

Correspondence J

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f.1

Merodelia,
Grafton Road, Acton. W.
7th. March, 1899.

Dear Mr. Galton,

I am engaged on a piece of work which is practically carrying out into concrete detail some of your own statistical methods, and should be glad to have a talk with you about some of the more difficult details. If you could spare me half an hour or so, I would call upon you or meet you any afternoon you care to name, meanwhile preparing you for my visit by letting you know some of the points upon which I desire guidance. If, however, you are unable to see me, perhaps you would permit me to send you on a short account of my plan and its difficulties, which might suggest to you some ways out.

I have always the pleasantest recollection of your similar kindness to me in former years, and as usual am tempted to show me gratitude by asking for more.

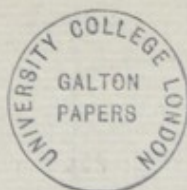
Yours sincerely,

Joseph Jacobs

Francis Galton, Esq.,
42, Rutland Gate. S.W.

J. Jacobs

15/3/10

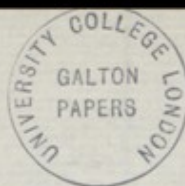


Merodelia,
Grafton Road, Acton. W.
10th. March, 1899.

Dear Mr. Galton,

I should be sorry to trouble you unnecessarily when you are so busy and your time so occupied, so perhaps it would be sufficient if I just told you the line of work on which I am engaged and the sort of hints and helps I should like. You would perhaps be able to jot down any hints by the side of the accompanying paper of queries and difficulties, and for that I should be deeply grateful.

I am just engaged in concocting a sort of economic dummy, which I intend to call the "Mean Englishman", and which I think might be a useful sociological gauge for comparative purposes between period and period, and nation and nation. The title will at once suggest to your mind the sort of thing I have in contemplation: you would probably call him the Median Englishman. For every quality which can be statistically enumerated, there is an Englishman who stands as the fiftieth percentile (to use your own expression) for that quality. I propose to imagine and determine a single individual who would concentrate in himself all these qualities in their median degree. Of course, it is impossible that A.B. should be the Median Englishman as regards height, and also as regards weight, or length of life, and so on; but I think it would be useful to attempt a consolidation of these mediocrities in a single type, which would give some clue to the sort of product English civilisation is now turning out. As you yourself have shown, in each of these qualities the tendency for the next generation is to revert to the Mean Englishman.



f. 3r

2.

Irish facts

There are certain methodological difficulties, however, in the way, on which I should have liked to talk with you. I presume that when we are dealing with such large numbers, it can be assumed that the Median Englishman as regards height possesses the average height of Englishmen, and I shall go on that assumption in dealing with properties which can be numerically determined. But when it comes to other, more indeterminate properties, I feel somewhat at a loss. Thus it would, of course, be of interest to know where the Mean Englishman lives - whether town or country, and much would hang upon this point. I propose theoretically arranging the 30 million Englishmen in the order of the populousness of their towns, and then finding the fifteen-millionth, who would come in a town of somewhere about 30,000 inhabitants. By arranging the big towns in order of populousness, I could even, by this means, fix upon the actual town. I should like to know whether you consider this method legitimate, or whether you could propose a more practicable one? The same method would enable me to determine that he is in the artisan class, and even that particular branch of industry in which he is engaged.

Of course in the first instance I shall only be able to get at very rough approximate and popular results, and I am only just at present intending to make a Fortnightly article out of them; but I think it possible that the thing might be developed into a useful conception, both for economists and statisticians, and am hoping for your encouragement to continue the research.

Yours sincerely,

Irish facts

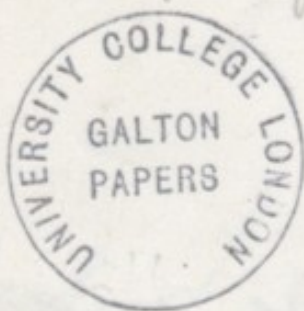
(P.T.O.)

P.S. I enclose a very rough draft of the kind of shape the imaginary biography of the Mean Englishman would take. I would ask you kindly to return this.

Francis Galton, Esq.,
42, Rutland Gate. S.W.

L. Jacobs

P. 45



MERODELIA,
GRAFTON ROAD,
ACTON.W.

Mar. 13. 1899.

Dear Mr. Galton,

Thank you very much
for your letter, which
will be of the greatest
possible use to me.

I fully appreciate your
point about the median
in a discontinuous series,
but would urge that in
cases of occupation and
population, by a little

manipulation one may
regard the quality of living
in a large city, a small
city, a medium-sized city,
down to living isolated, -
as a continuous series;
just as, I presume, you
would say there is a
median in colour of eyes,
ranging from dark black
to pure blue (or perhaps
Albins). However, I

feel I ought not to trouble
you further in the matter
just now, and content
myself with thanking you
for your great kindness
in answering so promptly,
at a time when I fear
you must have had other
things to think of.

Yours gratefully,

Joseph Jacob

Francis Galton, Esq.

42, Rutland Gate. S. W.



Merodelia,
Grafton Road, Acton. W.
20th. March, 1899.

facts

Dear Mr. Galton,

Just a line of thanks for your very valuable postcard, which explains to me quite clearly the difficulty which I instinctively felt as to the possible non-representative character of a specified locale; and yet it seems impossible to consider a Londoner, for example, as a Median with regard to residence, since there are at least four-fifths of Englishmen who do not live in London.

However, I have bothered you enough, and must try and work out my own salvation in this particular matter.

Yours faithfully,

Joseph Jacobs

Francis Galton, Esq.,
42, Rutland Gate. S.W.

Ans 9.16.1906

f.7

Publishing House of
FUNK & WAGNALLS COMPANY
44-60 East 23d St., cor. 4th Ave.



EDITORIAL ROOMS OF
THE JEWISH ENCYCLOPEDIA

New York,

Dec. 16, 1905.

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

Dear Mr. Galton:

You may possibly be aware that I have been now for the last five years in America editing the rather colossal Jewish Encyclopedia in twelve volumes, which has now been completed. It has been a huge but very congenial task for me.

Incidentally under the article types I have had a new composite made of Jewish boys in New York, similar to that you made for me of a number of Jewish lads in London. I accordingly send you herewith a copy of the plate which will appear in the twelfth and last volume now going through the press.

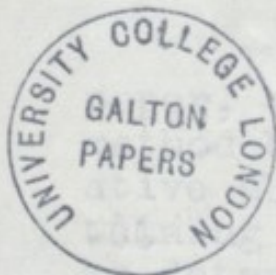
I may possibly be connected a little later on with a general Encyclopedia, in which I think of introducing deviations from averages, as well as the average itself. Do you not think that the "probable error" is just as useful as the standard deviation, and much more easy to get at? I fancy I could manage the former, but it would require too much detail work to carry out the latter. If you could spare time I should like your advice on this matter.

With kind remembrances,

Yours very sincerely,

Joseph Jacobs

Jacobs



JOSEPH JACOBS
11 GREYSTONE TERRACE
YONKERS, N. Y.

July 28th, 1909

Sir Francis Galton,
42 Rutland Gate,
London, S.W., England.

Dear Sir Francis:-

Permit me, first, to congratulate you upon your recent honors, which are only a fair recognition of the honor you have done to English science. Long may you live to enjoy them!

As you may perhaps know, I came over to this country about nine years ago to organize a great Jewish Encyclopedia in twelve volumes, which has now appeared, and am now fixed for life as Professor in English at the great Jewish Theological Seminary here and as Editor of "The American Hebrew" the most important Jewish weekly in this country. Of course these duties leave me very little time for any outside work, but I have not forgotten the impulse towards anthropology which I received from you years ago, and try to ~~follow~~ follow up your work and that of your school in "Biometrika" and elsewhere.

again
I have recently taken up the comparative study of Jewish ability, on which I read your paper before the Anthropological Institute during your Presidency and in which I made use of the methods of "Hereditary Genius". Owing to my work on the "Jewish Encyclopedia" and as Editor

paper, or, if not, can you suggest any method by which one can compare the comparative abilities of any population by ascertaining the numbers of their men of mark as determined by compilers of dictionaries of contemporary biography. I shall also be glad of any method by which the probable error of any results which I might reach on my own or your methods could be ascertained, considering that I have only ~~had~~ ^{half} ~~a~~ one-quarter of the distribution in range accounted for and practically only one percent in number. $E-X+2x = 500$ in half a million males over 50.

With kind regards, and renewed congratulations, I remain,

Yours sincerely,

Joseph M. J. 3



of "The American Hebrew" I have collected very much more material than I had at my disposal in those days and think of writing a book on "Jewish Ability, A Study in Eugenics" but before planning out the method should like to have your views as to the validity of that adopted in my "Anthropological" paper.

If I remember aright, you hinted that the conclusions drawn from the extremes of the normal curve were rather precarious both from the difficulty of deciding the relative grades of the geniuses of the order F, G and from the tendency of curves to show eccentricities at the extremes. In those days, too, Pearson's investigations into skew curves of distribution ~~had~~ not appeared.

My new materials will enable ^{me} I fancy, to answer some of these difficulties. Owing to the publication of books like "Who's Who" in England, Germany and France. I can at any rate get contemporaries ^{and} get the comparative number of Jews in classes E to X, or, in other words, the ^{upper} number quartile. The distribution of numbers in the upper quarter, if your method is correct, is determined mathematically if the curve is normal.

With regard to the normality of the curve, I have very striking evidence as to the lower quarter of the distribution from reports ^{upon} from insanity in Germany, Austria and Hungary and other parts, showing that the larger the number of celebrities among Jews in any country the larger the number of defectives.

Do you think that with this increased evidence I should be safe in carrying out my proposed book on the method in my old

Jacobs

f. 10r

JOSEPH JACOBS
11 GREYSTONE TERRACE
YONKERS, N. Y.



October 23, 1909.

Sir Francis Galton,
42 Rutland Gate,
London, S.W., Eng.

Dear Sir Francis:-

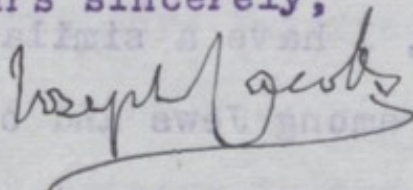
Thanks very much for your letter which has immensely relieved me; and I shall now go on with my work with a safe conscience. I thought, when you knew the extent of my induction, that your hesitation about the method would be removed. Besides the quarter frequency of ability at one end of the curve, I have a similar quarter of insanity, etc., among Jews and others at the other end of the curve; or, in other words, half the frequency is accounted for, though of course this takes up only a very small amount of the area.

As regards the reliability of the

-3-

In the body of each chapter, I would treat only of the more important names, probably your F. G. and X's; and with regard to them, give not my own judgment but quote from the many histories of Art, Science, etc., estimates of experts. This, I think, would overcome that difficulty. I feel I ought not to trouble you further, when your time is so precious. So will conclude with many thanks and kindest regards from,

Yours sincerely,



modern dictionaries of Contemporary History
I feel, with you, that they must insert many
below their own scale of utility, but it is
scarcely plausible to consider they omit any

equal number of those who ought to be in, even

according to their own estimate. This sam-

ple is all that I need make in order to

utilize them for comparative purposes.

However small their price of admission, they

certainly operate as a barrier for low or gentle

and that is all I need for my comparison.

As regards giving the readers full

names, the more important names,

and I had some of them in my plan in a

"Bibliography of the Appendix", giving in the Appendix

each chapter on Art, Science, etc., a

list of the names I had found, with short

biographical details, date of birth, and

chief works, etc., the symbols indicating my

conclusion.



-2-

modern dictionaries of Contemporary Biography I feel, with you, that they must insert many below their own scale of ability, but it is surely plausible to consider they omit an equal number of those who ought to be in, *even* according to their own estimate. This assumption is all that I need make in order to utilize them for comparative purposes. However small their price of admission, they certainly charge the same for Jew or Gentile; and that is all I need for my comparison.

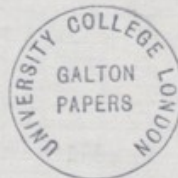
As regards giving the readers full information about the more important names, I had thought of adopting your plan in a "Hereditary Genius", giving in the Appendix to each chapter on Art, Science, etc., a full list of the names I had found, with short biographical details, date of birth, and chief works, etc., the symbols indicating my sources.

489 Fifth Avenue, New York

September 15th, 1909. F. 12, 1

(see address of Mr. Galton)

Sir Francis Galton,
4 Rutland Gate,
London, S.W., England.



Dear Sir Francis:-

Joseph Jacoby

Thanks for your kind reply, which I received on my return from my vacation. It was somewhat of a disappointment to me to find that you do not think that we could get any quantitative results by the comparison of the number of distinctions ~~made~~ ^{gained} between, say, Jews and Scotchmen and, say, Germans. By my own Cambridge training and through your own influence, I never feel satisfied until I get something like rough numerical results, however wide the probable error.

I am afraid your suggestion as to giving five-line biographies of all the names I propose utilizing is scarcely possible, as I have gone through lists of 184,919 names out of which I have culled 7,989 Jewish ones, and ^{though} there are doubtless many doublets among these, [^] but I should say the total number of Jews living 1805-1905 who have got into the various biographical dictionaries, would run to about 6,000. Surely, this induction is large enough to get something like a trustworthy numerical result.

I venture to think that circumstances have

changed since your own investigations into "Hereditary Genius" and my own humble following of them. Various forms of "Who's Who" collected by experts, without ~~which~~ ^{or} any bias afford a wider ground of induction than we had in earlier days. I can, for instance, draw up the relative proportions of distinguished Jews in England, Germany, France and America, in four different "Who's Who" of those countries, as follows:

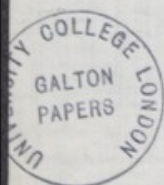
	<u>TOTAL</u>	<u>JEWS</u>	
"Who's Who"	16,704	260	2.7%
"Wer Ist's"	20,000	983	2.5%
"Who's Who America"	14,443	200	1.4%
"Qui Etes Vous"	5,000	131	2.6%

Roughly speaking, I find that there are 4,000 out of every million males over fifty who get into these dictionaries of biography; In other words, of the your old classes X G F E and part of D. Surely, if your old contention that ability arranges itself according to the normal curve of distribution holds good, the determination of more than one-quarter of the curve ought to enable us to draw out the rest of it with some degree of confidence, especially as I have similar sort of details about the relative proportions of insane and idiots at the other end of the curve, confirming in a remarkable manner the propositions of the upper end.



Besides these general results as to contemporaries I have a lot of special details culled from the biographies which are attached nowadays to almost all scientific treatises. This ought to give some help as to the special ~~main~~ lines of Jewish ability. Thus, of the 315 names in the index to Miss Clerk's "Problems in Astrophysics" 27 are Jewish. Of the 170 names in Young's treatise on ~~the~~ sets of points, no less than 17 are Jewish, showing the tendency towards pure mathematics, while of 380 names given at the end of Wilson's "Cell" only 16 are Jewish.

As against these tolerably definite numerical results I must confess I do not see what your suggested method would lead to, if I understand it. Suppose we take Jews and Scotchmen, and select X to F's of the century ~~in~~ 1805-1905 of both in various branches of distinction, taking as you say, a corresponding number of Scotchmen, by which I suppose you mean corresponding to the number who have reached fifty in that century. In other words, if two million Jews reached that age in the century, and a million and a half Scotchmen, and four hundred Jews reached distinction, one would have to take the three hundred highest Scotchmen and find how



✓

they compared in placing the two sets in order of merit,
~~Do~~ I understood you rightly.[?] If so, this would
involve a piece of comparative judgment in which no
one could feel much confidence, though I feel flattered
at your suggesting such a thing to me. But supposing
I persevered, the result would scarcely seem to me
worthy the enormous labor, whereas by my old method
one can get the standard deviation of the two races
~~by~~^{with} comparative ease, and get a definite comparative figure.

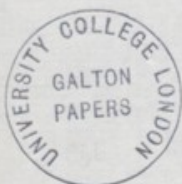
Pardon my troubling you with all this, but after
all it is practically your own work as I am only
attempting to carry out what I have learned from you.
With kind regards, I remain,

Yours faithfully,

Joseph Galton

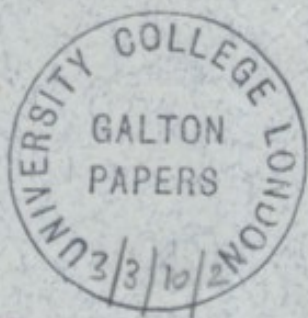
P. S. - - You will ^{be} surprised to know how many people I
have taught the [^]classification of ability in hereditary genius
and who can sum up a man as a B C D or E almost as
instinctively as I can.

11 Greystone St.,
Yonkers, N.Y.



8 Nov 1901

P. 1



Ireland

Dear Sir.

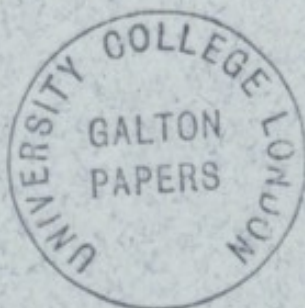
I read your lecture
with great interest
& congratulate you on
winning the Stuxley
Memorial Medal

I venture to send you
two papers which
bear on the subject
and I feel sure

that the first Nation that
takes up the breed of its
people must lead the
other Nations in everything

I am

Yrs truly
E. C. F. James.



8 C F James



Extract from "THE TIMES."

THE BRITISH ARMY IN INDIA.

CALCUTTA, JAN. 21, 1897.

Now that Parliament has reassembled it is hoped that pressure will be brought upon the Government to deal in a practical way with the problem of contagious disease in the British garrison of India. The general public in England can scarcely have realized how terrible are the effects of that special form of disease among the troops out here. The *Pioneer*, in a recent article, has published figures which are calculated to cause widespread alarm. Only 24,000 men in the whole British garrison are now free from this disease in some shape or other. The number per 1,000 actually incapacitated from duty has risen to the startling figure of 522, as compared with an average of 30 in the armies of the great Continental Powers. A report is said to be under preparation in the War Department in England which will give these and other particulars fully, thus strengthening the hands of Ministers in any action which may be contemplated. The *Pioneer* concludes its article in the following strong terms:—

"We have all been observing with deeply sympathetic feeling the alarm excited by the outbreak of plague in Bombay. As a human affliction, however, how does that epidemic, transitory in its nature, however severe, compare with the fell disease that has been allowed to fasten on the British troops throughout the country? Netley Hospital, to which the worst cases are consigned on the arrival at home of troopships from India, is at the present moment, as it has been during every trooping season of recent years, the scene of horrors. Officers in responsible positions at home, constrained by duty to become acquainted with the state of that hospital, have been goaded into denouncing the cruelties of the existing system in language almost too impassioned to repeat.

"But the inferno at Southampton, crowded with patients dying under ghastly conditions in which they are hardly recognizable as human, does not represent the worst results of the mischief wrought by the apostles of 'purity.' Hundreds of men are being turned loose from every troopship that returns from India, unfit for military duty, unfit for any good or efficient work in the world, but not unfit to disseminate the seeds of the dreadful poison which they have taken into their blood. That poison, for some mysterious reason, is said by medical men to be more virulent and destructive now than ever it was before. It is fast flowing into the veins of the British Nation. No diabolical machinations with an evil end in view could have inflicted such harm upon the State as that which has been brought about by the champions of free trade in contagious disease—and this condition of things has been brought about in the name of morality! The folly of it all is too sickening for words. By whatever persuasion can be used, by all the example that can be shown, let men who know how to lead clean and dignified lives try to induce the young British soldier to follow their lead; but are we to go on condemning him to a lingering and loathsome death if his undeveloped mind and will prove too weak to control the strongest natural instinct with which he is endowed?

"The fanatical oppression of which the awful consequences are around us may be overturned now if a sufficiently vigorous effort is made. Men in high positions at home are prepared to face the ignorant abuse that will, of course, be directed against them as soon as they begin to act. The support of a vehement and determined outcry from this country will render their action confident and successful. Squeamish reserve, veiled and dubious hints, are no longer appropriate to the emergency. We must take a leaf out of the book of our Continental contemporaries and surround certain exigencies of military life in India with suitable and inevitable regulations, or learn once more, under more terrible conditions than have ever previously been faced, that the consequences of supreme folly may sometimes be more appalling than those of 'vice' itself."—*Our Correspondent, by Indo-European Telegraph.*

HEALTH OF THE NATION.



IT is universally admitted that the welfare, strength, and prosperity, of a Nation, depend on the health of the People: that is to say, it depends on breeding men and women, healthy, strong, sober, honest, and industrious: *i.e.*, capable of doing good honest work.

DR. ALBERT CARLESS, of King's College Hospital, states in the *Observer*, 21st April, 1895, that 60% of the Patients attending our Hospitals suffer from diseases contracted from Prostitutes; and, I am informed, that 80% of Lunatics are from the same cause.

These diseases are by far the worst we have: they cause Insanity, Consumption, Epilepsy, Loss of Sight, and many other ills, in the children of parents who have contracted or inherited them; and if the histories of those poor patients who are dying in the Lock Hospital were known, it would surely cause a Royal Commission to enquire into the whole matter, for, at present, the results of these frightful diseases are kept from the public. Nothing is done to prevent them. They put no less than 33% of our ARMY and NAVY into hospital—that is to say, one man out of every three is not only incapacitated for duty, but often ruined for life. I have heard of Soldiers coming from abroad, and marrying respectable girls, who, when admitted to hospital, were found to be so diseased as to be beyond cure, and had to be sent to die a lingering painful death in the Lock Hospital.

Surely it is time some one spoke, and people were warned and made acquainted with the frightful results that may attend slight indiscretions. The Doctors won't speak, as it would mean a loss of the greater part of their business if these diseases were checked, as they are the cause of nearly every complaint.

The people who got the "Contagious Disease Act" suspended are worse than murderers, as they have not only killed many, but have diseased thousands for generations to come.

It is most extraordinary, that although such pains are taken to breed horses, cattle, dogs, birds—in fact nearly every animal—and handsome prizes given for the best results, that Man, the most intelligent animal of them all, should be allowed to breed in any way he likes—filling our Hospitals, Lunatic Asylums, and Prisons. If it is necessary to have a licence to sell tea, tobacco, shoot game, act plays, &c., surely the breeding of children—which is far more important and far-reaching in its results than anything else—should not be left entirely to the sweet will of the people however much they may be diseased or crippled.

If anyone is sent suffering from small-pox in a cab to hospital, there is a great fuss and heavy penalties are imposed, but 2,500 prostitutes are allowed to walk the streets of London every night, spreading the worst and most frightful diseases we have. Before the "Contagious Disease Act" was suspended, these poor women when they got ill could rest and get well in hospital, and were examined to see that they were free from disease, and our Garrison and large towns were comparatively free from these frightful diseases. But now, these poor women are obliged to continue their trade to get bread, spreading these terrible diseases.

Some Clergymen, who know how easily these diseases are contracted, wisely have separate glasses to administer the Communion, instead of allowing everybody to drink out of the same vessel.

Doctors at confinements have caught it when the mother was diseased, and wet nurses have caught it from the child of a diseased parent.

I saw a suggestion for celebrating the 60th year of the Reign of Victoria, *viz.*, to pay off the debts of the Hospitals; but if the "C. D. Act" was put in force, it would reduce the number of patients attending our hospitals by over 60%, and so free them from debt, besides checking the worst diseases the flesh is heir to.

I would remind religious people, who may be foolish enough not to wish the "C. D. Act" put in force, that the Jews were circumcised by direct order of God on purpose to prevent their contracting these very diseases, and that Christ set them the attitude they should adopt towards the Magdalenes, by commanding those that were without sin to cast the first stone at them; and He healed all manner of diseases among the people without any reference to the characters of the sufferers, or the cause of their maladies.

SOLOMON II.

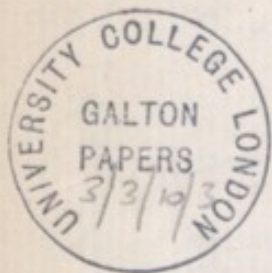
Gallon/3/3/10/3

2 photographs

(attached to letter

1887 Aug 19)

Germautown. Philadelphia.
Pa. U.S.A.



Aug 19. th 1887.

My dear Sir:-

I take the liberty of
sending you Review of Aug 5th
containing a synopsis by me
of your article on 'English Temper'.

I also forward a copy of a
Composite of 21 Johns Hopkins
Doctors of Philosophy of the year
1886-1887. The composite was
gathered up by me for Prof Sheddard
of Smith College who will

f. 14

If the Anthropological section is an excellent
index of the deep hold that this subject has on
the public interest. I was also agreeably
surprised to find that the treatment of a purely
psychological subject (I tried the experiment by
reading a paper on Memory and Apperception)
should have the same advantage.

Hoping that the things I send may not
be without interest to you
I am sincerely yours
I give my full address above.
Joseph Jacobson.

publish them in the Century Magazine. The average age of the sitters is 27 years; I think the face is good.

I was surprised to find my letter by you printed in the May number of the Anthropological Journal. Is it possible for me to procure a copy of that number for my map-book?

The psychologists like all other men take a holiday in the summer. Everything is hibernating or rather aestivating I suppose. I have just returned from the meeting of the American Association for the Advancement of Science. The popularity

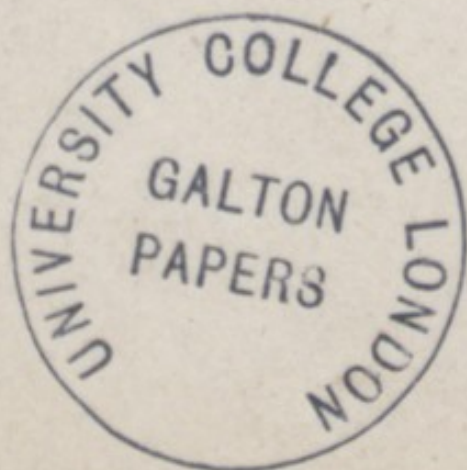
13



X
Comp. of Phtisic patients
(Hotel pot)

f 3v 13

13

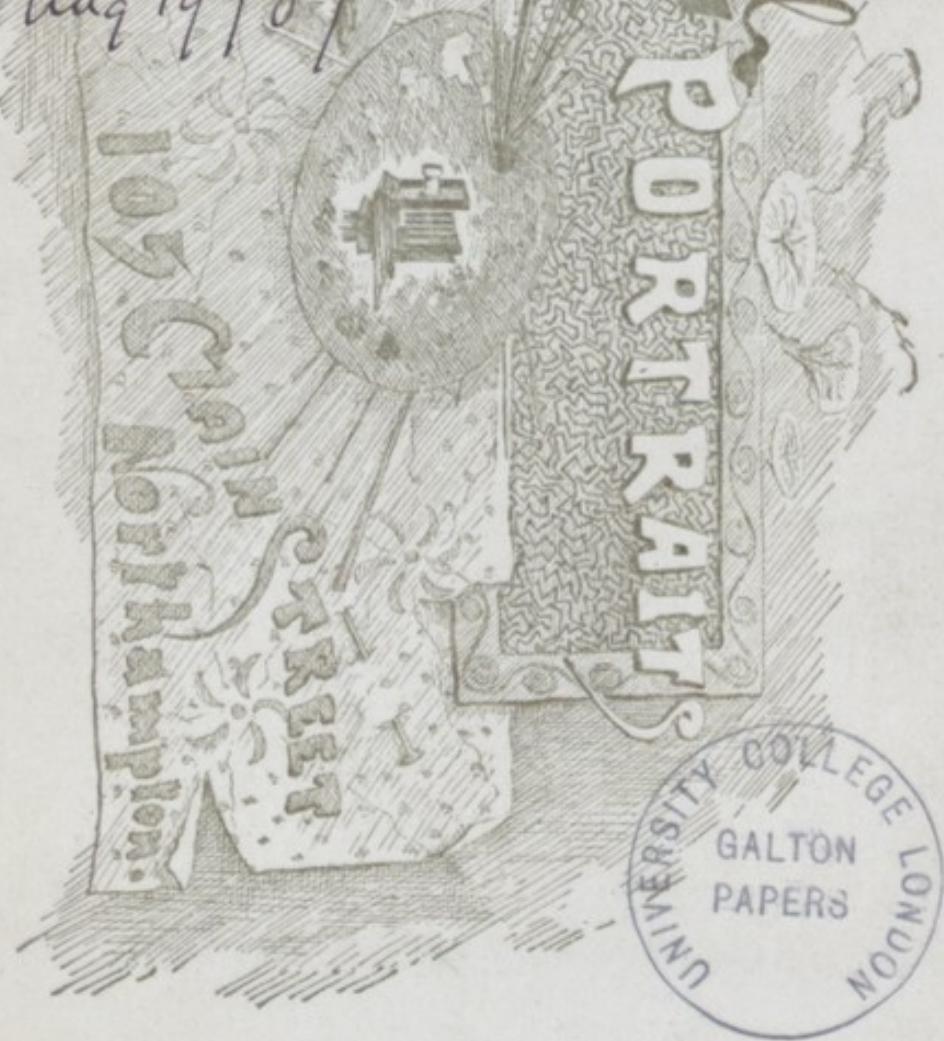




LOVELL PHOTO.—NORTHAMPTON, MASS.

Composite of 21 ^P John Hopkins ^{P. 4v}
Doctors of Philosophy of the years 1856-7.
made for W. Jastrow by Prof. Shaddow
of Smith College who will publish them in
the Century Magazine. The average
age of the sitters is 27 years

Extract from letter to me of J. Jastrow
Aug 19/89





WORLD'S COLUMBIAN COMMISSION.

OFFICE OF THE

Director-General of the Exposition.

DEPARTMENT OF ETHNOLOGY AND ARCHÆOLOGY.

F. W. PUTNAM,

Professor of American Archaeology and Ethnology,
Harvard University,

CHIEF OF DEPARTMENT.

PEABODY MUSEUM OF ARCHÆOLOGY, CAMBRIDGE, MASS.

Galton
 Mr. Francis Galton,

London,



Barnantown, July 17, '92.

Dear Sir,

The Section of Psychology at the World's Fair has been placed in my charge; and an essential part of the proposed exhibit will be a working laboratory in which measurements will be made of the more important physical and mental characteristics of men and women. Inasmuch as your work in this direction is doubtless the most important that has been done, I venture to ask you to send me a copy of all your publications in this field for exhibition in the Section of Psychology, as well as for guidance in the elaboration of the plans of the Section. I should also ask of you to use your influence with the makers of the apparatus which you have devised, to exhibit at their own expense such pieces of apparatus and I expect to offer them the inducement of a probable sale in this country. I will communicate with them directly later.

WORLD COLUMBIAN COMMISSION

The Board of Trustees of the Columbian Exposition

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY

PEABODY MUSEUM OF AMERICAN ETHNOLOGY, MASS.

Let me assure you in advance of the personal
gratitude with which I shall accept these
favours, and also express the wish that we
may have the pleasure of a visit from you
at the World's Fair. Believe me very
truly yours

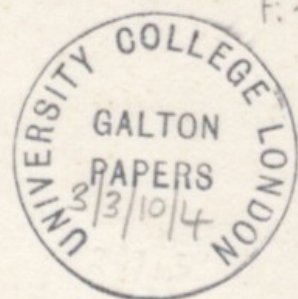
Joseph Jacobson.

Address.

University of Wisconsin,
Madison,
Wis. U. S. A.



F. 1



DR. OSCAR JÁSZI

DIRECTEUR DE L'ÉCOLE LIBRE DES SCIENCES SOCIALES
SECRÉTAIRE GÉNÉRAL DE LA SOCIÉTÉ DE SOCIOLOGIE

I. Városmajor u. 57.

BUDAPEST,
II., HUNFALVY-UTCA 8.

HUSZADIK SZÁZAD
TÁRSADALOMTUDOMÁNYI SZÉMLÉ
(Zeitschrift für Socialwissenschaften
Revue sociologique)
BUDAPEST

Budapest, ~~the~~ 26 November 1907

BUDAPEST, I.,
Városmajor-utca 57. sz.



Sir,

I would translate in
my periodical your masterly Herbert
Spencer-lecture on Probability. The
Foundation of Eugenics and I beg
therefore your kind authorisation.

Your endeavours for propagating
the new science are already well-
known to the public of this review
and your powerfull essay will surely
awake a still greater interest in
the Hungarian readers.

With many thanks in advance
very respectfully yours

J. Oscar Taszi.

S. STEPHEN'S,
CHELTENHAM.

Sometimes wish I had a
more subtle & acute mind. I
am essentially common: place
I know it. See myself & the
intellectual positions of higher
& keener minds escape me.

Common writing takes a
certain time tho' I only preach
now a week 1/2 15 minutes
but the childrens service again
causes a lengthy preparation.

The afternoon I usually give
to visiting sick & poor alike

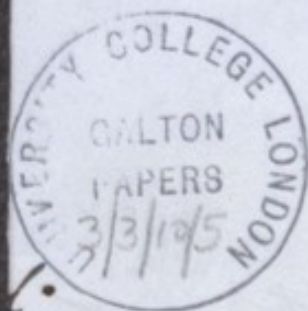
and Club choir & other parochial
activities for men among the women
usually try to give instruction in
composition on some advanced
subject - to two or three young fellows
who tho' they have left school are
glad of help in continuing
their education in their spare time
Then a few sufficiently in
earnest for this but it is a
real pleasure to help such when
one comes across them

Now I have scarcely exceeded
the due & proper space in writing
but I tried to answer your
questions about time. I hope
I shall be in London in November
& then I trust I may have the
pleasure of seeing you. With
reiterated & most grateful thanks

Yours very sincerely

E. L. Innes

Rev^d E. L. Jennings P. 4r



S. STEPHEN'S,
CHELTENHAM.

out 9

My dear Mr Galton

How to convey to you my
deep appreciation of your
kind thought - in my self
or my gratitude for the
concrete expression of that
thought. I know not. It
is not - the value of the gift that
in this case it is something
for which I have often longed
but never dared even to hope
to possess. so much as the

fact. that- somebody has been
so kindly disposed towards me
as to prompt such great &
unlooked for generosity which
gives me such true & heartfelt
pleasure. Thank you a thousand
times. It was most kind of
you ~~to~~ not only to write but to
write at length for it makes
me hope that- the dear interview

f 2c

I think you are good enough to
admit me during those solemn
hours at Royal. I like journals and
I claim some slight place in
your regard. I am deeply
interested in your arrangements
& upon ^{that} the difficult question of
companionship has been so
pleasantly solved. It is most
wise to secure young
companionship for their
bright acute unreason
is such a safeguard to our
cold calm reason. It cheers
and brightens life. Now

than anything else I know.
I can plead guilty to your kind
accusation of being very busy I wish
I were as sure that the latter count-
of usefulness was equally true.
I find a little time (not enough
alas) for daily reading. Christian
Ethics & Christian Evidence have
been before me lately. I am even
preparing a short simple course
on the latter to a class of ladies
interested in theology in Gloucester.
Still I am told in these days my
only plea is that the arguments
I shall lay before them seem
to me honestly conclusive.

Dr Jewitt

f. 4r



CONSULATE OF THE UNITED STATES,
SIVAS, TURKEY.

December 29 '93
Francis Galton Esq F.R.S.
Anthropometrical Section
So. Kensington Inst
London

Sir,

Pardon the liberty I
take in asking your
assistance in a work
I have undertaken.

I am endeavouring to make
a collection of anthropomet-
rical measurements of
Armenian and Greek women
with a view to study the
average measurements of

women living under such
very different conditions
from those in more
civilized countries. I
wish to study the figures
both from a medical
and artistic standpoint.
As a basis of comparison
I would like to get the
average measurements of
English and other highly
cultured women and
the measurements of
perfect types of classic
perfection.

If you can help me
to get these figures I will
be very thankful.

I have no literature on
the subject except some

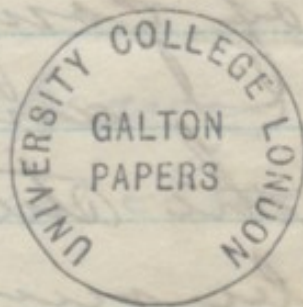
brief studies made by
Dr. Hitchcock of Amherst
College America of the
average male & female
American students.

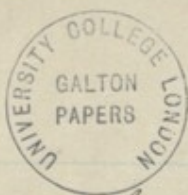
I have ordered a copy of
Duchetel's Anthropometrie.

I enclose some of the
blanks which I am using
and would be greatly
obliged to you if you
would give me any
figures that may
serve as a working basis
of comparison.

I am just beginning
the study and would
be very glad of any
help or suggestions of
any sort.

Very respectfully yours
M. A. Jewett M.D.
H. Russell





Sivas. Turkey Feb. 10th '94

Dear Sir,

Your favor of Jan. 21, is at hand.

It seems to me that you have misinterpreted my letter. I would not maintain that the average type is the most perfect one.

Sitting aside for the moment the question of race I think we may say that a certain mode of life produces a certain type of physical development. To compare the results of one mode of life with those of another you would not take an exceptional case but an average representative or the average of a sufficient number to represent the type. My wish was to get by numerous measurements the physical type of woman produced by the peculiar dress and mode of life of women of this country and compare it with the product of very different conditions in civilized countries. With that end in view

I took the liberty of asking you to give me the average measurements of English or other highly civilized women, not because the average would be the most perfect type but because I thought the average might fairly be taken to represent the product of that particular mode of life. Thousands of young American women have been measured according to the schedule I sent you and I supposed similar measurements had been taken in England and elsewhere.

Having made a physical (medical or physiological) comparison I wished to see how an average oriental woman compared with some recognized standard of artistic beauty and for that purpose I desire the measurements of some accepted model, preferably classic. This is a secondary consideration.

Having explained my position more fully perhaps you can give me some assistance.

I am, Sir, very respectfully yours M. A. Jewett

DEN KGL. VETERINÆR- OG LANDBOHØJSKOLES
plantefysiologiske Laboratorium.
KJØBENHAVN V.

f. 1r
25/8/903



S. T.

Mrs. Francis Galton F.R.S

London

I thank You very much for Your
letter of Aug. 12. I shall to day
permit me to give some informations
concerning Your questions. I beg You
excuse my bad English - I suppose
You will prefer that language for
only a little better German or French.

Of course all my original notes
and all samples of objects not used

as recd, are accessible for inquirers,
 coming to me. I cannot still send
 the originals away; they are to be used
 in several other combinations. I should
 be very proud if some other investigator
 would work in my laboratory, I have
 had a young Norwegian. I love the
 "open door" - politics in science!

Will you be so kind to introduce
 me to Prof. Pearson to ~~whom~~ whom
 I have sent a copy of my pamphlet.
 I hope that I in 1904 can be able
 to go to England for taking some more
 biometrical training. You will have
 seen how much suggestion I have taken
 from the Biometrian School - that
 the Biometrians should work more
 freely also in biological sense is
 my only objection.

I am aware of the irregularities by the application of the "normal law", but I fancy, that in "pure lines" that law will be mostly well in place. In the populations different disturbances may be added.

It is quite correct, that "subdividing types" tend to be distributed normally on each side of a "central type". But I mean, that such central types (averages) of a population is not (or not necessary) a real biological type. Please to see the figures at the page 35 of my pamphlet. The centre is in the three figures only the mathematical centre of the superposed "Galton-curves" of the pure lines. The figs at p. 28 give real types - but there is not to be seen directly any difference between the false unity of the figs p. 35 and the

true unity of the Fig's p. 28.! Here the
pure statistics can not show the way
out - here we must go to the isolation
experiments, the Biology of the "pure lines".

All these things will be discussed
further in my next publication, concerning
the multimodal "lines". These show
the types (the true types) as very constant
in spite of all selection of fluctuating variates
and shows also beautiful examples of
no ^{personal-}ancestral influence.

Just now a young Danish assistant-
chemist has found that the selection
within "pure lines" of oats ^{in three years} has ~~no~~ ^{has} no
~~result~~ - respecting the percentage of fat-
result. But if he takes the population
then he find again your regression law.

I shall soon publish - in Danish
and German - my lessons (given as free
lessons at the University) about Heredity
and I should be very glad if I was

DEN KGL. VETERINÆR- OG LANDBOHØJSKOLEN
plantefysiologiske Laboratorium.
KJØBENHAVN V.

p. 3
25/8 1903

Sheet 2.

able to ornate the book with the
portraits of Francis Galton, Gregor Mendel,
Louis Vilmoren and Hugo de Vries.

Will you be so kind to send me
a photograph of yours for that
are?

I am Yours
very respectfully

W. Johannsen.



Will send when
Schedules are
ready
TELEPHONE No 195, SYDENHAM.

Prof Dr Alice Johnson

f. 4c

LAMBETH SCHOOLS INFIRMARY,

CROWN HILL,

UPPER NORWOOD, S.E.

Miss E. White
Superintendent Nurse.

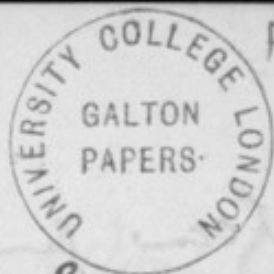
22. V

1905

Dear Dr. Galton



Shame a beautiful
mentally Deficient slave at
last - Shame a boy of 6 years
of age can't speak, can't
feel kindness, angel temper
but - hears smells & sees
all right & untaught
can judge any air on the
piano that he hears -



He is the only dependent on
of a family of 5 children
his mother & father are
honest - nominal hard
working people & that
the father is a labourer
but the maternal grand-
father was a swindler & there
is a very shady character
he was hauled up in the old
Baillie & was one of the
long term conspiracy -

Learn just out more particulars
if you like - the old man
could probably tell all
about his father - he would
do any thing for a shilling &
two poor devil -

The only interesting morally
Defective shame at the
Schools is a child of 9
years; whose mother turned
up the other day & is just
like her

I hope you have got

4

Something out of the Workhouse

Sincerely yours

Alce Vane John

Private Address 97 Central Hill
Upper Norwood
S E

TELEPHONE N° 196, SYDENHAM.

D. Alice Whitton

LAMBETH PARISH SCHOOLS,

ELDER ROAD,

WEST NORWOOD, S. E.

L. A. Morris.
Master.



Xmas 1905

Dear Mr. Galton

A Merry Xmas &
New Year to you & Miss Biggs
I missed you by 2 days. Rushed down
on the Sunday after you had left
to Rutland Gate & found it all
shut up & guarded by the faith-
-ful "Adam" - who said you were
basking in the sun at Pau
& I missed you & rode away into
the rain & fog & Arthur Mac
Donald Mac Suer, dined with us
soon after his (Mac Suer's) return
from Rhodesia - Mac Suer was
full of joy in having buried in

nigger annie the King Solomon
 & Queen of Sheba myths of Rider
 Haggard & W. H. Mace was full
 of new & weird tales of the Petrie
 Camp, that will be tinned up
 in my memory until I see you
 again

L.C.C. work has kept me busy
 I enclose one of their measurement
 cards. The Nutrition factor is
 worse than useless as you may
 not strip the children so that
 you put the head of the cribbet
 " & the Champion swimmer for
 all London class as poor &
 the podgy stay at home clanking
 as very good but barring that
 & having found the scales out $\frac{1}{2}$
 milo's (before I began to weigh) I
 think the rest is accurate

the top knots on the girls' heads were distracting
 but ~~by~~ after the first ~~two~~ ^{three} I managed to dodge them,
 those just ~~two~~ ^{three} will doubtless come out 1 cm less
 in height after 6 months of good feeding!

The children have the keenest sense of humour especially
 the infants & their drawings are immense & would
 charm the Pu Raghache School - last week I came
 across a small urchin of 6 who had drawn ^{beautifully} in
 coloured chalks ears of wheat & poppies this mite of
 6 was giving most delight as his neighbours gigantic
 ears & put up his hand & said "Please teacher theme the
 7 years of plenty" - When will you be back again?

Love to Miss Biggs

CITY COLLEGE

Ever yours sincerely

Alice Vour Johnson



Dear Mr. Galton & Miss Biggs -

Nadolig llawen i chiwi, a blwyddyn newydd
da! (Gwlth)

How is the Great Sympathetic Line
of Railway? Yours truly

Alice Adam.

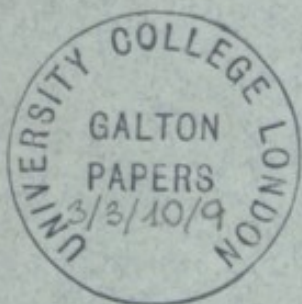
Amy Johnson

P 1r

The Pagon House Hotel

Ramsgate

Sep 5 1906



My dear Uncle Frank

I am just sending you a
line to tell you that
Herbert has been offered
the Living of Keston in
Kent by the Archbishop.
It is a lovely place
2 miles from Hayes & 4
from Bromley. The population

is 1100, 2 churches &
the Curate paid for by the
people. The Rectory is
a charming house, & a
very nice garden. The
Living has gone down very
much in value unfortunate
but as the Archbishop says
it is an important
growing place of grand
opportunities & wants
building up, so we are

going to try it any way,
& if at the end of a
year we find we can't
manage to live there, we
must ask the Archbishop
or Lord Derby who is
the Sponsor, & has heaps
of rich Livings in his
gift to move us! —
There are many other
rich people in the
parish besides & if they

like us will probably
 raise the Rector & Rector
 for us as they did at
 Monte Carlo. The Rector
 resigns on Oct 1 & delapidating
 will take about 4-6 weeks so
 we shant be able to get in
 till middle of ~~Nov~~^{Nov} - we shall
^{have} to buy a lot more furniture
 & all our carpets, & I shall
 have to come end of Oct
 to town to buy it, after
 seeing exactly what I have
 left at ~~Atford~~ ^{Atford}. With much
 love to you & Eva
 Your affec^d niece
 Amyl Johnson

Nov. 27/97

1, ELVASTON PLACE,

SOUTH KENSINGTON. S.W.

My dear Mr. Falton

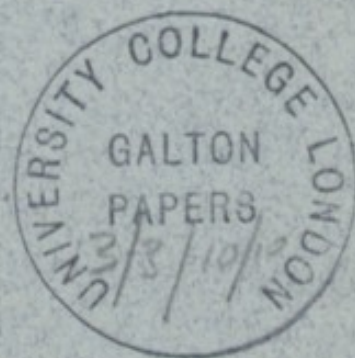
We are all quite touched by your very great kindness in writing such a very kind & full letter. Coming from you who are the Authority about "Heridity" it must have weight.

Mr. Chaplin shall see it & his Secretary will keep a copy we

W 2 v 10 p 24

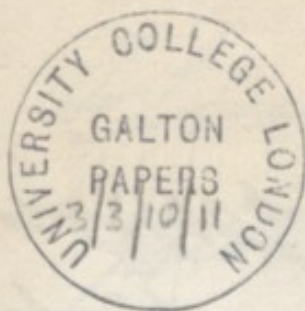
will send in with it,
but the document
itself we shall
keep as a precious
possession.

Yours very sincerely
& very gratefully
Cecilia W. Johnson



H. G. Johnson

f. 1r



11, Savile Row, W.

March 10th 1896

My dear Galton
Many thanks for
your kind and useful
letter. I am delighted
to find that I was
right in thinking that
you would be interested
in the history of my
martyrdom. It seems
a very narrow matter
and for a time

threatened to be as serious
 as Dr. Ferguson predicted
 that it would be
 with reference to the
 question of releasing the
 prisoners, I believe
 that some time ago, I
 sent you my "Medical
 Letter with G. S. S. S."
 If you refer to p. 123
 you will see that
 from the last para-
 on that page to p. 125

Have discussed the
question - The substance
most likely to be ben-
eficial is Atropine -

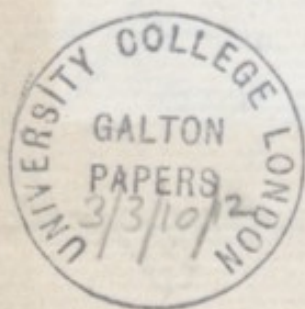
The mydriatic effect
before with the ex-
citation of the shock which
during collapse is
greatly reduced in
consciousness of the mind
amount of blood going
through the lungs -

The time for action
of positive & negative
cases during the shock

those who from jealousy
 or other motives have
 the will to oppress can
 do so by giving my
 book the harsh
 has been from the first
 my most persistent an-
 tagonist, and now
 apparently means to
 leave my "History" un-
 noticed.
 You might do good ser-
 vice to our work if you
 think if you could induce
 in some influential people
 your views on the subject
 from my sincerely
 Yours John

W. E. Johnson

f. 1r



Madoff House
Cambridge

April 29/88

Dear Sir,

I must thank you
very sincerely for so kindly
writing to me with respect
to a remark of mine in
Mind on Laws of Error.

If what I suggested
appears to you at all
likely to have any value,
it would give me the highest
satisfaction. And it is
particularly kind of you.

to give me further suggestions
as to how the matter might
be worked out. I have
waited a day or two until
I could do justice to your
letter by thinking the matter
over. I am sorry to say,
however, that I am not
sure that I quite understood
the nature and conditions
of the problem which you
propose. (1) In speaking of the
law of growth as being

represented by a parabola,
 or some other curve
 I suppose I am right
 in understanding that the
 ordinates represent the stature
 & the abscissae the time.

(2) Is the only 'error' (due to ^{in each observation}
 error of time, or are the instruments
 & mode of observation to be
 supposed fallible?

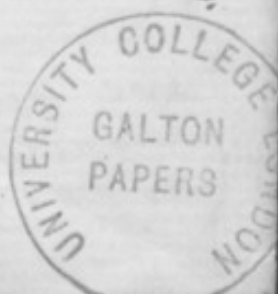
(3) Do you wish to find
 the formula which connects
 the each stature as observed
 with the comparative frequency
 of that observed stature? or,
 are you wanting to connect the
 magnitude of the errors with their comparative frequency?

(4.) But lastly what are
the limits of variation supposed
to be? How far may ^{the} 'time'
of observation vary from the
~~approx~~ right time on each day?
* Perhaps I may ask you
to give me a word or two
of further detail on these
points - as I should like
very much to see if I could
work the matter out to a
successful issue, since your
authority has encouraged me
to believe it may be of some use.

Yours faithfully

W. E. Johnson

F. Galton Esq



Let R_1, R_2, R_3 be ^{a series of} ~~the~~ means of ~~consecutive~~ ^{several} measures of the same object to find the relative frequency of difference of various amounts ~~between consecutive measures of the same object~~ ^{between pairs of the above series taken at random}

Let p = the probable error of a single observation

n = the number of obs.

then the prob. err. of the mean of a set of n measures is $\frac{p}{\sqrt{n}}$

Now suppose we have a great many of these means of sets which ~~themselves may be called~~ ^{we will} R_1, R_2, R_3 & respectively, then they will form a series and we will call the series of them "the M series". Then each member of the M series has just been, the probable error of a single element of the M series is ~~the~~ ^(which we may call r) $= \frac{p}{\sqrt{n}}$

The differences between any two elements in ^{the M series} ~~a series~~ themselves form a normal series which we will call the D series.

Then the probable error of any element in the D series $= \sqrt{2} \times r$
 $= \sqrt{\frac{2}{n}} \cdot p$

It is not difficult from the ordinary tables of Frequency of Errors (or it is particularly easy from my graphic method of determining the Distribution of Errors) to find the frequency with which errors of each given grade in amount would be met with in a given number of observations.

In applying this to the variations in temp: from day to day in the Mean Temp of 32 years - the diurnal change from day to day may either be allowed for, deriving it from the smoothed curve or may be disregarded in comparison with the large daily jerks.

Rude sketch. I wrote a revised ^{copy} with a letter to W. Stone April 13/10.





f. 4r
Llandaff House
Cambridge.
May 13. (85

Dear Sir,

It is very good of you to have sent me further explanations of the problem you proposed. The points I misunderstood were quite cleared up by your last letter. But I found that the problem was not of the kind which I had meant to indicate in my Note: so that I am afraid my suggestion will not be of any service towards

the solution of such problems
as you are interested in.

Not feeling quite familiar
enough with the mathematics
that would be required,
& having very little time,
for the work, I asked my
friend Arthur Derry,
(who was Senior Wrangler
a few years ago) to try the
problem, which he very
kindly undertook. I have
looked carefully through his
work, & have corrected
a few slips, which might

have put you out in
reading it & also confirmed
the work (which after all
is not very abstruse): and
it seems to me to have made
a very nice problem.

It has given me much pleasure
to have studied Berry's
solution. Page (4) is a little
confusingly written out,
but the work really amounts
to the ordinary transformation
by which h is got rid of in
the function $\int_0^x e^{-\frac{x^2}{h^2}} dx$ in order
that the tables for $\int_0^w e^{-w^2} dw$ may
be applied.

I hope you will forgive
 my apparent neglect in
 not writing before. Berry
 sent me the solution a week
 ago, but I have been too
 busy to study it until now.
 With many thanks for the
 interest which your problem
 has given me, believe me
 yours very faithfully
 W. E. Johnson.

May I write later to explain
 more fully what I meant
 by $+ or - \infty$ limits, ~~by~~ illustrating
 it by some practical example,
 if I find I am able to apply it?

F. Galton Esq.



Problem

f. 6

- 1) A traveller accurately weighs a young savage & finds his weight to be w
 - 2) The savage is reported to be of the age of 18 but there is as likely as not to be more than 1 year difference between the reported and the real age.
 - 3) The ^{rate of} growth in weight about the age of 18 may be assumed ^{something} as follows, taking the weight at the exact age of 18 as unity.
- | | | | | | | | |
|------------------|----|----|----|-----|-----|-----|-----|
| age | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| relative weights | 77 | 87 | 94 | 100 | 105 | 109 | 112 |
- 4) A growth of the ~~age~~ age of 18 & thereabouts, is as likely as not to differ from the mean weight of boys of his exact age ^(a race) by $\frac{1}{7}$ ths
 - 5) The law of frequency to be assumed in (2) & in (4)

Required to find the probable difference between w and the weight of the ^{above} savage at the exact age of 18.

(Note. it is not worth while to suppose ^{in (1)} inaccuracy of measurement, because that ^{is (2) for} easily dealt with by compounding its effect with (4))



J. Galton April 30/88

The smudges are drops of rain, which fell as I was perusing this out walking. Please excuse. W.E.T.

1) M^r Galton's Problem.

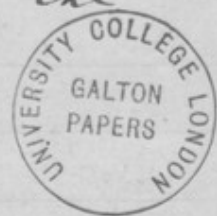
(Arthur Berry)

It is not clearly stated whether the law given in (3) applies to the particular savage in question, or to the average savage.

I assume the former to be the case.

Since then all the conditions except (4) apply only to the particular savage, & the answer applies to him; we are not concerned with the average savage at all, and the condition (4) becomes irrelevant.

We may however make use of (4) to determine probable difference between w & the average savage at 18.



The discrepancy between real & stated age in (2) is supposed to go according to the ordinary law of frequency of errors.

2)

If w_0 be weight at age 18
 Let $w = w_0 \{1 + \phi(t)\}$ be ~~age~~
 weight at age $18+t$

Then $\phi(t)$ has to be chosen so as to agree
 with the numbers given in (3); correcting
 the first number from 77 to 79, it is easy
 to see that $\phi(t)$ can be taken = 1 at bt^2

$$\text{where } \left. \begin{array}{l} a = .055 \\ b = .005 \end{array} \right\}$$

The ^{weight} age at 18 is then given by

$$w_0 = \frac{w}{1 + \phi(t)}$$

$$\text{or } w_0 - w = - \frac{w \phi(t)}{1 + \phi(t)}$$

Hence the chance that the ~~saver's~~ weight at
 18 ^{is less} exceeds w by a quantity not greater
 than $w_0 - w = - \frac{w \phi(t)}{1 + \phi(t)}$, is the same as
 the chance that his age exceeds 18 by a

3) quantity not greater than $\underline{x}$.

Hence the chance that the weight at 18 should lie between $w \mp x$ is the same as the chance that his age should lie between $18+t_2$ and $18-t_1$,

where t_1, t_2 are given by

$$\left. \begin{aligned} x &= \frac{w\phi(t_2)}{1+\phi(t_2)} \\ -x &= \frac{w\phi(-t_1)}{1+\phi(-t_1)} \end{aligned} \right\} (A)$$

But this chance is

$$\int_0^{-t_1} f(t)dt + \int_0^{t_2} f(t)dt$$

where $f(t) \text{ or } \frac{1}{h\sqrt{\pi}} e^{-\frac{t^2}{h^2}}$ is the law

of frequency; i.e. $f(t)dt$ is the chance that the age should lie between $18+t$ and $18+t+dt$.

But if x is the required probable difference between w & the weight at 18, this chance must be $\frac{1}{2}$.

4)

p. 10

$$\therefore \int_0^{t_1} f(t) dt + \int_0^{t_2} f(t) dt = \frac{1}{2} \quad (B)$$

We have then to solve the equations A & B

write $t = h t' \quad \text{or} \quad t' = \frac{1}{h} t$

$$\begin{aligned} \therefore \int_0^{t_2} f(t) dt &= \frac{1}{\sqrt{\pi}} \int_0^{t'_2} e^{-t'^2} dt' \\ &= \frac{1}{\sqrt{\pi}} \int_0^{\frac{1}{h} t_2} e^{-t'^2} dt' \end{aligned}$$

Now in our case the prob. error τ is given

$$= 1, \quad \therefore \frac{1}{h} = \rho = \text{constant}$$

ρ being the well known constant $\cdot 47694 \dots$

Hence we can write B in the form

$${}^{(4)}(\rho t_1) + {}^{(4)}(\rho t_2) = 1$$

where ${}^{(4)}(x) = \frac{2}{\sqrt{\pi}} \int_0^x e^{-x^2} dx \quad (C)$

The advantage of this transformation is that ${}^{(4)}$ is a function which is tabulated [Chauvenet's

Astronomy, vol II p 595]

5)

From equation A we get

$$\phi(t_1) + \phi(t_2) + 2\phi(t_1)\phi(t_2) = 0 \quad (D)$$

$\underline{C}$ & $\underline{D}$ are two equations to determine t_1 & t_2 .
These to be solved by approximations.

The method I use is to take a series of trial values of t_1 , to deduce t_2 by means of equation C & the tables; & then to substitute in D; the solution lies between values ~~which~~^{where} the left hand side of D opposite ~~values~~ signs.

I find in this way that t_1 lies between .8 and .9, and that ~~to~~ to two places of decimals,

$$t_1 = .86$$

Whence

$$t_2 = 1.15$$

& from (A),

$$x = (.054) \cdot \omega$$

The max prob. error for the average value is

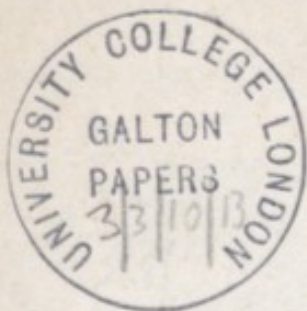
$$\sqrt{(.054)^2 \omega^2 + 49}$$

6)

The method of solution shows that we are concerned only with the ~~values~~ form of $\varphi(t)$, as far as the ages $18+t_2$ & $18-t_1$, where t_1 & t_2 are .86 & 1.15 ;

Then the solution will be ~~quite~~ unaffected if the figures given for the ages 15, 16, 21 are replaced by any others; provided ^{only} that the law assumed above holds between $18 - .86$ and $18 + 1.15$

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If the law given in (3) be supposed true of the average savage, but not of the particular savage in question, then the work will be much more complicated; but for moderately great values of ω , (such as would actually occur, the numerical result would probably be almost the same.



22, CUMBERLAND ROAD,
KEW.

28th Oct. 1901

My dear Mr. Galton,

Many thanks to you
for the reprint with your very
interesting anecdote concerning
the origin of the Geological Society.
I fully accept it as the account
of one who was one of the foremost
- perhaps I should say the leading
spirit - in the foundation of the
Society.

In spite of this, however, I
think something may be said
on the other side by an advocate
for Sir Joseph Banks - That he
was terribly arbitrary in his
rule of the R.S. is well known &
it may be admitted that his
methods would not be tolerated now.

It is obvious that everything depends
on the nature of the questions, which
it was proposed to issue under
the auspices of the R.S. I think
we may form a very good idea of
these from the book issued by
Greenough in 1819 "A critical
Examination of the First Principles
of Geology - in three Essays." At
the beginning of the 19th Century the
battle between the Plutonists & the
Aqueonists was being waged with
a merciless vigour we can scarcely
realise now. Those who were not
followers of Werner were denounced
as Atheists - & every prejudice
was being stirred up against
Hutton, Playfair, Hall & their
followers. Now Greenough was
a bigot of the most pronounced
type in the Wernerian Camp. I
think that when that wicked Lyell
published his "heresies" ^{Greenough} ~~he~~ would

f. 25

Low (under a strong sense of duty no
doubt) ~~Low~~ unhesitatingly lighted
the faggot if he could have seen
Lyell tied to a stake.

I think if we could see the list
of questions proposed by Greenough
they would be found to be not a
fair enquiry as to facts but a covert
attack, ^{on} one of the rival theories.
And I strongly suspect that a fair
defence of Banks might be made
on the ground that this publication,
under the auspices of ~~from~~ the R. S.,
of questions drawn up by Greenough
& his friends would not really
lead to the Advancement of Science.

Certain it is that, soon after
the foundation of the ^{Geological} Society, a
very important step was taken
by a majority of its supporters.
A resolve was arrived at to
prevent the Society from being used
by either faction - and it was

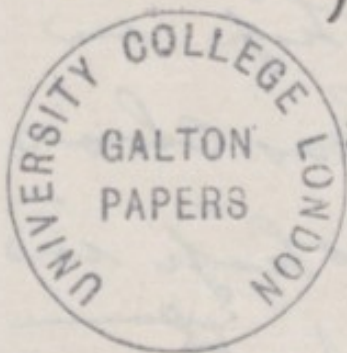
f. 2v

However these points do not
affect your citation of the
Anecdote as an illustration

I am glad to learn you speak
of our meeting ^{next} Thursday as a
Wedding - I have feared though
I have done my best on the
Committee to carry out the task
we were set to do) that some
of the members of the Philosophical
Club might regard it as a
funeral. Well, the Club has a
respectable record of 54 years
it has done the work it was
formed to do! Let us like Buddhists
regard in resignation our very faithfully
Yours
Wm H. Miller

Returned from Betchworth 2.7.09. *MS 2 f. 30*

(Judd)



30, Cumberland Road,
Kew.

29th June 1909.

My dear Sir Francis,

I can assure
you that you were greatly
missed at Cambridge, at
the Darwin Celebration,
which passed off so successfull
But it was a slight con-
solation to us on our return
to see your name among
those whom "the King"
deightest to honour.
All friends of Darwin

hold your kinship in
thought as no less close
than your kinship in
blood with that of the
grand old man, and we
all join in hearty
congratulations and good
wishes to you,

Yours very faithfully,
