhabitance will be interesting and may also be encouraging to you in your further investigations of that most interesting Planet praying that God may bless you with ultimate success

f2v

in your most arduous and
all absorbing work
I remain gratefully
C P B Olsop
97, Bartholomew Road
Kentish Town

When I sent my Manuscript
to the Journal I was then
Residing in Savannah
G. A
America

AMERICAN ASSOCIATION
FOR THE ADVANCEMENT
PHYSICAL EDUCATION

YALE UNIVERSITY,

New Haven, Conn., Jan. 31 - 1890.

Francis Galton, F.R.S.

Dear Sir,

As Secretary of the American Association for the Advancement of Physical Education I invite you to prepare a paper, on some subject - agreeable to yourself but bearing more or less directly on the physical side of heredity - to be read at the next Annual Meeting of the Assoc'n to be held in Boston, Mass. Apr. 3rd and 4th 1890.

A discussion of such material

F.1v

as you may have similar of that compiled in Tables X, XI, XII, etc. in your book on Natural Inheritance would be very acceptable.

I take the liberty to send you a copy of the last Report. and also to enclose a table showing the results of work in Anthropometry here at Yale for five years ending June 1st 1888.

This subject of Anthropometry and physical examination is receiving much attention in all our higher institutions of learning and during the

YALE UNIVERSITY,

New Haven, Conn., 18

Current year the results of 15000 individual measurements of students in Colleges will be published by E. Hitchcock, M.D. of Cornell University. These will probably be followed by the publication of figures collected and compiled by D.A. Sargent, M.D. of Harvard Univ. who has more material of this kind at hand than any other man in this country.

The object of our Association is to encourage a scientific study of problems connected with Physical Education.

F.2v

Be assured that we shall
esteem it a high favor and
honor to receive a paper
from your hand: therefore
hoping for a favorable reply
I am.

Very Sincerely yours.
Ray W. Beaver.

f.1r

Deutschland. — Allemagne.
Bayern. — Bavière.

Postkarte. — Carte postale.

Weltpostverein. — Union postale universelle.

Mr. Francis Galton, R.A.F.

London, England.
Rutland Gate.

Nur für die Adresse.
Côté réservé à l'adresse.

97

Otto Ammon

f. 1 v

Dear Sir! Received your Paper: „Average Contribution etc" yesterday evening at Munic (München), returning with my family from the Bavarian Mountains. As I have seen, the paper is a very scientific work on the way of your fructuous ideas. I shall read it with the greatest interest, and write you my impressions after my arrival at home, in the beginning of September. I thank you very much for your amiable attention. Yours truly

Otto Ammon.

I have not got the fine Portuguese maps that you allude but would be glad to possess them.

I have made a very fair map of the whole of Western Damara-land up to the outposts of the Ovampo and I would probably have sent it to the R. G. Society had they seemed to care about it or myself. I heard that my letter sent via Benguela was duly rec'd but the Society vouchsafed me no answer. The result is that my map will probably not see daylight during my lifetime. Before publishing it I would, if time & circumstances admitted of it, work it over once more as at present it is just as I brought it from the journey. It is full of details. Almost every hill & water course, however small,

is laid down. But it is 2 to 3 months hard work.

I congratulate you upon your appointments; they are certainly very honourable but beware, pray not absorbing all your time and make you neglect your own homestead

C. S. P.

Cape Town, Oct. 8th 1852.

Dear Galton,—

I have just this moment returned to the Cape, and finding the mail for England is about leaving, I embrace the opportunity to write to you a few lines —

I anticipate your surprise to find me so soon in the Cape. Of course it is from sheer necessity. I was unable to procure articles of exchange, & of any description whatever at Walfish Bay, & have in consequence been obliged to come here, & that too over land, which has been a journey of the most tedious & tiresome description —

I was rather sorry not to find a few lines from you, but perhaps you thought I was still far in the interior. I cannot say how much I regret my not being able to go this year, for I shall in all probability never again get so favourable an opportunity. The rains fell in such abundance that I have been assured by the natives, that there has not been a year equal to it for the last quarter of a century. Even the barren plain between Schepmansdorf & the Swakoop was covered partly

with grass - and the Swakaup they when I left - and it was then a little running very strong - had been for three successive months! One day in crossing the Shineleni's Hope river we had our waggon nearly carried away - the Kuisip has also risen to an enormous height - Mr Bam's houses, Church &c. was completely carried away! Mr Bam escaped however, in saving all his things -

I am now very busy making all the necessary arrangements for my expedition, and intend in the course of another month or two to embark for Walfish bay - I have secured Timbo who seems delighted with the idea of again going. Poor fellow, coming here he found his wife with another man - He has of course withdrawn her support & also taken his child away - Timbo is really a fine man, & he well deserves the handsome testimonials you have given him - He said you forgot your saddle. I have taken it off his hands & shall be very glad to buy - lots you have the goodness to tell me the price?

I have been to look after your boats, as far as I could see they were well taken care of but I intend to have them out in a day or two

I think, if you do not return, you had better sell them. I shall of course be happy to dispose of them if you think proper - I shall in the meantime pay the man for the two years they have been there -

You may perhaps recollect one of your servants of the name John Waggoner? He has turned out a horrid scoundrel. From the time he left Pikeholoh, to his arrival here, he has been imposing upon everyone - His usual story was that he had been sent by you to the Government of the Cape with important letters, & with a request of getting some two or three hundred soldiers, &c. The most extraordinary thing is that everyone believed him, & that he might loose no time, some sent him away in their best waggons, others gave him packs & ride oxen, &c. - He is said to have come quicker to the Cape than ever any other man!

Col. Ingelby is still here & quite well - I am sure that if he knew that I am writing he would send you his kind regards - The Scrapmetals you will be surprised to hear, have been swindling everyone to a considerable extent - They are now

F.3v

off to England I believe –

I hope you will excuse this short epistle – I shall write you further before I leave – Pray remember me kindly to any one you think likely to take any interest in the lonely wanderer in the African wilds – And wishing you every blessing

I remain, Dear Galton,

Yours very truly & sincere

Charles J. Anderson

P.S.

Of course, if you publish anything, you will not forget me with a copy. I am rather surprised that the Geographical Society has not written to me a few lines –

Anderson
Oct. 1852
Cape Town

170 New Bond St
September 7th 1854

Dear Galton, —

I have just received your very kind letter of the 4th inst. and it was with the same intense feeling of delight (that I always experience) that I heard of wellbeing and happiness. —

My movements are at present very uncertain, but as soon as I have heard from Mr. Lloyd I will probably proceed without delay to Sweden, but if there is the least chance of seeing you in England in the course of another month I shall certainly stay,

for

next to seeing him, I have no more cherished object in the world than you - But I beg you clearly to understand that I do not wish you for one moment to alter your plans on my account: Indeed I shall be sorry if you do

As regards the Map, bearings &c. that I requested you to send me, there will be time bye & bye, for I think I have enough data to go upon for the Construction of a rough map - and the time is too short for doing any very accurate work. My intention is, however, to furnish

a more complete & correct one by the earliest opportunity. I think that between us we might manage to fill up what is at present a blank in Great Namaqua & Damara Land. Dr. Shaw proceeds to Liverpool in a few days to attend a meeting of the Relief association, and he is anxious to have my map & Memoir for the occasion. —

Return my sincere thanks to Mrs Galton for her very kind remembrances of

me

Believe me, though I have not the pleasure of her acquaintance I feel as if I already loved and esteemed her. –

As regards my prospects in life they are but indifferent but it would be unfair to trouble you with any details on that head. Indeed it would be wrong of me to grumble, for I have much to be thankful for and at present I feel rather cheerful and contented, and consequently comparatively happy. People are everywhere kind and considerate to me, and that goes a long way with <u>me</u>.

I heard from your sister

lately, and your mother kindly invited me to spend a few days at Leamington which I will make a point of doing.

Excuse the shortness of this note, but my time is at present so occupied with the map &c. that I can afford to write no more. Next letter I trust will be more circumstantial.

What a dreadful thing that about poor Capt. H. Parker. I was not aware of it. How did it take place. Was he accidentally shot or was he murdered?—

Remember

f. 10v

me most kindly to your wife
Trusting that this note will
reach you quick, and in
good health,

I remain,
Dear Gallon
Yours much attached
Ch. S. Anderson

f.11r

170 New Bond Street
September 18th 1854

My Dear Galton,-

Your very kind letter, with your delightful proposal of visiting you in France, I have just received, and assure you that I shall have very great pleasure in complying with your wishes. I have been making inquiries to day as to the best means of getting across the Channel, and find that Steamers run from Southhampton to Jersey, and thence on to St. Malo, and as this place appears not to be very far from where you are at present

residing. I have decided on taking that course, but as the steamers from Jersey to St. Malo only go every Tuesday, and as I could not possibly be ready to start to morrow I have no alternative but to wait till next Monday (Septr. 26th). My intention is to leave London, ~~at~~ that day (Monday) the 8 h. 30' p.m. Mail train which will take the ¼ to 12 o'clock at night steamer to Jersey from Southampton - & at 11 h. a.m. on Tuesday we leave Jersey, & I suppose we will reach St. Malo that, or early the following day. Consequently you may expect to see me at Dinan on Wednesday

~~next~~

a week, or the 27th of September, and I trust you will not have left that place by that time. If you are obliged to do so, pray leave a note for me where to find you. In the mean I intend to run down to Leamington to see your family and will of course bring any letters or parcels that they may have.—

To morrow morning I am going to your residence in Victoria St. Westminster, and will have a good **Search** for the Documents you have kindly offered me the loan of.—

I had

intended to have gone down this
week to Liverpool to attend
the meeting of the Baptist
Association, but I have soon
given up the idea —

I am exceedingly grieved
to find that Mrs Gallie has
suffered so severely from an
attack of intermittent fever,
but I trust sincerely that by the
time these lines reach you
she will be quite recovered.
I hope you yourself are quite well?
I am pretty well myself, tho'
I cannot say that European
climate agrees with me very
well. —

Everybody is out of London
& consequently I see nobody.
I was very much touched by
poor Hyde Parkers premature

Hôtel de Londres { France, étranche, La manche.

October 26th, 1854

Dear Galton, —

I hope by the time that this letter reaches you that you will be comfortably settled in Westminster, and that you arrived without accident or delay in England; and I trust, moreover, that Mrs Galton escaped further fever attacks. —

Shortly after you left this place, my old complaint increased in severity, besides which I have been attacked by a quite different disease, and, though perhaps not actually so painful as the other, is, if possible, more annoying and distressing. The pain is at times (often for 12 to 24 consecutive hours) so acute as to make me shrink together like a bag. And the only thing

[redacted]

that gives me a momentary relief is the bath. Of late I have also had recourse to Chloroform. Only once or twice since you left have I attempted to take an airing, but each time it was accompanied with such pain as to compel me to give it up altogether, and I am now a constant inmate of my Chamber. But enough of this, I suppose in the course of another month I shall be on my legs again. I have taken an amazing quantity of medicine in this short time, and expect the Doctor's bill will considerably lighten my pocket. —

When at all free from pain, I am busy with my maps for the two Geographicals. To do it satisfactorily at all, it requires both time & patience, but when

f. 145

completed I hope it will repay my labours. I am sadly afraid I shall not be able to fill up your part, that is from Schmelens Hope northwards, as I am not sure of your way of working. Nevertheless I will do something. Should you favour me with a few lines, would you kindly sketch, on one side of your note, your notions of the course of the lower part of the Nourse R., its embouchure (Latitude of) and position of the junction of the Atchilanda and the Cunène, together with the names and positions of the respective tribes between Nourse R. & the Ovambo. I shall also be glad of the approximate Latitude & Longitude of Lifilé according to Dr Livingstone. —

What time I can spare from

please

and the more, I should be very glad to be perfect in the French language. My tutor is a Frenchman who does not understand or speak the least of English, but this considerably all the better as it necessarily compels me to express him in French. Mrs Lane manages very much of course in my fortunately to explain to him all about our travels with which he seems delighted.

I am restored to health & shall in all probability return to England viâ Paris and for double reason in the first instance the steamer from Granville to Jersey ceases till tomorrow (this winter) & secondly I am in hopes, by the time that my health is somewhat recovered, to be able to be sufficiently advanced in the French language to make myself understand my wants & wishes.

I remain my Lord & Mr Baxter

Yours ever affectionately & obliged

Chas. J. Anderson.

Hotel de Londres f.15r
Avranche
November 2d 54.

My Dear Galton, –

I received yesterday your kind note, dated Boulogne, and was glad to find you and Mrs Galton were well; and I hope, moreover, that your journey to London proved prosperous. I wrote to you sometime ago, on which occasion I addressed my letter to your residence in Westminster and I trust you have perused it by this time.

My health, I am sorry to say, is exceedingly indifferent, and the Doctor tells me, that,

under

the most favourable circum-
-stances, weeks will elapse
before I can be restored to
health. I have therefore no
alternative but to remain
where I am. Of course it will
be both expensive and
inconvenient, but it is
useless to grieve. —

Would you kindly do
me a favour, viz. to go to
Bishop in Bond Street and
deliver the enclosed note to
him, which contains a
request that he will hand
over to you my cash box.
It is no great amount but it
would perhaps be as well to

Count

it in his presence. The Key will be found, together with other keys, in my bed room. When you have received the money, pray take out £15, and send it to Miss Elizabeth Lloyd, together with the enclosed letter. The remainder of the Cash I should be obliged to you to remit to me in the safest way possible. Would it be inconvenient to your Banker to give me a Cheque on Avranche for whatever the amount might be? I should think it could be

cashed

here without any difficulty
However you will know best.
Again, should my things be
in the way, or troublesome,
to Mr. Bishop, you would
much oblige me by removing
them to your residence.
as they will go in a few
carpet bags. &c. I dont think
they would occupy much
space –

Should Mr. Bishop express
a wish to have his account
settled, I should be glad if you
would pay him. I had been
with him exactly <u>three</u> (3)
<u>weeks</u> when I left him, and
I had agreed to pay him <u>two</u>
<u>Guineas</u> (<u>£2. 2. 0</u>) <u>per week</u> for
my <u>two rooms</u> and <u>breakfast</u>

B.

this. I have also had a little wine and beer, and an occasional meal. As regard paying for the rooms during my absence, you will hear what he says. I wrote to him, soon after my arrival in France, to say that I should be glad if he would let the rooms, as I did not think of returning for some time. However, if he insists on my paying for the whole time there is no remedy but to pay, but of course he will then take into consideration my not having fed with him. I hope you will excuse me all this trouble, but I have no person in London to whom I

could

address myself in this matter. Mr. Bishop has also paid orts and ends for my account. I request him to include everything in the bill. —

I hope you arrived in England in time for your contribution to the periodical you spoke of? —

If I have unfortunately to stay here any length of time, is there any chance of getting one's things sent over here? —

If you settle Mr. Bishop's account, pray give the Chamber maid, and the man Servant, half a Sovereign each. They were very kind and attentive to me in London. —

During

f.18

the last week the weather has been magnificient. The sun has been as warm almost as in the summer.

I had come thus far when I received your letter dated Westminster, and was delighted to find you safe in London and that you have had such fine weather in England. –

With kind regards to Mrs Galton, and every sincere wish for your health and happiness,

I remain,
My Dear Galton,
Yours ever much
attached & obl.d
Chas. J. Anderson –

f.19r

170 New Bond St
April 4th 1855

My Dear Galton, –

Will it be convenient to you to advance me £40 or 50 towards the end of this month? I am anxious to go over to Sweden as soon as possible. In case you can assist me with the sum mentioned, I would give Mr Bishop orders to hand you over the amount as soon as my remittance arrives,

which I expect to take place early in June. —

I hope you are quite well? Pray remember me kindly to Mrs Galton & the rest of your family.

Ever yours very sincerely

Chas. J. Anderson

f20

My dear Anderson

It is with real regret that I feel I must refuse what you request. I will not rest my refusal ~~simply~~ on the ground ~~of the~~ that lending the sum would be ~~loan being~~ inconvenient to me which is the case, but because I have of late years made an invariable rule of refusing – My reason is much what Polonius, in "Hamlet", says "that loan oft loseth both itself & friend"

Believe me ever sincerely yours

Francis Galton

F21r

170 New Bond Street,
April 5th 1855

My Dear Galton,

I have received your letter of yesterday. –

I shall not comment on your refusal with regard to the money matter, but you might have spared me the pain caused by your Polonius expression "That loan oft loseth both itself & friend" –

f21v

You have judged me badly.
My sincere wish and hope
is that you may never
yourself know the meaning
of the word <u>want</u> –

If any parcel arrives
for Mrs Gallon (it has not
yet) you may rest assured
that I will see it safely
delivered in Victoria St.

Ever sincerely Yours
Chas. S. Anderson

f22v

Anderson
March 1855

170 New Bond Street
Monday Evening

My Dear Galton, —

I send you my Instruments. I drive out to day, but notwithstanding I hope to be able to benefit by your invitation and your assistance. Should I, however, not be with you at the appointed time (8 — 9),

and

F23v

the sky should be clear,
pray make a trial of the
Instruments by yourself.
Your experience is worth
twenty of mine –

Very sincerely Yours
Chas. J. Anderson.

7 Bloomsbury Place
Bloomsbury Square
Saturday Morning

My Dear Galton,—

It was with very great gratification I learnt that you at last had arrived at the goal of your sanguine wishes. I am sure that your talents, and good motives, are a sufficient guarantee for the success of the arduous, but immensely useful, work you

are about to embarke in.

With regard to your kind offer to make one a fellow labourer in this good cause, believe me I feel very grateful. In a pecuniary point of view, a fortnight ago, when without a roof over my head, and when struggling for bare existence, the proposal would have been invaluable. I have now engaged my

rooms

for several months to come, and whether I occupy them or not, I must pay alike. I am but too sensibly aware of the beneficiency of change of air, but I have not yet given up all hopes of visiting Sweden.

Again I do not know how far I may be competent to fill the post you wish to place at my disposal. My conscience would never allow me

to accept of an appointment, however lucrative or indifferent without the certain knowledge that I could hold it with honour.

Yet from the kindly feeling I have always entertained towards my fellow creatures, and by the same wish as yourself to be "of use in the world", and from personal friendship to yourself, I would gladly try

my hand in assisting you to the best of my ability. My small store of practical experience might possibly be of some use to you in putting into train and arranging the elementary processes of your method, which, if I mistake not, will be the most difficult part of the business. But since my own time is so much occupied, and my plans for the future so uncertain,

I would not undertake to stay with you any length of time or any prescribed period: I might be called away any day. Allow me simply to come as your friend – at least for the present – All I shall require, is a "shake down", and perhaps it would not be too much to ask to have my travelling

expenses

paid?

I have written to Mr. Galton to inquire whether you will be at home to morrow & whether it will be convenient to you to see me —

What of my instruments?

Very sincerely Yours
Chas J. Anderson

Tuesday Evening, —

My Dear Galton, —

I am truly glad to find that at last everything has been satisfactorily arranged with regard to Aldershott. But on the other hand, I sadly fear I must disappoint you. I need scarcely assure you it is no fault of mine, but as I told you in a former letter

I am entirely guided by circumstances. —

As yet I have had no encouragement about my Book, and since there is not a person in England who would come to my assistance with a sixpence in case of any difficulties, it would be dangerous for me to ~~be~~ live entirely upon hopes,

and perhaps finally would find that no Publisher would undertake the work.

My plan is, therefore, ~~unless I unless~~ in a few days to leave England for Sweden, in order to see my family – that is provided I can scrape together the means, & thence return forthwith to the Cape.

f 29v

I have not yet, however, given up all hopes of getting a Publisher, in which case I may remain in England until such time that the work is through the Press. You shall know further before Saturday

In haste

Yours very truly

Chas. J. Andersson

7 Bloomsbury Place

Bloomsbury Square

7 Bloomsbury Place
Bloomsbury Square
July 13th 1855

My Dear Galton, —

I have received your last communication, and feel obliged to you for your offer to Edit my Book should I find a Publisher. However, having already secured most able assistance for that purpose, I beg to decline your offer. —

With regard to the remainder

of the Contents of your letter, the less said the better. From the perfect confidence I have that you meant sincerely, I will endeavour to take it in the same spirit. –

I am off to night for Sweden –

Sincerely hoping that your exertions

at

f31r

Aldershott will be crowned with the success the undertaking deserves, and that I may find you in the full enjoyment of health on my return,

I remain,
Very sincerely Yours
Chas. J. Anderson

Damara Land. Otjimbingué —

Sept. 27th 1857

My Dear Galton, —

I have long been meditating on penning you a few lines, and now an event has occurred which hastens this my resolution.

In May last Mr Frederick Green left these parts on an hunting and exploring expedition for the interior. His principal object was to penetrate, if possible, to the Cunene river. A letter just received from my friend is now lying before me from which I learn with regret that not alone has he failed in accomplishing this much desired object, but that he has had a most miraculous escape from the Ovambo nation, who, it seems, have turned traitors. I have sent an account of the transaction to one of the principal papers at the Cape and have requested Mr Hall to forward you a copy by the earliest opportunity. Messrs Hahn and Platte, who accompanied Mr Green, have returned in safety to their homes, but they feel sadly out of spirit — or, to use Mr Hahn's own expression, they "feel humbled in the dust" — at

the disastrous result of a journey which a few ~~months~~ months back they had looked forward to both with pleasure and success. The Ovambo, however, have paid dearly for their treachery, and it is to be hoped they have learnt a lesson which they will not easily forget. Several of their principal men, Nangoros chief son (no doubt you will remember the youngster?) amongst the rest, were slain. I am totally at a loss how to account for their behaviour but am greatly inclined to think that it did not altogether originate with themselves. Be this as it may, I fear much that those scoundrels, the Namaquas, will use it as a pretext for attacking them; and if they do, the fate of the Ovambo is sealed, for though they cannot be broken up quite so fast as the Damaras have been, nothing but the interference of Europeans can save them from ultimate ruin.

But notwithstanding Mr Green's many misfortunes, his journey will not prove altogether

abortive, for it has accidentally led to the discovery of a fresh water Lake. If I judge rightly, I think you will feel more pleased than surprised at this announcement, for though we found the dried up pond of Omambondè, I think we both agreed that the Lake was still to be discovered. The only thing that annoys one is the circumstance of the lake (which, bye the bye, is called Onondova) being actually situated within one single days' march of the Otjihakondua Gomulenga (Otjihako wa Molenga of the Maps) — that is to the eastward of the point of the flat where crossed by us in 1851! Indeed, I am not sure that both this plain and the Etosha Salt pan do not stand in connection with Onondova. But Mr Green and his companions would no more have found the Lake than ourselves had they not accidentally stumbled upon it: indeed, they actually saw the water before they had the slightest intimation of its presence or existence.

As soon as I shall have seen Mr Hahn or Mr Green — the latter I expect back in December

I shall be able to furnish you with a more detailed and accurate account of the interesting discoveries. I shall also be able to furnish you with something in the shape of a map of the Travellers route. In the mean time you must just satisfy yourself with what can further glean from the Newspapers. I have also a good many observations relating to certain portions of Demerara laws, which may possibly help to fill up a few pages in the map. I only want time to work them out.

I need scarcely say that the Trevor feelings entail upon me but inconvenience and heavy losses. However, it is to be hoped my friend will be able to make up for it by a rise in the cotton which he contemplates undertaking in the early part of the next year.

At the expiration of my present agreement, and if I am spared in health, it is not improbable that I will undertake an expedition in search of the Demerara. I don't think I could ~~stay~~ rest in my grave until the position and character of this mysterious lake of Stream

P.S. Paul begs to offer Mrs. Rae, & Miss Rae, his respectful remembrances.

Dear Mr. Rae, Yours sincerely, J. S. Trevor

Cape Town
July 19/4. 1860.

My Dear Galton, –

On my return to this place a few days ago I found two letters from you dated 5th July and 1st of March, and was truly happy to find that when you wrote you were well and happy. But it appears you have had a very narrow escape. I believe the kind of diphtheria you speak of is not altogether new – at least from your description I should imagine it to be identical with a throat-disease very prevalent in Sweden during my school-days. Great number of young people died of it.

Pray what results do you expect from a Survey of the Sinai? I presume you speak of the Sinai

of the Scriptures?

I learnt for the first time, from one of your letters that my letter from the banks of the Okavango viâ Benguela, had safely reached its destination. What a pity I myself had not the same luck as my epistle! I am gratified to find that my discovery of the Okavango has cleared up one of the mysteries of an important point in the Portuguese Geography of the West Coast. I am by no means certain that the Omuramba "K'Omanbondé" runs into the Okavango, for some days journey to the eastward of your route (I mean of your furthest easterly point) there are two distinct

Omuramba, one evidently going direct towards the middle course of the Tsoughe, whilst the other either joins(?) it (the Omuramba K'omanbondé, i.e. Omuramba ka' malako) or separates(?) from it flowing very northerly in the direction of the Okavango.
Nor can I tell whether the Omuramba ka' Ovambo flows east or west, though the latter seems the most natural. But if this be the case, then where does it take its rise? This point puzzles me amazingly. The boiling-water observations that I made in these regions do not enable me to settle this question. Nor does the native information assist me!

this may seem almost incredible to you; yet I only tell you a fact.

I deeply regret to hear of the unfitness of the lower course of the Zambezi for navigation. This must be an immense disappointment to people in Europe. But perhaps the superiority of the newly discovered regions about Lake Nyanza may in some measure compensate for this failure. Capt. Speke has lately been here. The Governor got the Parliament to subscribe a sum of £300. to his undertaking chiefly with a view of enabling him to get a supply of Mules. We have had a long chat together and I advised him to try Donkeys. It appears he had some of these animals on his last journey

but they unfortunately all perished. I suggested that the cause of their destruction was probably to be attributed to their being overburdened. Capt. Speke thought it was the real cause of their death, but said he would make another attempt. He seems a nice man, and expresses much confidence as to the final success of his journey and its object.

So the Skeleton of an elephant or a rhinoceros is only worth £50! Surely, Prof: Owen does not imagine that a man would take the trouble of procuring and preparing it for such a paltry sum. Why the tusks alone of a decent Bull elephant is worth nearly this sum!

I am truly sorry to learn of the elopement of Mrs J. H. Gurney.

though, to tell you the truth, I always thought her more fit for a footmans wife than the partner of such a good and nice man as her late husband. Has he succeeded in getting a divorce, and what about her own large independent fortune? I suppose that's her own during life, and at her death it goes to her children. I mean to the issue of her first marriage bed? I pity poor Mr Gurney from the very bottom of my heart.

Pray remember me kindly to Ouseley when you see him. Tell him he might as well find time to drop me a line. Remember me also very kindly to our friend Vardon if you ever see

him. – I am glad to hear that Dr. Shaw is doing so well. I dont think I shall ever trouble myself about again addressing either him or the R. G. Society. Both seem perfectly indifferent to poor Anderson. –

Your account of the Gorilla monkey is very amusing. I am very sorry I did not meet with the monster. If ever I do, depend upon it I will become a second Warburton both in dexterity and boldness.

I cannot conscientiously state that I have yet thoroughly regained my health. My recovery is excessively slow & tedious, but I trust the bracing winter air of the Cape will soon bring me

round:-

With many kind wish for your prosperity, health & happiness and kind regards to Mrs Galton, your mother and others of your relatives to whom I am known. Also kind remembrances to all other friends & acquaintances

I remain

Ever very sincerely Your

Chas J. Andersson

Francis Galton, Esqre

My address is to the care of Messrs Van der Byl & Co. St Georges St. Cape Town

So send me your particular visit and that of Mrs F. Galton, as also and other of your family writing I would value them much

Damara Land
Otjimbingue - Sept. 8th 1864

Francis Galton Esqre
London

My Dear Galton, -

About six weeks ago I received your letter of the 27th of March. The reason of my not replying to it before is that I was at the time so to say in a dying state - My right-hand leg being completely shattered by a gunshot-wound received in a terrible engagement with the natives. It was a regular pitched battle and lasted from 10 o'clock a. m. to between 3 & 4 p. m. We were about 3 & 4000 men engaged — Damaras led by myself & 2 or 3 other Europeans against Hottentots. But I am unequal to enter into details being still very weak & suffering at times excruciating pain - For 3 months I have laid flat on my back and indite these lines in that painful position.

I had scarcely expected to hear from you after so long a silence. Moreover I believe it was my turn to write but to tell you the honest truth. Your last

letter contained so many admonitions and so much advice of a nature utterly incompatible with the position of a poor man like myself that I thought a correspondence carried on in that strain might only lead to estrangement between us. Moreover you so utterly misconstrued my character. Lastly came your refusal for a slight pecuniary loan. I would never have asked had I not been perfectly sure of being able to refund you the money. But, at the same time, I have never forgotten "Old Lang Syne" – in short what we did & suffered together. Indeed I have often wished to have written to and still more I have yearned to hear from you. I would now write you a long letter ~~stating~~ that you seem to take an interest in my welfare but must postpone it to a future date. Suffice it to say that at no distant day I had a very flourishing business but in an unlucky moment I befriended the Damaras who suddenly threw off their yoke of slavery. I pitied them and determined to stand by them. The upshot has been, notwithstanding we have beaten the Hottentots (chiefly the Afrekaners) in three distinct

engagements, that my prospects in life have been utterly blighted. Loss upon loss has followed in such rapid succession that I have got almost bewildered. Upwards of Twelve thousand pounds sterling is the amount of my loss up to date and Heaven only knows what may still be in store for me and some one friend V.d. Byl & large - and to crown my misfortunes I have become a cripple for life. But God is merciful and I am not altogether without hope of being able to right myself should I be restored to health.

But to return to your letter. I very much fear that I shall be unable to assist you with any data for your interesting researches. As regards the natives of South Africa keeping pet animals I never knew or heard of an authenticated instance of such a phenomenon. It is said that the chief found by the Matabele (& conquered by them) on the Sesheke was in the habit of doing something of the kind but I believe it was more in the way of feeding them than actually keeping them captive.

We have only one species of Guinea-fowl

in these parts. It breeds in captivity. You are of course aware that this bird in a domesticated state get white markings on the wings but I have not observed this singular phenomenon in any of the birds bred here but perhaps it is only in the 2 or 3rd generation that the white appears?

I am surprised to find that you were not aware until lately that the Afrikaan Elephant was tamed at a remote period. Why you will find something on the subject in "Lake Ngami".

I am very glad to find that your aged mother is so well. I had no idea that she was so old. Pray Conway Oliver and the rest of your family my best regards. Likewise remember me kindly to all enquiring friends, Oswell in particular. I am very glad, though a little surprised, to find that he is a family man.

I have two children, a boy and a girl, the latter a year old a sweet, loving thing. The boy is a naughty self willed fellow very ugly but otherwise as fine a fellow as you would wish to see. Both, as well as their

[illegible]

kindly fwd. by J. Hallett Esqre

F40

Francis Galton, Esqre
care of Royal Geographical Society
15 White Hall Place
London

P. S. A.

South Africa - Cape Town
March 15th 1866

My Dear Galton,

Some time ago you asked me whether I had not a map of my last travels to which I believe I replied that I did possess materials for a very good one, but that I somewhat dreaded taking the work in hand in consequence partly of my physical sufferings & partly because of the great labour it would entail on me. However I have lately been hard at work on the map in question, & am happy to say have succeeded in completing it as far as time and circumstances would admit of. But it is with considerable hesitation that I now offer the map (or rather maps) to the R. G. Society of London; for Mr Barnes took leave to day that in a conversation he had with Mr Bates, your distinguished Secretary,

he

he had told him that he "did not think such a Country (Damaraland) was worthy of a map." Secondly I cannot but think that ~~the a Country~~ Society has treated me shabbily & neglectfully, but of course as nearly every member of Society feels himself more or less an aggrieved & suffering party, I must not complain ~~Bates~~ it would be but a poor way of getting satisfaction for a supposed grievance by with-holding a document that may to some small extent supply a deficiency, & fill up a gap in the map of these parts of Africa. Will you therefore kindly undertake to present the accompanying maps to the Society, with my humble respects, hoping it will find it of sufficient interest to have it published in their Journal. But if, on the other hand, Mr. Bates' opinion should really prove to be the echo of the

body of the R. G. Society, perhaps you would do me the favour of re-directing the maps, &c. & forwarding them with the first safe opportunity to the following address:-

To

The Kongliga Vetenskaps
Academien
Stockholm
Sweden.

NB. The parcel might be given to the Swedish Minister or Charge d'Affairs in London.

The maps have cost me very great labour, but indeed they afford but a poor criterion of the extent of my troubles & hard work. But you will perhaps better realise them when I inform you that the documents in question have been deduced from upwards of three thousand prismatic-compass bearings, besides numerous

other

observations. And in order to obtain these I find I have ascended between forty & fifty mountain, mountain peaks, & hills, besides very many less conspicuous objects. I have truly spared no pains nor labour in arriving at the embodied result. This time I could have added a good many more details to the maps, but for many reasons this is at present impracticable. In the first instance one of my note books, containing numerous data, has been mislaid or lost; secondly my health is very poor; thirdly I have no time, contemplating, as I do another journey shortly to the Interior with a view of improving my health & means, the latter are wretched in the extreme. Under the circumstances I have thought best to forward ~~the~~ the maps in their present state, as I might never have time to complete them more thoroughly.

Sir Roderick Murchison
Bart. K.C.B. &c. &c.
Royal Geographical Society
London

Cape Town. 38 Buitenkant
April 17th 1866

My Dear Galton,—

I hope you will ere this have received my letter & the map for the Geographical & that the latter may be found worthy of their acceptance.

Can you afford to favour me with your name as a subscriber to my contemplated work on the birds of Southern Africa, of which I will direct a few copies of the prospectus to be forwarded to you? Oblige me to distribute them in such quarters where you think I may obtain supporters. The prospectus will give you a pretty good idea of the character & extent of the Book in question. Of course there is no chance of my publishing for some time to come as I lack the means to maintain myself in England. Moreover, I must daily lose the result of my applications. You will see by the Prosp. that Day & Son, the publishers, demand the large number of 500 Subscribers as a guarantee for their very large pecuniary outlay. I can do with 400 at a pinch but then they will not execute the plates in the style I deem requisite. Pray give me the benefit of your support. With your large circle of friends and correspondents you can be of greater

service done in this matter than any other of the few friends that I can boast of. I expect no pecuniary benefit from this work, as 700 copies, at the very least, must be disposed of before I can get a sixpence. My object therefore in publishing I venture to affirm is tolerably disinterested. Whilst waiting for the subscriptions lists to be filled up, & with a view of bettering myself, physically & "pecuniarily", I propose undertaking another journey to the Interior. I am hardly fit yet for the undertaking but I have little or no alternative unless I choose to starve.

My wounded leg is progressing tolerably favorably & I can now walk a little with the help of a stick but it seems somewhat doubtful whether I shall have much real use of the offending member. It is much deformed & about 3½ in. shorter at the heel than the sound leg. The latter difficulty I have got over to some extent by having recourse to a false boot. There are still two open wounds & I expect more pieces of bone to come away yet. Lately I have been a terrible victim to gout (!!) & rheumatism —

Best very kind regards to Mrs Galton & other known members of your family

Yours very sincerely, Francis Galton

P.S. What nice cows those of the Redons are! etc. etc. Francis Galton

Cape Town -
Green Point. May 31st
1865

My Dear Galton,-

I received your letter only a month ago whilst on my way to this place, and though I am much too early for the mail I have thought it best to begin my answer at once. Like yourself I shall be delighted to foster a correspondence between us, but you must not think hardly of me if now & then I should prove a little remiss. Troubles have come upon me rather over-whelmingly - in short I am utterly crippled in means & body. I was doing an excellent business when suddenly I had to encounter war, epidemics among my cattle and horses, bad seasons & the Elephant-hunters, insolvencies, deaths of customers, and many other

equally distressing causes. If I set down my losses during the last two years from such causes at say Ten thousand pounds thy I am probably below the mark!

As regards my bodily health I cannot complain, but my leg is making anything but satisfactory progress. I have only been a few days in town & the Doctors have not yet favoured me with their ultimatum, but so far as I understand, if they had their own way, they would cut it off my leg. However I hope not. It is about 4 inches shorter than the sound limb. and we have extracted upwards of Sixty (60) Splinters & pieces of bone! But enough of this. I hope not to trouble you again with this tome painful subject.

I am very glad to find that the Geographical Society is in such a flourishing state. I am

likewise delighted to hear that Mr Bates is their secretary. I know him well from his work which I possess and which I read more than 18 months ago. I was particularly pleased with the simplicity of the style of the narrative at the same time I saw he was well up in his subject. As a fellow traveller & naturalist I presume I may venture to beg you to convey to him my sincere congratulation upon his appointment & my respects.

Your remark on Baines' Book is very just and you might even have gone a little farther. He writes very well but makes horrid blunders; his materials moreover are too meeting. He has left this for England and you will of course have an opportunity of seeing him before this reaches you. He is apparently very modest

but awfully ambitious. I never met a man who would do so much for ~~with~~ a little buttering. You cannot flatter or butter too much. I was able to put a feather in his cap the other day, for the King of Sweden was graciously pleased to accept one of his pictures of the Falls that I sent him.

I have distributed a few sheets of your Ethnological queries amongst friends & hope they will be able to furnish you with some information in the course of time. I have also told some friends & acquaintances of Professor Huxleys' wants. Give the learned Professor my best respects & tell him I hope to be successful in procuring a Samara. Skull or two. I believe I have now some by me but should be afraid to produce them as authentic specimens they having been mixed with other kind

of native skulls.

I am scarcely prepared to give you the information required about the wild Guinea fowl. But I do know of at least half a dozen instances where the bird has been bred in captivity but in all these cases it has been accomplished by getting the eggs & then setting them under a tame hen. I also know of a few instances where the young chick has been captured & successfully reared. But I have no authenticated proof of such bird having produced young.

I cannot call to mind how I got to know about Sekheké having kept pet wild animals but I am certain I have some authority for my saying. The Caffers I believe keep pet fowls but it is quite possible that they have

acquired this habit from coming in contact with civilized people.

Your age of the capture of the African Elephant is very curious & interesting and I certainly never heard anything of that kind.

"Have you observed any difference in the moral character of gregarious & of solitary animals?" you ask. Yes, I think I have, still it is a subject for consideration. You have of course heard of the "rogue" Elephant and we have many other kind of rogues such as Rhinoceros, Buffalos, Lions, &c. &c. Society I fancy has very much the same effects upon brutes as it has on bipeds; it makes them gentler, less shy, less morose less bloodthirsty and so forth. In short the brute who lives either singly or in pairs is either of a milder or more cruel disposition than those who herd together. The wild dog is perhaps an exception

to this there may be other. As a rule a solitary Lion, or Tiger or panther, or Hyæna, is more to be dreaded than a company of either. — at least this is my experience.

Many thanks for your Cartes visite. Would it be asking too much if I were to ask you for your mother — also those of your brothers to whom I am known?

If I have read your letter aright you would be glad to serve me, if it could be done without any inconvenience. Well I think you can. It is this. I have probably done with Damaraland for ever, and if ever I should be restored to health I must endeavour to select an entirely new field for my future labours — somewhere north of the Zambesi. Could you manage to obtain for me from the Portuguese Government at Lisbon permission

to travel in any of their African settlements, as also to erect a factory for trade South of Benguela — that is if I found such a course desirable.

I like your pamphlet on the domestication of animals very much. You have completely proved your theory, I think. The origin of most domestication I conceive to have been almost accidental — there certainly was no great amount of civilization required on the part of man. It is just this if your bird or animal takes kindly to you the thing is accomplished. I remember an interesting instance of this in my own experience. A certain person who wished to shew some proof of his gratitude ~~to me~~ for some slight service done him brought me a young Duiker (you know the antelope, I think?). The fawn took a fancy to me almost immediately & we became firm friends. It had the run of the house and knew meal times as well as ourselves. It would station itself at my elbow at such times petitioning for crumbs — it was very partial to bread. It would sometimes

remind me of its presence by putting both feet on my knees or even on the table precisely as we cat dogs do. It grew & galloped amazingly for a time but at last fell grievously sick. It slept at one end of the house & myself at the other – but the doors intervening were usually left open on account of the heat. One night I was suddenly awoke by a piteous whineing – at first I was unable to think of what caused the noise but all at once it struck me that it must the faun – and I exclaimed aloud – "poor little thing I am afraid you have come to die!" The next instant I felt its little head laid against my own – In five minutes more the poor brute was a corpse. It had to pass through 5 rooms before coming to my own.

Bye the bye, in all probability Burns will have gone home with a view of obtaining an appointment to some exploring expedition. He is in many respects admirably suited to form one of such a party, but there are two kinds of posts for

which he is unsuited — viz. either the Commissarial or at the head of an expedition. I would especially guard against his becoming anything of the latter. No men would obey him. I have thought it my duty to mention this my own experience of the man. I can have no possible wish to injure him as all my conduct towards him has been uniformly kind & courteous. Indeed I wish him success from the very bottom of my heart.

Sincerely hoping that you are enjoying health, with very kind regards to Mrs Galton, your mother and other near members of your family, and every kind wish for your happiness

Believe me, to remain
Ever sincerely Yours
Chas J Anderson

Apparition 250
28
28/250 (8
224
26

Maid	2.50
Breakf	3.-
Snow	2
Dinner	7
Tea	2
	25.50

Retreat 7. Yoncha
Water 7 ½
4 glasses 3 oz
½ hour between each glass
Coffee not till ½ hour 10
after last glass viz at 9½ am
take strong food till
till dinner 4½ – 1 à la fourch
– 3 hours after take)
– Bath 1.h 25.26° ½ hour
2 glasses of water with ½ oz bran
Between Bath & dinner – take
2 glasses – anywhere
– Dinner 4½
– Establishment of Communal
Take good rate French
Port Cream wine

Rest 7 – 8 water.
8½ bath 4-9
breakfast.
2 glasses before dinner
hour after dinner
hour before

Tuesday at 11
8 Legacy with call.

Cape Town – Green Point
Decr 8th 1865

My Dear Galton, –

I am much obliged to you for your exertions on my behalf with our friend Dufrat, who, as you truly say, "is one of the kindest hearted & most Gentlemanly minded men." Mr Dufrat & your kind letter arrived here by the last mail, & I lost no time in calling upon him. I regret to say however, that little or nothing is to be done in that quarter, for however anxious the Chevalier may be to benefit himself & to do a kind turn for a friend, I shrewdly suspect he has not the means, & if he has is not inclined to risk them in "prospecting" & he may be right. As for his mines they must exist in imagination, for all I can gather from him is that he has "been told by the Portuguese that there is abundance of Copper in their settlements" & so there may be in the moon for ought we know to the contrary, Mr Dufrat, as you are

perhaps aware, has got a large grant of land from his Government at St. Fish Bay. But beyond the name, he might as well be possessed of land on Tierra del Fuego, for the whole neighbourhood round that Port (S.F.B.) is one tremendous howling wilderness. And you will hardly believe it but he was not aware of the character of his Grant, until I pointed it out to him! And what do you think our friend said when I explained matters to him - why, he coolly remarked "Oh, I can exchange for some other locality", "but", I rejoined, "suppose the country is already occupied" "Thats of no consequence" he immediately remarked"! "Oh, Chevalier, if thats really the case, have a bit out of each Golleanardo," & so ended our first interview. Since then Mr Dupratt has got a notion that St. Fish Bay might be turned to account as a Fishing Station, & perhaps it may, though I never yet knew an establishment of that kind prove remunerative; it is only when worked in conjunction with the Guano islands that any profit is at all realised. At all events a Fishery would not suit me

But, my dear Galton, when I asked you to speak a word in my favour with the Portuguese Government, it was ~~merely~~ mentioned as the merest contingency a visit to their Settlements for I am utterly destitute of means besides being a complete cripple, probably for life.

I am at present busy writing a Fauna of the birds of S. W. Africa, but am very doubtful whether the work will ever see daylight. My Publishers have not absolutely refused the publication but speaks of the enormous expense of such a production. However, I do not mean to give it up very lightly as I have now nearly completed four fifths of the Book & have gone to great expense about illustrations. I paid friend Davies alone upwards of £100. & I cannot afford to throw all this money & labour away. Besides the work is not a Compilation but the notes are carefully & laboriously made, in a great measure at least, from personal observation. I wish I could get you to interest yourself in the undertaking, as your great interest in the literary world would go far to ensure success. However, don't thinks that I am about to tax your friendship to any great extent, but I do hope & think that you will lend me your countenance in a quiet way. Honestly

believe that my contemplated work will be useful, & I am doing hard at insuring accuracy & facts.

I will not forget your wants as regards your future work should anything come to my knowledge that is the least likely to bear upon the subject. I have asked several friends to co-operate with me, but as you reminded me lately "out of sight out of mind" is likely to be verified.

I did know Wesley Richards & am sorry to hear of his death.

I am very much interested in Baker's successful journey. I may presume that he is returned by this time, & that we shall soon have a full account of his labours. I possess all his works on Ceylon &c.

You will be sorry to hear that my leg sometimes bothers me much trouble & anxiety. The opinions of the faculty have coordinated — some are for amputation, others for holding out a little longer. In the mean time I am wearing away. God help me, poor fellow!

I sincerely hope that this will find you & Mrs Hallton quite well. With united kind regards from myself & wife & best wishes for your health & prosperity

Believe me
Very sincerely Yours
Chas J. Anderson

78

Charles J Anderson

letters on his return

to a relative to England 1860

1852-66

f.1r

Anthropological Institute.
3, Hanover Square, W.

December 13th 1887.

Sir,

I am requested by the Council to forward to you the accompanying Resolution which was unanimously passed at their Meeting this afternoon, Mr. Hyde Clarke, Vice-President, in the Chair:

Francis Galton, Esq., M.A., F.R.S.,
President Anthrop. Inst.

F.IV

Resolved

"That Mr. Galton be requested to complete his Term as President of the Anthropological Institute by retaining the Chair for another year; more especially as at this period, in the opinion of the Council, he has conferred great benefits on the science of anthropology and on the Institute by

f.2

his course of lectures at the South Kensington Museum which have attracted great interest not only among men of science but by the public generally."

I am, Sir,

Your obedient servant,

F. W. Rudler.

Secretary.

ANTHROPOLOGICAL INSTITUTE,
3, HANOVER SQUARE. W.

10·1·02.

Dear Mr. Galton,

Very many thanks for your card. I have recommended the enquirer to make use of the schedule of measurements contained in Notes & Queries.

We had hoped to print your Huxley lecture in the Journal which is due now, and will be ready in a week or two from now: but when on the point of sending to press, we found it printed, diagrams & all, in Nature: and now we find it printed also in Appleton's Popular Science Monthly. As the Institute does not feel itself justified in reprinting articles, from other publications, in its Journal, and is in fact not always able to print in full even what is offered for it for sole publication, we were obliged to resign the hope of publishing your lecture, to our great disappointment. The

same thing happened with Lord Avebury's address last year: and I am afraid that W. Thomas, who was ~~then~~ our Asst. Secr. in October, & took charge of the Huxley lecture correspondence, did not make it clear that we hoped you would allow your paper to be regarded as coming under the Institute's rule in regard to papers read before the Institute. I am very sorry that things have fallen as they have; and as I say, we were all much disappointed that we had not the privilege of including your lecture in the Journal.

Yours very sincerely,

John. L. Myres.

D. APPLETON & COMPANY,
PUBLISHERS,
436 FIFTH AVENUE,
NEW YORK.

February 11, 1904.

Francis Galton, Esq.,
42 Rutland Gate,
London, England.

Dear Sir :

We have the pleasure of enclosing a statement of your royalty account for the period mentioned therein, and our check for the amount due, which we trust you will find satisfactory.

With the best wishes, we beg to remain,

Faithfully yours,

D. APPLETON & COMPANY,

President.

f.2

ST. 414

Royalty Statement

From October 1st, 1903. to December 31st, 1903.

Francis Galton Esq.
42 Rutland Gate London Eng

In Account with **D. Appleton & Company,**
436 Fifth Avenue,
New York, December 31st, 1903.

STATEMENTS OF AUTHORS' ACCOUNTS CANNOT BE RENDERED FOR THE FIRST TIME IN LESS THAN SIX MONTHS AFTER PUBLICATION. THEREAFTER THEY ARE ISSUED QUARTERLY.
AFTER THE EXPIRATION OF TWO YEARS FROM PUBLICATION STATEMENTS ARE ISSUED ONLY WHEN SALES HAVE BEEN MADE IN THE GIVEN QUARTER OR WHEN SPECIAL REQUEST IS MADE BY THE AUTHOR.

TITLE OF BOOK	NO SOLD	PRICE	RATE	AMOUNT
Hereditary Genius	5	2.00	10%	1.00
				01
			£0-4-1	

DATE	DR. ITEMS			

43

ST. 414

Royalty Statement

From July 1st, 1903. to September 30th, 1903.

Francis Galton Esq
42 Rutland Gate. London Eng

In Account with **D. Appleton & Company,**
436 Fifth Avenue,
New York, September 30th, 1903.

STATEMENTS OF AUTHORS' ACCOUNTS CANNOT BE RENDERED FOR THE FIRST TIME IN LESS THAN SIX MONTHS AFTER PUBLICATION. THEREAFTER THEY ARE ISSUED QUARTERLY.
AFTER THE EXPIRATION OF TWO YEARS FROM PUBLICATION STATEMENTS ARE ISSUED ONLY WHEN SALES HAVE BEEN MADE IN THE GIVEN QUARTER OR WHEN SPECIAL REQUEST IS MADE BY THE AUTHOR.

TITLE OF BOOK	NO SOLD	PRICE	RATE	AMOUNT
Hereditary Genius	5	2.00	10%	1.00
By balance 6/30/03				40
				140
				01
				£0-5-9

DATE	DR. ITEMS

f.4

ST. 414

Royalty Statement

From April 1st, 1903. to June 30th, 1903.

Francis Galton Esq
42 Rutland Gate, London Eng.

In Account with **D. Appleton & Company,**
436 Fifth Avenue,
New York, June 30th, 1903.

STATEMENTS OF AUTHORS' ACCOUNTS CANNOT BE RENDERED FOR THE FIRST TIME IN LESS THAN SIX MONTHS AFTER PUBLICATION. THEREAFTER THEY ARE ISSUED QUARTERLY.
AFTER THE EXPIRATION OF TWO YEARS FROM PUBLICATION STATEMENTS ARE ISSUED ONLY WHEN SALES HAVE BEEN MADE IN THE GIVEN QUARTER OR WHEN SPECIAL REQUEST IS MADE BY THE AUTHOR.

TITLE OF BOOK	NO SOLD	PRICE	RATE	AMOUNT
Hereditary Genius	2	2.00	10%	40

Checks for royalties will not be sent for amounts less than $1.00

DATE	DR. ITEMS	

55, GRANVILLE PARK,
LEWISHAM, LONDON, S.E.

Feb. 23. 1897.

Dear Mr Galton,

I enclose an Agenda Paper for Thursday's Committee – if you have any suggestions to offer, I shall be glad to have them. Dr Mill has not yet been able to complete

f. 1v

his review of Gen. Wheeler's geographical localities scheme.

Your new draft of Anthropology looks very promising — in such a subject, I imagine, it will not be so desirable as in some others to go into detail in

subdividing — I have no doubt the Committee will order it to be printed & circulated as you desire.

I wish I could be sure whether a purely empirical system of registration such as Sharpe & Forsyth advocate is or is not sufficient for our purposes in the future.

Yours very truly

W. E. Armstrong.

ROYAL SOCIETY OF LONDON,

INTERNATIONAL CATALOGUE COMMITTEE.

Feb. 25th — 2.30 p.m.

To arrange for the appointment of a paid secretary to the Committee.

To define the exact nature of the work to be undertaken in preparing the materials for the Catalogue 1) by authors; 2) by Scientific Societies &c. acting as editors; 3) by the Central Office.

To consider the character of slip to be issued from the Central Office to subscribers.

To consider the extent to which primary divisions shall be constituted — whether, for example, crystallography and meteorology shall rank with or apart from physics; petrology (including mineralogy) with or apart from geology; entomology with or apart from zoology.

To consider how far the schemes of classification already provided meet requirements.

To discuss the method of registration to be adopted
a with reference to main subjects.
b " " " primary subdivisions
c " " " minor subdivisions
d " " " the use of common symbols (Geographical indices, &c.).

To fix the date of the next meeting.

R. Soc Monday Jan 11 4 pm

55, GRANVILLE PARK,
LEWISHAM, LONDON, S.E.

January 6. 1897

ROYAL SOCIETY OF LONDON,
INTERNATIONAL CATALOGUE COMMITTEE.

Dear Mr Galton,

We are anxious to have your assistance in drafting the scheme of classification for indexing Geography. Will you, if possible meet General Strachey

f4r

f. 4v

Admiral Wharton, Dr Mills & myself at the Royal Society at 4 p.m. on Monday next, Jan. 11th?

I hope you in any way favour the suggestion made in the enclosed memo. to have a set of <u>Geographical symbols</u> corresponding

to the chemical symbols & dos be jumbled from them, let us say, by writing or printing them within a circle? It is necessary in so many branches of science to indicate geographical localities, that the use of such symbols

f5v

might be a very
wide one.

Yours very truly,
Henry E. Armstrong.

Prof Armstrong F.6

CITY & GUILDS OF LONDON INSTITUTE FOR THE ADVANCEMENT OF TECHNICAL EDUCATION. *John Watney*, Honorary Secretary.

CENTRAL TECHNICAL COLLEGE,
Exhibition Road,
London, S.W. Feb. 13th, 1896

Dear Mr Galton,

Your scheme seems to be full of promise, but it will be necessary to reduce the number of primary divisions to 10 as this is done in

f.7

all other subjects.

Yours truly,

W. E. Armstrong

I shall hope to see you at the Royal Society to-day.

f.8 r

THE ROYAL SOCIETY,
BURLINGTON HOUSE, LONDON, W.

25. 3. 96.

ROYAL SOCIETY OF LONDON,
INTERNATIONAL CATALOGUE COMMITTEE.

Dear Mr Galton,

The enclosed is intended as an introduction to our scheme — it is set up in wrong form, but that can simple

f.8 v

altered. I shall be obliged if you will make any alterations, or suggest any other points to which it is desirable to call attention.

Yours truly,

W. L. Sclater

Under this arrangement each symbol printed on a slip will consist of two letters and two digits, such as A a 97. An unskilled person can sort the slips, first according to capital letter, then according to small letter, then according to digits. If an Institution have but a small number of works or slips, it will arrange according to capital letter only. In short, three degrees of complexity of arrangement are optional.

Specialists may easily, if they wish, carry out further analyses for arrangement of particular divisions of a primary branch of a science by adopting a second set of numbers, which (it is suggested) could be used so as to make the symbol of a subdivision like

$$\text{A a } \frac{97}{55}.$$

But in the first instance it is recommended that such subdivision be not adopted for the catalogue; the matter is mentioned solely in order to indicate an easy development of the method of registration.

Slip Catalogue.

5. All titles shall be issued, each one separately, and each shall commence with author's name, followed by the actual title and sufficiently detailed reference. The slip so formed shall bear the symbols to indicate (1) the sciences, (2) the branches thereof, (3) the divisions of the branch. As the analysis symbolised will not be carried farther than (3), if the paper be limited to details smaller in analytical value than those scheduled under (3), this degree of speciality will not be shown by the symbol. Example: If a paper be published on the habits of the cuckoo, cuckoo might be symbolised by the sign for birds, and the total signature of the slip would then indicate, zoology, birds, ethology.

Specimen slip.

F	b	27	**Smith, Thomas.** On the Habits of the Surviving
F	b	21	Apes of Central Africa. Pr. Sci. Soc. Cairo, xxv
D	h	04	(1950), 27–34.

[Year] 1950.

It is to be understood that this slip is entirely imaginary. F = Zoology; b = Mammalia; 27 = Primates (*i.e.*, Apes); 21 = Ethology; D = Geography; h = branch of Geography; 04 = Central Africa.

6. All slips must be of one size. The size should be sufficiently large to allow of registration marks being added subsequently, as

well as to permit a clear distinction to be made between the title itself, and the subsidiary adjuncts to it. These will be, (1) such variety of symbol-marks as the Committee may decide, (2) the year to which the slip belongs; this last mark is necessary in order that an accumulation of slips may be chronologically treated, and its digits should be quite separate from the symbol, and should also be distinguished by a different type.

[If it be thought desirable that an attempt be made to construct a Slip Catalogue that shall serve as a subject index (as distinguished from a slip catalogue of titles arranged according to subject), it will be necessary to issue concomitantly with the title-slip a certain amount of subject analysis limited as provided in Chapter 5; this, in no case, should extend beyond [four] entries for each science mentioned in a title.

Each of these subject slips should be a separate object, and each should be appropriately symbolised. If, however, each title-slip be permitted to bear manifold symbols, an arrangement could be made by which an increase in the number of title slips printed would serve the purpose of a Slip Catalogue Subject Index.]

7. Each science shall have its slips printed on paper of a distinctive colour.

8. If a title refer to more than one science it shall be issued in duplicate or triplicate, one slip being signed for one science, a second slip for another science and so on. But when a work refers to science in general (as distinct from a combination of two or more sciences), then only one slip shall be issued which shall bear a synthetic mark [such as X] instead of the ordinary symbol system.

Volume Catalogue.

9. The form of the Catalogue for permanent reference shall be volumes issued annually of the following kind, viz.: (*a*) An Author's Index Volume, being a complete list of all titles for the year, alphabetically arranged under author's names, there being appended to each title the name and symbol of the science to which it relates; (*b*) a Subject Index Volume, or Volumes, arranged according to the several sciences, their branches, and the divisions of their branches as adopted in the Slip Catalogue. The headings of each division shall bear the actual name of the division as well as the symbol thereof used in the Slip Catalogue.

In this Subject Index the title of the paper referred to will not be repeated, the author's name and a volume and page reference shall suffice.

10. It will be necessary to prepare—

(1) A list of Societies, Academies, &c., with the abbreviated forms of reference to their publications as used in the Catalogue;

(2) An explanation of the system used, occupying not more than two pages, and printed in such languages as shall be decided on;

(3) The analysis of each science under branches and divisions.

It would probably be convenient for libraries that these should be included in a single volume, and for individuals, that each of them should be obtainable separately.

D. S.
A. R. F.

November 18, 1896.

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.

ROYAL SOCIETY.

INTERNATIONAL CATALOGUE COMMITTEE.

The resolutions arrived at by the recent International Conference contemplate the compilation and publication of a complete catalogue of scientific literature arranged according both to subject matter and to author's names; and it was decided that in preparing such a catalogue, in the first instance, regard shall be had to the requirements of scientific investigators, to the end that these may find out most easily what has been published concerning any particular subject of inquiry.

The catalogue is to comprise all published original contributions, whether appearing in periodicals or in the publications of societies or as independent pamphlets, memoirs, or books.

The catalogue is to be issued in two forms—(*a*) in the form of slips or cards, which are to be prepared and issued to subscribers as promptly as possible; and (*b*) in book form, in parts corresponding to the several branches of science.

The Committee which has been appointed by the Council of the Royal Society to carry into effect the resolutions arrived at by the Conference (Acta, Res. 26), proposes, in the first instance, to take into consideration and determine—

(*a*) The manner in which, and the extent to which, the subject matter of each branch of science shall be classified.

(*b*) The method of registration to be adopted in each branch of science.

The former needs no explanation; it rests with the representatives of each subject to suggest the system of classification which appears to be most useful and practicable. I would venture to point out, however, that it will be impossible to please everyone, and that the object must be, with as little delay as possible, to produce schemes which can be submitted to test and proved to be useful in practice.

As there appears to be considerable misunderstanding regarding registration, I may point out that this is, in a measure, independent of classification, although intimately connected with it; and that the

main purpose in view is to provide means of attaching to each slip or card a registration mark which will at once serve to indicate the character of the entry, and at the same time make it easy even for those who are not experts to place the slips as delivered in their appropriate places.

Mr. D. Sharp and Professor Forsyth have suggested a scheme which, with certain other suggestions made by them, is printed as an appendix to this memorandum.

Those with whom I have discussed this scheme mostly regard it as hardly less inelastic than that afforded by the Dewey decimal system on its registration side—against which a very strong feeling undoubtedly prevailed at the Conference, although no decision was arrived at which precludes it being again taken into consideration and modified.

In the first place it is remarked—why label the different sciences A, B, &c.; why not use the familiar first letter of the names of each, with a second where necessary? If science appropriate nearly all the alphabet, other subjects must adopt a different system. There would be no difficulty in using **M** for mathematics rather than **A**, and **Me** for meterology, **Mt** for metallurgy, **Gl** for geology, **Gg** for geography.

If this were done, subjects such as crystallography and meteorology would rank independently, and not—as in the Dewey system—as branches of physics.

Cases will arise, however, in which it will have to be decided whether it be desirable to constitute the subject a distinct branch. Thus, in the case of mineralogy, a large part might be ranged under geology, another under chemistry, and a third under crystallography. I may point out that if a mineralogical index, say λ, were agreed to, it would be easy, by affixing this index, to indicate that the matter in a paper was of interest to one or other of the sciences in question: thus, **K**.λ or **K**$^{\lambda}$ would serve to show that something about a mineral which is of interest to the crystallographer was described.

Another case is that of entomology—is this to come separately or under zoology? Here a separate treatment appears to be preferable, but if such be adopted, it may be necessary to deal with the subject somewhat more broadly than would be the case if only the requirements of the entomologist were considered, in order to meet those of zoologists.

Again, the Sharp-Forsyth scheme provides that small letters shall be used in dividing each science into branches. This appears to be an over-provision in many cases. Thus, it is probably unnecessary to divide chemistry into more than about ten main branches at most, and this would be equally true of, say physics and astronomy, I imagine.

Perhaps the principle already suggested as applicable to mineralogy might be a suitable one to apply in such cases. In chemistry, for example, it is easy to attach the symbol of the element as an index. $\mathbf{Ch}^{C}$, for example—the chemistry of carbon—would apply to the whole of organic chemistry; and by adopting this plan, instead of restricting the whole of inorganic chemistry—which includes all elements other than carbon—to one letter, some seventy symbols would be available.

To go a step further, it would be easy to indicate whether a paper had reference to mineralogy, crystallography, qualitative analysis, quantitative analysis, thermo- or electro-chemistry, let us say, by assigning a special index to each of these branches, *e.g.*, λ (lithos), κ (krystallos), λu (lyo), μ (metron), θ (thermos), ϵ (elektron). Thus, $\mathbf{Ch}^{Cl}.u$ would mean something to do with the quantitative analysis of a chloride; $\mathbf{Ch}^{O}.\theta$ something to do with the thermochemistry of oxygen. As we are fast adopting a rational system of nomenclature, in which the terminal syllable has a definite meaning, it will be easy to carry such a system a stage further: thus, a paper on the quantitative estimation of the trihydric alcohol, glycerol, would be marked $\mathbf{Ch}^{C}.\mathbf{3ol}.\mu$. To distinguish cases of mere quantitative analysis from those in which constants, *e.g.*, atomic weights, were determined, the symbol μ^{c} might be used in connexion with the latter.

I can imagine that it may not be impossible to apply a similar method to many other sciences. Thus, in entomology, if l stands for lepidoptera, c coleoptera, &c., and if h stand for life history, or d for distribution, then $\mathbf{En}^{c}.h$ would mean something about the life history of a coleopterous insect; a number might be added to indicate the family.

In geography, if a set of symbols applicable to the different countries were agreed to, it would be easy to use these, not only in geography, but also in other sciences, such as zoology, botany, geology, and astronomy.

No doubt the requirements are different in different subjects, and probably will be advantageously met in different ways; but after spending considerable time lately in applying the principle I have above suggested to my own subject, I feel satisfied that it should be possible to make use of it, and that it would be a very elastic one.

With reference to Art. 9 of the Sharp-Forsyth scheme, I may at once point out that some to whom I have shown it object very strongly to the suggestion that the title of a paper shall not reappear in the subject index.

With reference to Art. 10, I think it should be carefully considered also whether the plan of registering all scientific publications and attaching to each its appropriate geographical index and a number may not be a desirable one to adopt. If this were done, the regis-

tered index could be used in place of the contracted name, a course which would have the effect of greatly economising space.

HENRY E. ARMSTRONG,
Chairman.

OUTLINES OF SCHEME SUGGESTED BY MR. D. SHARP AND PROFESSOR FORSYTH.

GENERAL.

The two kinds of catalogue it is proposed to issue shall be connected by using for both one system of arrangement—symbols, which shall be such that the slips themselves, or the books and papers they refer to, may be arranged by means of the symbols, without the aid of language or of any knowledge of the subject itself.

1. The sciences treated as distinct are

[not exceeding 26].

2. Each science is divided into a number, not exceeding 26, of branches.

3. Each branch of a science may be divided into a number of divisions [not exceeding 100].

4. The symbols shall be as follows, viz.:—Each science shall have a distinctive capital letter [A to]; each branch in a science shall have a distinctive small letter [a to]; each division of a branch shall be indicated by a number of two digits [00 to 99].

In order to carry out this scheme each science will decide on its primary branches: then for each select 100, or less, divisions (*i.e.*, subjects) arrange the subjects of each branch in a linear, but, as far as possible natural, sequence, and then number them. It will be advisable to leave some numbers unoccupied, in suitable intervals, so as to allow for future contingencies. It should be constantly remembered that we are not attempting to make a logical or natural classification of science, but merely a catalogue for arranging and indexing its literature in a convenient manner. *Convenience when the system is in operation is the primary consideration.*

answered

Arnold Forster 1.1

9, EVELYN GARDENS,
S.W.

8.10.91.

Dear Sir Galton

May I ask whether you can refer me to any book giving statistics of height & chest measurement of sample Ships Companies in the Royal Navy; selected Regiments of Volunteers; Miners; Bicycling Clubs,

f.2v

or any other classes of
the Community.
I am anxious to see whether
the figures given from
infantry regiments are
fairly representative of the
whole of the population.
At present they seem to me
very low.

I am, Yours truly

A. O. Arnold Forster

F. Galton Esq.

Arnot

Raymond H. Arnot,
Attorney and Counsellor at Law,
Rochester, New York.

F1

I recommend Darwin.

March 1, 1902.

My dear Mr. Galton:-

Will you kindly tell me where I can get your latest or best photograph in cabinet size or a little larger and an accurate account of your noble career for the ROCHESTER MODERN HISTORY CLUB?

Assuring you of our sincere respect for your noble and useful life,

I am, with all good wishes,

Very Cordially yours,

Raymond H Arnot

Mr. Francis Galton.

Mr Atkinson & f/r

R. F. F.

Clare College Lodge,
Cambridge.

Oct 22. 1885.

My dear Sir,

Recent illness has prevented my earlier reading your Aberdeen Address & thanking you for it.

I have not sufficient knowledge to understand it all, but what I do has much interested me. I should like to say that all the measurements of stature belonging to my own generation and those of the Williamson (my maternal) side were taken "scrupulously in stocking feet," & against a white painted board ruled in inches.

I cannot resist

f 1v

mentioning to you an instance of heredity in features connected with myself. We have in our College Combination room a portrait of our Foundress Elizabeth de Burgh, Countess of Clare, grand-daughter of Edw 1. by his daughter Joan of Acres. I am considered to bear a considerable likeness to this portrait. Ever since I was married the Fellows have said "the best portrait of Mrs A. is in the Combination room". A servant who came to us 20 years ago "supposed it was Mistress' sister". Only last month on my sick-nurse being "shown the College" & entering the Combination room, she instantly

remarked "Why that is – Can it be? – Mrs Atkinson!"

Only this spring a distant Cousin sent me his pedigree from Edw. 1. & through our Foundress. His pedigree is also mine, as we spring from the same Edmond Williamson, my great Grandfather, who through Wyvills, Danbys, and Neevilles traces up to Edw. 1. Thus a reason has appeared for the likeness which had hitherto been only curious.

Forgive me if I have wearied you with my story,

& believe me, my dear Sir

truly yours

Frances A. Atkinson.

28, St Oswald's Road,
West Brompton. S.W.

29. 2/88

Dear Sir

With reference to your question at the Anthropological last night. My work in Art Schools, and principally adjudicating on Art examination exercises where everything is prescribed, gives little opportunity to students to develop specialities. In the Art Schools the most approved examples are always before pupils, and the wish to obtain a prize at the examinations makes candidates

f 3

∴ The appliances of course always considered.

anxious to comply with the regulations.
I never met people utterly ignorant
of art, on which such an experiment
might be tried. But I may mention
that I have often seen verified the old
law, "Like produces like." It holds
good in art. People in the same state
of culture, reproduce the same phase
of art. The early dawn, will be the
straight line ornament.* When about
half educated, I have seen young
men swear by strap and interlaced
work, like the Celtic ornamentation
afterwards to be thrown aside by them
in favour of a naturalistic treatment
then symbolical, when the powers
of representation are better developed.
Last stage of course, the conveying
thought by the representation of
things, as you very well know.

f4 1

I remain dear Sir
Yours faithfully.
George M. Atkinson.

Francis Galton Esq M.A. F.R.S.
President Anthrop. Institute
&c &c

Lodge flar

Australasian Association for the Advancement of Science.

University, ~~Royal Society's Hall~~ Melbourne.

April 14th 1894

Dear Sir:

A Committee of the above-named Association has been formed for the purpose of considering the best means of promoting psycho-physical and psychometric investigations in the Australasian colonies — where, up to the present, nothing of the kind has been done. This Committee is of opinion that a statistical enquiry into the developement of psychical faculty among the children of these colonies is at present within the

compass of possibility; we have a very elaborate system of State-aided education ranging from the primary schools to the Universities; and it is important to note that attendance in the primary schools is not confined, as is practically the case in Great Britain, to any one class of children; but the children of the professional & business classes work there in many cases alongside those of the artizan class.

Now we have already secured the support of the officers of the various Education Depts, the permanent head of the South Australian Dept. being

one of the active members of our Committee; we hope therefore to be able to carry out the enquiry for the children of each colony. The results would, at least, be useful for comparison with those obtained in other countries; and the effects due to climatic influence — if there be any — might be expected to disclose themselves during such a comparison.

We propose to draw up a list of questions, the answers to which are to be obtained by the school authorities, for each child, and to make such measurements as may be deemed advisable. Before issuing our list of

f.16

Australasian Association for the Advancement of Science.

ROYAL SOCIETY'S HALL, MELBOURNE.

18

collection might be abridged: but suggestions on this point would be very helpful.

I am Dear Sir
yours faithfully
E. F. J. Love

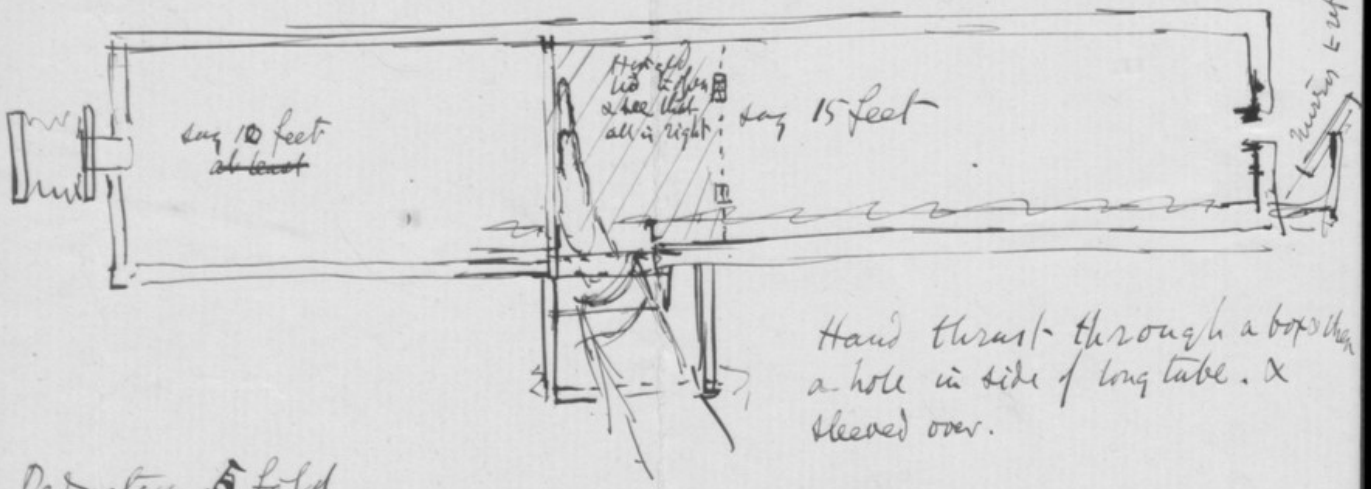
Hon. Sec. Psychophysics & Psychometric Committee

Francis Galton Esq: F.R.S.

F.1c

May 26/94

Total length say 25 feet



Hand thrust through a box & then a hole in side of long tube. X sleeved over.

Reduction 5 fold

3 inch focus

4 inch

of questions we decided to ask the advice of certain gentlemen in England and America whom we knew to be experts in these matters; I have therefore the honor to invite your sympathy & help in the way of suggesting (a) subjects of enquiry (B) methods (c) apparatus; in the latter case name of maker & approximate cost would be valuable details.

Professor Beaunis "Questionnaire" "abrégé", as published by the International Congress of Psychology, is well known to us; but the title is surely a misnomer; the whole collection is too long & complex for such a purpose, at any rate for use among children. In default of anything better, this

Prof. Ayrton

F.1

41, NORFOLK SQUARE,
HYDE PARK, W.

February 17th 1907

Dear Dr. Galton

Could you, without giving yourself much trouble, let me know where I could obtain one of your whistles for testing the limit of audibility? I desire to use it for two purposes—one to test my younger daughter's hearing who thinks that she can distinguish between the cries of the male and the female bat, whereas many persons cannot hear the bat's cry at all; the second is that it occurs to me that the "thought-reading" of the Zancigs at the Alhambra (which has been bewitching London for the last two months and which has made even scientific people, or at any rate people whom the world regards as scientific, think is a manifestation of genuine telepathy), but which I have assured my-

self is accomplished by the use of certain ingenious codes which I have detected, may number amongst them the sending of signals by the use of high frequency sound waves above the limit of audibility of ordinary persons but which, however, can be heard by Mrs Zan-cig who is the recipient of the thoughts in the so called telepathic performance -

Could you also allow your Secretary to kindly direct my attention to any publication in which you have recorded the results of experiments on the limits of audibility in different persons?

The last time we met was in 1904 returning from the Greek play at Bradfield. Since then I have had a serious break down in health through prolonged overwork and have had to rest for many months. Hence my apparent inattention to your enquiry about the char-acteristics of ancestors. Your book is however I see now published. I have before me as I write the cheque box

which contained "Cold Cream" and which you were so good as to send me in 1898 as showing the persistence of smell after repeated washings of the pot. I have had to turn up my old work on smell which I shortly described in a Presidential Address to Section A of the British Association in that year since a certain Herr Karl Grahn has recently started the theory on the continent that the smell of metals is produced by an emanation like the emanation from radium (which discharges electrified bodies) and that the smell coming from a metal has nothing to do with the state of its surface. Whereas I showed in 1898 that it had everything to do with the chemical state of its surface and that the smell could be entirely destroyed by cleaning the metal's surface sufficiently thoroughly

During the past 9 years I have been longing to take up again this investigation on smell,

but electrical engineering problems have been absorbing me professorially and professionally. Now the remnant of my old boyish love of conjuring performances leads me to take up the study of another of our senses viz the hearing of very high notes. I presume that this power cannot be cultivated so that a person who had the power naturally to hear high notes could be gradually taught to hear notes higher and higher in the musical scale. Probably the peculiarity depends on some peculiarity in the air passages in the ear or the tightness with which the drum of the ear is naturally stretched or on the lightness of the bones in the ear and so could not be improved with practice or study.

Believe me Dear Dr Galton

Sincerely Yours

W. E. Ayrton

Prof. Ayrton 1907

f.5r

41, NORFOLK SQUARE,
HYDE PARK, W.

London
Feb 25th.

Dear Dr. Galton

I am very much obliged to you for your most interesting letter regarding your whistle and its uses.

There is one point that I am not clear about ~~and~~ concerning the §3 of your letter. You say:—

3. "High notes occasionally give a curious "dizzy feel in the head which is not a sense "of smell. I found that one of the lions "was sensitive to this. It was curious to watch "his annoyance, rubbing his ear angrily with his "paw".

How did you ascertain that what

the hour felt was a "curious dizzy feel" and that he did not hear the high notes itself

Dr Starling, the Prof. of Physiology at Univ. College London, writes to me:- "It is imagined that the ten-
"-sor tympani contracts and puts the membrana
"tympani on the stretch when high notes are sounded"

If so may the dizzy feeling that you refer to be the intimation to the tympani that a high note is being sounded, and that the tensor ought to be stretched voluntarily, or involuntarily, in order that the high note should be ~~sounded~~ heard just as the annoyance caused by some object put close to the eye intimates, although the eye cannot see it, that

if the muscles of accommodation be caused to round the eye the object close to the eye will become visible because a greater shortening of the focal length of the eye has been set up indirectly by the presence of the object close to the eye.

Prof Starling, however, admits that he does not know whether the supposed shortening of the tensor tympani is based on experiment or not. He mentions another theory that the destruction of the vascular fibres at the base of the cochlea of a dog produces deafness to high sounds, and at the upper end of the cochlea where the fibres are long to low sounds. But these experiments, he mentions, are not, however, accepted as fully establishing the conclusions

f.6v

drawn.

I am expecting several of your sketches to choose from, but they have not arrived yet

Believe me Sincerely Yours

W. E. Ayrton