Letters Concerning Hereditary Genius

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F.1r

From W. Austen-Leigh

J.E

Old Vicarage
Maidenhead

My dear W Richards

I am afraid that I can not give W. Galton any additional information about the Austen family worth his having. He has already discovered that we have no connection with Mrs Austen the Translator of German works. I do not think any thing more can be known of Dr Leigh, unless by chance any traditionary anecdotes of him may linger in

Ballioll common room. But
probably they have long been
obliterated by the innumerable
stories about Jenkins. Mr Galton
will not be able to make much
capital for his theory out of me or
my academical honors, which
consisted only of a second Class
in Classics. I might indeed give
a more remarkable list of
successes from the five of my sons
who have been Oxford & Cambridge,
viz 4 first, 2 two second Classes;
five fellowships; 4 Universities

Juniors, and 2 Newcastle
Medallists
~~Winners~~ at Eton.

poorly. I said that he had
[illegible] following from Rheumatism.

Austen Jane

Dr. Theophilus Leigh = Rev.d Thomas Leigh
master of Balliol

Rev.d George = Cassandra
Austen
a good scholar

Cassandra Jane
b. 1775
dearly loved & admired by her

Jane

Edward
took name & arms of Knight

Henry
great conversation
turned possessed

Francis GCB
senior admiral of the fleet

Charles
also admiral
dearly beloved by those whom he commanded

Rev.d Austen Leigh
Vicar of Bray.

5 Sons all fellows of their second College at Oxf.d or Cambridge
4 of them were University prizemen
and 2 were Newcastle medallists at Eton

Dr. Theophilus Leigh was master of Balliol for nearly half a century - overflowing with puns & witticisms & sharp retorts

Austen Jane - Pride & Prejudice - Sense & sensibility - Her novels held an extraordinary admiration has been ~~increased~~ increased by the highest estimation of the ~~most~~ discerning & judicious ~~of the~~ the highest critics. ~~Their own~~ an abundant ~~her~~ ability in her family ~~there is no other case of the ability~~

gB Dr. Theophilus Leigh, - - - M.
[F] a good scholar
E had strong common sense & a lively imagination
[B] Henry great conversational power
B Francis GCB senior admiral of the fleet
B Charles, also admiral - dearly beloved by those whom he commanded.
[5 NS] 5 sons of A

An extraordinary admiration of the simple charm of her novels, has been freely
~~the highest~~ expressed by many of the ablest critics

f. 1r

Beaconsfield
June 30 1870

Dear Sir
I fear I can give you but little information about Waller's parentage at present, but if I can find out anything I will let you know.
On his monument, which was erected in 1700, it is stated :-
Patrem Robertum et ex Hampdenâ stirpe matrem habuit —
I have seen the entry of his baptism in the Register at Amersham in wh. parish he was born Mar. 3. 1605.

F. 1v

Perhaps some information might be gathered from that Register Book. But you are most likely to find what you want by writing to the Post's descendant-

Edmund Waller Esqr
Harrington Lodge
Northleach
Gloucestershire

Believe me, dear Sir,
Faithfully yours
R. Barker
Curate of Beaconsfield

Mr Edmond Waller, Author of these
poems was the son of Robert
Waller of Agmondesham in Bucks
by his wife the daughter of
— Hampden of Hampden in that
County, one of the most ancient
families in England & sister to
Col: John Hampden .....
.....

The house at Agmondesham being
old & decayed Mr Waller of whom
we write lived mostly at Beconsfield
where his Mother dwelt in her
widowhood, & often entertained Oliver
Cromwell there during his
usurpation, he being related
to her. But notwithstanding her

F.2V

Relation ℓ the Usurper ℴ Col:
Hampden she was a Royalist in
her Principles ℴ when Oliver
visited her at Beconsfield, she
w^d frankly tell him how his
Pretensions w^d end. The Usurper
used merrily ℓ throw a Napkin
at her in return, saying he w^d
not enter into further disputes with
his Aunt for so he used ℓ call
her, tho' not quite so nearly
related".

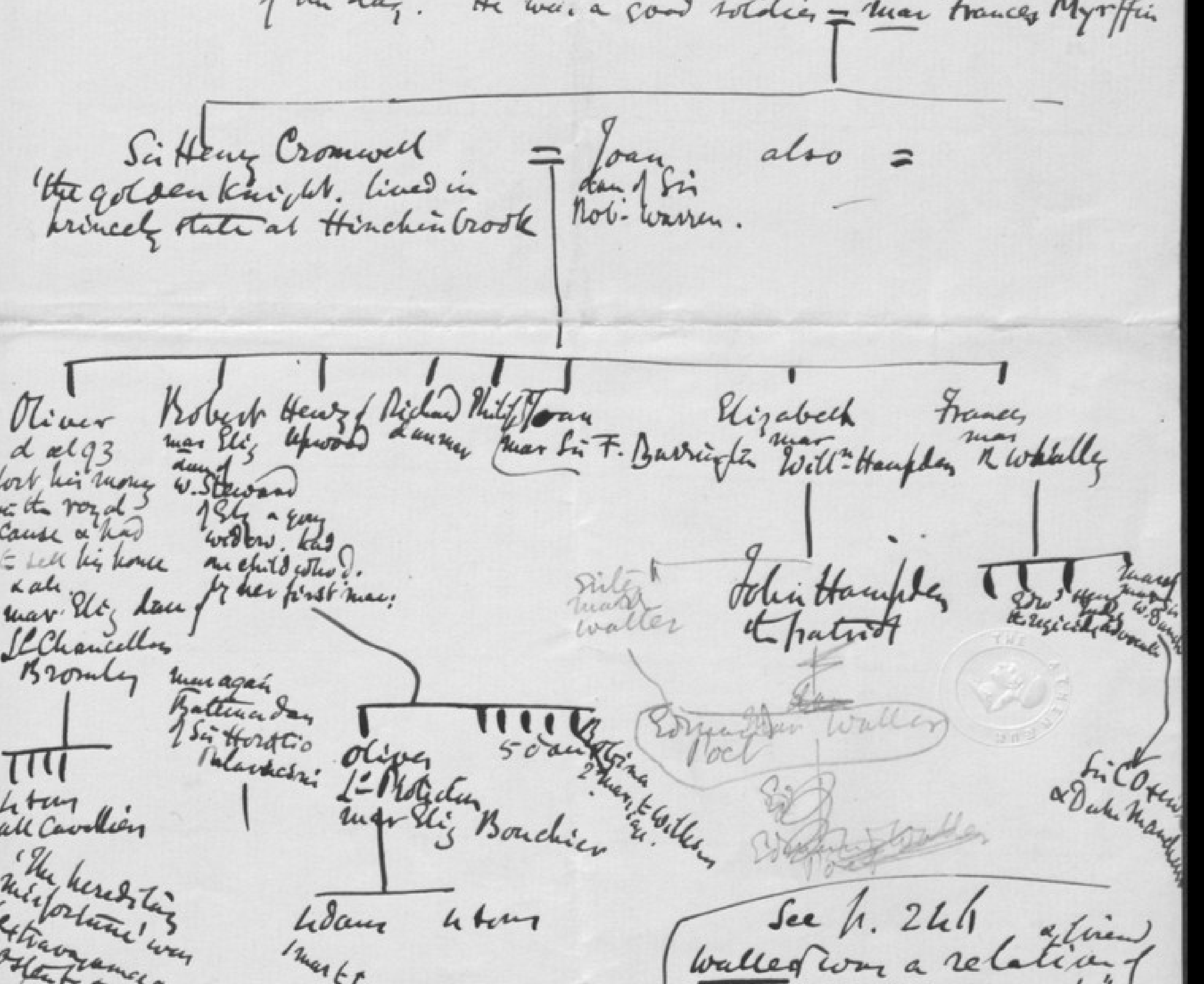
Published in 1729 by
W^m Fenton.

F. 3

Cromwell

from Sir B. Burke's 'Vicissitudes of Families' (1st series), 4th Edition Longman 1860.

Sir Richard Williams a Welshman took the name of Cromwell (at Henry VIII's express instance) from his Uncle Thomas Cromwell Earl of Essex, 'Vicar General of all things Spiritual' who ~~bestowed~~ sold to him ~~[illegible]~~ at a very low cost a very large amount of church lands. He thus became one of the wealthiest men of the day. He was a good soldier = mar Frances Myrffin



Sir Henry Cromwell 'the golden knight.' lived in princely state at Hinchinbrook = Joan dau of Sir Rob. Warren. also =

Oliver d aet 93 lost his money in the royal cause & had to sell his house & [illegible] mar. Eliz dau of Ld Chancellor Bromley

4 sons all Cavaliers

'The hereditary misfortune' 'extravagance & ostentation' p. 30

mar again [illegible] of Sir Horatio Palavicini

Robert mar Eliz dau of W. Steward of Ely a young widow. had one child who d. by her first mar:

Henry of Upwood

Richard Ramsey

Philip

Joan mar Sir F. Barrington

Elizabeth mar Willm Hampden

Frances mar R Whalley

Oliver Ld Protector mar Eliz Bouchier

4 daus 1 mar to Ireton

4 sons

5 daus

Robina 2 mar to Wilkins.

sister mar Waller

John Hampden the patriot

Edmund Waller Poet

Edwd the regicide General

Henry Judge

Mary mar Sir W. Dunch

Sir C. O[illegible] & Duke Manchester

See p. 244 Waller was a relation & a friend of Cromwell who called him Cousin. Noble says he was not a relation but ?

Taylor of Ongar

Hollingbourn
1 Nov 1870

Sir I seem to know you Nos' your Art of Travel which has been useful to me more than once and it is with great delight that I read your Hereditary Genius.. First let me give you a fact or two that you may think worth using.. Your list of the Taylors of Ongar does not exhaust the list.. Jemima Taylor (now Mrs Thos Herbert) was the authoress of some of the pieces published by Jane & Ann Taylor.. She has two sons Revd Thos Herbert Jr & Edward Herbert barrister who are essayists — not first class but of some talent.. Dr Mr Gilbert of Manchester is as described to me "author of lots of works on agricultural chemistry, sewerage &c".. He is another son of Ann Taylor.. A third son James wrote a large pamphlet on

Parly Reforms .. Caroline Gilbert daughter of ann Taylor (Gilbert) & authoress of hymns (evangelical heredity). The Gilberts [illegible] in both sides the father being a leading minister & an author-

Another note is that Bradock Heaton of Cheltenham a poet of talents claims descent from Sir Isaac Newton.-

May not the enormous number of criminal [illegible] of Britain (p 320) be ascribed not only to subnormal talents but to subnormal kinds of the trade [illegible] & making clothes? For metal drawing is said to require such accurate-

May not the large number of half witted negroes (p 329) be ascribed to [illegible] marriages in plantation quarters?

If you wish I will look out some statistics as to the terrible proportion of deaf & dumb children among Slaves & in less degree among Protestants who persist constantly in marriages

Is it not remarkable that the nations producing giants of mind have been great cultivators of body? Take the Greeks specially, then the Germanics who since the establishment of their Universities 600 years ago have stood to the very front ranks.- How much of our power is built on the stamina obtained in the cricketing boating

& of public schools & universities? Contrast France whose strong men were killed off under Napoleon & whose people have neglected robust exercises & have failed to maintain the position they once held..

Such genius results from mechanical inventions going in new fields – take the telescope for instance (did it ever strike you that considering Cycles Brakes difficulties he may have been a greater natural genius than Newton?) – then take the development of the microscope, cheap printing cheap locomotion & a score of things which have as certainly fostered or created new schools of science literature zoology &c as gunpowder led to a new school of war.. I don't whether the Brake did not owe less to 'magnificent & freed' than to the new fields which democracy opened to the minds of statesmen speakers poets & writers.. Democratic Athens surpassed with all these but her commanders were equalled by those of Sparta & Thebes & Macedonia..

I venture to send you these jottings as a return for the great pleasure your book has given me.. If not useful at least they are harmless..

Francis Galton Esq F.R.S. Yours very truly

42 Rutland Gate
London
March 29 1873

Dear Sir

My best thanks for your obliging information. I should be very glad to hear full particulars of the case, which is eminently deserving of being well worked out. — It would be well to ascertain all of the following facts.

age of husband & wife at marriage — how long previously had he been a drunkard — had he

delirium tremens. Was his
constitution obviously injured
by drinking - Under what influences
did he turn tea totaller. Are
his brothers & sisters & parents
healthy - What drove the man
to drink at first. Is there
madness or intemperance in his
family. Have his brothers
healthy children.

How about his wife - is she
in her family healthy - has she
married sisters who have children.

If no cause appears - except the
fact of the man having once been
a drunkard - for the death of his

& children. I should be glad of a description of the temperaments (using the word in its special sense) of the husband & wife. It is certain that some temperaments clash & others agree. & I heartily wish I could find out more than I yet know about these matters.

Once again thanking you much & trusting that you will not think my queries troublesome I remain

Yrs faithfully

Francis Galton

H. Churchman Esq

F.3r

Mr Marshall late of Wareham, now Charlwood Mr Horsham

Question		Answers
1	His age at marriage	40
2	Age of first wife at marriage	25
3	Age of second Wife at marriage	30
4	His age at second marriage	58
5	How many children by first Wife	9 or 10 some I understood, Three alive, Eldest 3 Months
6	How many children by second Wife	3 at Present age 6. 4½ and 3 yrs
7	Had he taken to drinking before marriage if so, how long	commenced at the age of about 16 both sensibly and drinking —
8	Had he delirium tremens	often on the Brinks of that Madness —
9	Was his constitution apparently injured by drinking	Suffers much from Nervous depressions & bey excitable after being Drinking —
10	Under what influence did he turn Teetotaller	Gods Grace in Christ Jesus and the Christian Kindness & Prayers of the Friends of Wareham
11	Are his brothers, Sisters, & Parents healthy	Father died with Dropsy at about 60 Mother & the rest Health generally good
12	What drove him to drink at first	Wishing to appear a very genial and to be called a fine Fellow
13	Is there madness or intemperance in the family	No
14	Have his brothers healthy children	Health generaly I believe good
15	Was his first wife or her parents healthy	Wife suffered from Epilepsy and died with from Softening of the Brain Parents to[illegible] good —
16	Was his second ditto ditto	Wife suffers from the Liver
17	Have they married sisters who have children	Yes
18	What was the husbands temperament	Excitable nervous temperament Strong Drink & Smoking Tobacco
19	What was the temperament of wife No 1	Excitable arising from part of her parents life being Husband Death & Premature hurt of a Husband that caused her trouble and sorrow & restlessness
20	What was the temperament of Wife No 2	Quiet nothing to encounter but the trouble Trial of an Invalid

Remarks

I would to state that I have been enabled to overcome that sin by being led to the Saviour of sinners and by his Mercy and Power to overcome He as enabled me by his will and now that I had not the least power of myself I tried self but self was of no use and to him be all the praise

My Health he wonderfully returned to me and since I have been enabled to endure and not to look the weakness they. I have enjoyed wonderful good Health. When I found a craving for strong drink the means I used was to take boiled Milk

over

Question No 7 repeated —

How long before marriage had he been a drunkard?

Answer Commenced at the age of 16 to love the bit of strong drink and gradually became stronger until I became a confirmed drunkard at the age of about 21 or 22 therefore I was a drunkard about 18 years before the marriage —

Horsham
March 24 1874.

Dear Sir

I have the pleasure to enclose full particulars of the case I wrote about some time ago. The delay has been caused by the doctor, who was unable to answer some questions. At last I found the man's address & have now got it filled up in his own hand writing.

I think it will answer the query you stated in the Fortnightly Review in a different manner from what I expected. I think you said you had been told that the children of reformed drunkards are healthy. I thought this case would prove the contrary to be the rule.

I feel sure that after he had reformed

& become a teetotaller
& his first wife continued
to have stillborn
children.

Should you wish to
know anything further
upon the subject, Mr
Wanstall will be pleased
to furnish all in his
power. He now employs
himself at hawking bibles,
you will see by his

F.S.V

remarks that he has become very religious.

Or I can get a medical opinion upon some points if you wish it from his own doctor.

Remain
Dr Sir
Yours truly
H Buckle

I have inclosed Your letter for you to see the questions asked.

Francis Galton Esq.

f.1r

40 Weymouth Street Portland Place W

March 30 - '70.

My dear Sir

I send you a few rough & slight notes on "Hereditary Genius" I think it most likely they will have, for the most part, been foreshadowed by you, but they come as a token that I have not forgotten our conversation on the subject.

Pray excuse my not having yet returned your very kind call at Weymouth Street. I have been for many weeks very busy at my office and moreover am writing a book.

Should there "notula" prove of the least service, I shall be glad to find a few more of the kind in my wallet.

Have you ever looked into the German genealogies - especially as regards "Lawyers".

and 'Stabsmusik' as we, Majestraties as they called them. I don't know whether the succession of generations in offices indicates hereditary faculty for administration, but the fact is nevertheless curious how it shows how very few Houses really governed as Rome during some hundred years. Drumanns Geschichte Roms &c mit genealogischen Tabellen - at the London Library - is worth your looking into, if you have not already done so.

One reason for sending the notes so late is that for sometime I could not get from the Library your book.

I remain

Very truly Yours

U. B. Donne.

F. 2

* It is not clear to me, and perhaps may be equally disputed to equally close folks, in what relation John Hey Heyrick stood to Kenneth Macaulay. I know both the brothers: but 'son of the above' may mislead. J. Heyrick was also Master of the Plymouth Grammar School. in 1824-30.

1. Miscellaneous Notes.

Kemble. Francis Anne ["Fanny Kemble"] omitted:
Arkwright - Mrs. daughter of Stephen Kemble, was a most
accomplished singer & musician.

Charles. I think 'Tragedian' scarcely the correct word: since he
has perhaps greater in Comedy - though several Tragic-characters
q.v. Jaffier - Romeo &c he played well. 'Actor' wd include T. & C.

Kemble - Sieldons - Henry. an actor and wrote a book on the Art of Gentleman
or some such title. H. Sieldons - son of the "Heiress" Tragic Muse' -
married with Miss Murray, sister of Mrs. Murray, actor and
long Manager of Th. R. Edinburgh. Both brother & sister were
of great merit on the stage. For an account of both - see Lockhart's'
Life of Scott - & 'Ritt's Letters to his Kinsfolk' - [Lockhart's]
published in 1815. 800. -

Knox - Solmund Knox has in some measure trained for the stage by
his uncle Moses [I think] Knox - an admirable mimic &
vocalist: & Charles Knox, only son of Solmund, deserves a niche.

Vandenhoff. G. All his family were dramatical - & 3 - two sons and a
daughter held good positions on the stage - Vandenhoff - père -
was a standing favorite at Dublin, Liverpool, Manchester &c
but he never, though a good actor, took firm root in London.

Brunton. John - father - was a very celebrated actor - & his family with
2 exceptions went on the stage. The Miss Brunton, who appears
with Mrs Sieldons in books & bills of the time, married (Bille
Cuscq) Merry. Louisa - m. the Earl of Craven - another
(2. whose name I think Anne) m. a Capt. Columbine - all
were successful. John Brunton, the son, held a good place
on the London boards, and was father of Elizabeth, who married
Yates, an admirable & most versatile actor, father of the present

F.4

Miscellaneous Notes

Edmund Gosse - dramatic critic, novelist &c -

Literary Men

Edgeworth. omitted - Francis Edgeworth - son (3rd family) of R. L. Edgeworth - a very remarkable man - great poetical and philosophical powers: but he took, for family reasons, to practical farming of the Estate of Edgeworth-town - Ireland. ? county. He is mentioned, but in a very unfair way by Carlyle in his "Life of John Sterling".

Cowper. b^th "began write in maturer life" - "began to publish" would be more correct: since Cowper wrote a good deal of verse while studying law at the Inner Temple - his Juvenilia were published by Mr Cowper in 1824 - and are reprinted in Southey's works of Wm Cowper. The Cowpers were indeed a poetical family through one or two generations - Two volumes of "Verses (or Poems)" "by Persons of Quality" published at Exeter - are at least ascribed by tradition to members of the family - one or two of whom I think. John Cowper - the poet's brother, was of remarkable ability as a scholar.

p. 225. His ballads in the Annual Register, and other fugitive pieces in the Gentleman's Magazine, from 1759

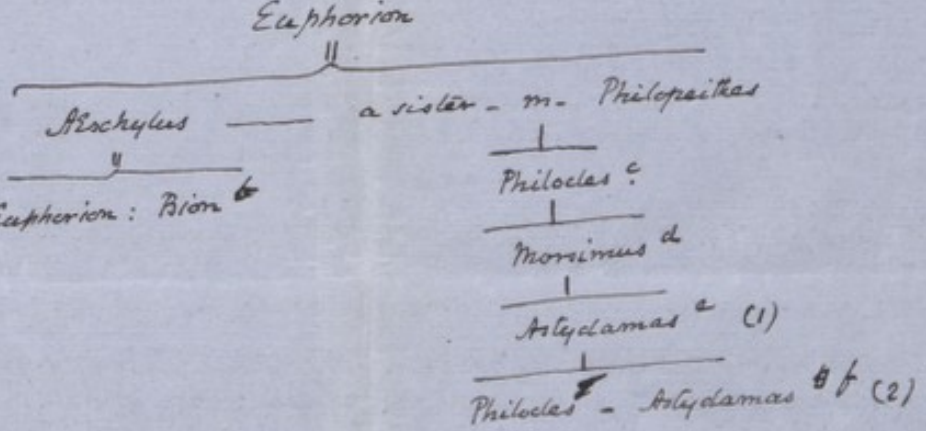
p. 226. "Sophocles — beat Aeschylus in the public games." meaning, I suppose - in the contest for the theatrical prize. But Games is rather ambiguous - & since in 468 B.C. when Sophocles gained his first prize in Tragedy, Aeschylus was 57 years old & Sophocles only 27. They can hardly have boxed or wrestled with each other, it might be as well to alter the phrase.

Cicero - his grandfather & father were men of provincial notoriety - & took an active part in (local) public business -

The genealogies of Roman lawyers and statesmen are very curious as regards "Hereditary Genius" E.G. the Scaevolae.

Æschylus : p. 228:

The hereditary genius of the Æschylean family is even more remarkable than it is stated in "the Appendix to Porter" E.G.



a. gained the prize against Sophocles & Euripides.

b. Tragic poet. Suidas.

c. apparently imitated his uncle's style, which came to be considered as harsh [? archaic] and hence got the nicknames of Ἁλμίων - salt-pickle - and Χολή - Gall. Suidas s.v. Philocles.

d. Morsimus, a tragic poet, is ridiculed in the "Knights" Schol. 401 and the "Peace" of Aristophanes. He seems to have also practised as a physician & oculist. -

e. Astydamas (1). came out as a tragic poet. B.C. 398

f. Astydamas (2), after the Peloponnesian war brought out 240 dramas and gained 15 prizes. He was the first of the Æschylean family who was honoured with a statue in his life time. Diogenes Laert. ii. 5 § 43.

There is some doubt about Aneinias [mis-print in the H.G. p 228 Amoinias] being a brother of Æschylus. but where I first found the doubt, I cannot now recollect.

Sophocles
Iophon a
Sophocles - the younger. b

a Iophon was considered by Aristophanes. "Frogs" - v. , as after the death of his father so the only support of the Attic stage. but he hints that when Iophon has no longer to be with him, whether he will keep up to the mark. He brought out at first many Sophocles to help him, unrepresented Plays of Sophocles, but seems to have written many more than he exhibited.

(1). Ἀνευ Σοφοκλέους ὅ τι ποιεῖ κωφωνίσω.

since

6. The younger Sophocles inherited from his grandfather many such lots of unacted dramas, & brought some of them out: afterwards he gained with his own compositions 12 prizes.

Euripides

According to Suidas. s.v. Euripides had a son and nephew, who were both dramatic poets. but he is thought to have confounded the nephew with the son.

His nephew of the same name brought out several of his uncle's unacted Plays and gained some reputation by his own.

Play-writing appears to have gone with the name if not in the family. E.G

There was a Tragic-poet, Euripides, earlier than his celebrated namesake who exhibited 12 plays, two of which gained the prize. (Suidas - s.v. Εὐριπίδης)

Also a Euripides mentioned by Aristophanes - Ecclesias. vv. 825 - 6 - 9. but only in connexion with a property-tax. But it is not clear that either of these last mentioned Euripideses was related to the author of Medea &c -

Carcinus, dramatic poet, was the father of a dramatic brood: but only one of them was a writer of Tragedies - Xenocles - He gained the prize when Euripides exhibited the Trilogy, of which his 'Troades' made a part. The other sons of Carcinus were choral dancers in his Plays.

22 Prince's Gardens.

Thursday.

Dear Mr. Galton.

We want you to patronise by asking for at the Library a book my Father has just written & concerning which I enclose a little memo.

The book is the Works of Mr. Bookham Frere - my Father's uncle. We have been collecting

by one of my uncles
Wm. Williams Fere –
(who was in the Indian
Civil Service. & has
now lately returned from
Enquiring into the
"Coolie Grievance" in
Demarara.) & they
are preceded by a ~~life~~
Memoir of Wm. H. Fere
written by my Father.

This latter has been a
somewhat difficult task.
for it necessarily embraced

Mr. Frere's Political as
well as Social & literary
life. He was Envoy in
Spain during the Early
part of the Peninsular
War & the Whole blame
of our Earlier Errors
there was thrown on him.
Sir J. Moore had differed
very materially from
him in his views as
the most advisable policy
& only very reluctantly

& with much hesitation
finally acceded to it.

Ultimately the policy
my uncle advocated
was successful under
Wellington & his friends
then urged him to
vindicate himself from
the blame that had
been thrown on him
by the clamour of
the people & the Press
& the Silence of the Govt

(Lord Castlereagh's) F. 31
which having first taken
the side adverse to
Mr. Fere, did not
naturally dare to
confess afterwards
that his views had
been correct —

But Mr. Fere
refused to vindicate
his policy — saying
that he would not
"fight" a dead man
if Sir J. Moore had

lived the case would
have been different.
& he quoted a
Greek Proverb "We
must not speak
Evil of our dead Heros".
& said if the Public
had not believed his
public dishonesties,
they wd not be likely
to believe anything

he might privately say – He was twice afterwards offered a Peerage. & once to go as Ambassador to St. Petersburg, but refused all. feeling that the Govt. he represented ought to have defended him when unjustly accused. & not have

throw the blame on
him then & offered
him a Sop afterwards!

It seems fair that
now he is dead
his Heirs shd be
judicially stated - but
in so doing my Father
wished to avoid
saying anything
that cd in any way
hurt any surviving
relative of the true

men who fell at Comme
or of those who
were of their way
of thinking -

I hope he has
succeeded in
this - but it has
not been an
Easy undertaking -

We do not know
if you are yet

returned to London -
if you are Will
you & Mrs Galton
give my Mother
the pleasure of
coming to see her?
She will be at
home this afternoon
from 3 to 7 o'clock -

We hope you have
good tidings of
the Recorder &
Mrs Gurney. I
should think she
would enjoy seeing
America.

Believe me
with our kind regards
& Mrs Galton & yself
Yours truly M Pease.

29 Landsdown Crescent
Notting Hill W
11 May 74

Dear Sir

At the request of my Son Mr Christopher J Gardner I enclose a cutting from "The China Review" -

I wish you wish to communicate with him - a letter addressed as above will be duly forwarded - My Son has the reputation of being a Chinese Scholar. If any question relating to China should arise in the F.S. - He is very likely to be able to answer it.

Yrs truly
Jno Gardner M.D.

Francis Galton Esq

Heredity Genius in China F.2c

giving his name. The next day he went to the office of the Board dressed as a private individual, and loafed about the entrance to hear what the police and messengers were talking about, but he learned nothing about Mao Yü. He tried again the next day, and at noon he turned into a wine-shop which was hard by, to have a glass of wine and rest himself. There were three or four soldiers in the place drinking with a civilian and after a while one of them remarked. "If Mao Yü does not lose his head he will be banished."

"Yes," replied another "and if the judge had not been so busy these last few days it would have been all over with him now."

"To-morrow or the next day will settle it," said the civilian, "and with your help, gentlemen, I will do for him. I will return you substantial thanks after the trial."

Lien Ching then got up, and after whispering to his servant, who had followed him, to keep an eye on these men, went as fast as he could to the office of the Head Censor named Wang, and struck the drum suspended before the gate in token that he had an important petition to present. The porter came out, and Lien Ching giving his name bade him tell his master that he wished to see him on most important business. The Censor came out to greet his petitioner, but Lien Ching stopped all ceremonious salutations and said "Mao Yü has been entrapped and falsely accused. I happened to go into a wine shop just now, where I met his accusers who were conspiring against him. They are still there, so for the sake of your colleague send and have them arrested at once."

Wang thereupon told twenty of his constables to go with Lien Ching and arrest these men. They found them still at the wine shop, and in spite of their remonstrances bound them and carried them off to the Judge's Court. Lien Ching recounted to the Judge how he had overheard them plotting against Mao Yü, and orders were at once issued that they should be tortured in order to extort a confession from them. On this the soldiers admitted that they had personally no grudge against Mao Yü, but that Hu Lai had suborned them to lay their complaint; Hu Lai knowing that concealment was now of no use, confessed the truth and admitted that he had brought this accusation out of revenge because Mao Yü had intended to have had him punished for his misdeeds some years ago. The Judge's examination and questions satisfied the Court that this was really the case, and that there were no grounds for the accusation against the Censor, and Hu Lai was therefore found guilty of Mao Yü's offences in addition to his own,* and was taken out and beheaded. As for the soldiers they were sent back to the Military Authorities for punishment, and the Emperor was memorialised by the Judge to restore Mao Yü to his office, as guiltless.

When the Emperor's warrant of release was brought to the prison, Mao Yü was let go in ignorance how his innocence had been brought to light. He returned to his house, where his wife and daughter and Chao Hua greeted him with the greatest joy. The next day all his colleagues, the Censors came to congratulate him. Censor Wang asked him if he knew who it was that had discovered the plot against him.

"I only know" replied Mao Yü "that the Judge memorialised the throne, being convinced that I was guiltless."

"I see you don't know your preserver, Sir," answered Wang. He then recounted in detail how Lien Ching had discovered the conspiracy and reported it to him, and how the Judge had tried the case, and punished the guilty and released the innocent.

Mao Yü thanked him saying "If it had not been for you and Lien Ching, I should have been done to death by Hu Lai."

* This is the law in China.

After his visitors had gone, he betook himself to Lien Ching's house to return thanks, the latter having lodgings in the city. He did not find him at home, so he left his card with this message, "Please accept my compliments. I should have died in prison, had I not been released by your exertions. I will come again to-morrow and return thanks in person."

Mao Yü then returned home and told his family the story of his release. They all sang Lien Ching's praises, and Chao Hua asked what part of the Empire Lien Ching came from; and what Mao Yü knew about him.

"He is a native of Hung Chien," replied her father in law, "a village near my own place. He is but 16, but has great abilities, for he never even competed at any examination before that of M.A., but got admitted for that by an Act of Grace and passed first. He has now taken his doctor's degree and is senior scholar, and a great favourite of the Emperor and Empress. His Majesty thinking that he must feel lonely in his lodgings offered to give him one of the young ladies of the palace to wife, but he declined on the plea that he was already betrothed. I hear that his intended's family name in the district is Hsiu and as your family is the only one of that name in the district I suppose one of your relations will have the luck to be his wife."

"When I was a child" remarked Chao Hua "I never used to go out, and therefore I am unable to tell you, which of the many ladies in our clan it is."

"I wonder" said Mao Yü, "Whether I am the cause of Lien Ching's success. I gave his father a piece of ground as a family cemetery, and the supernatural influence from this land may well bring this luck."

Chao Hua was now thoroughly convinced that Lien Ching was really her betrothed, but did not venture to say so. She merely remarked "Your kindness has received its due reward, for Lien Ching has saved you." She then retired to her own room to consult Chiu E.

(*To be continued*)

HEREDITARY GENIUS IN CHINA.

On page 334 of Galton's work, entitled "Hereditary Genius" occur the following words:—"I was anxious to obtain facts bearing on heredity from China. Are the Chuang-yuans ever related together?" Being deeply interested in Mr. Galton's theories, and perhaps a little infected with the spirit of "Amateur Sinology," so wittily and good humouredly chaffed by Dr. Eitel, I have collected the following facts on the subject. I may first note that at the great examinations the man who passes first is entitled Chuang yuan, the man who passes second Pang-yen, the man who passes third Tan-hwa.

I subjoin a list of the Chwang-yuan Pang-yen and Tan-hwa, during the present dynasty or from 1645 to 1871. I have added the provinces to which the distinguished scholars who gained the above named titles belonged, and have then gone through the provinces and put in juxtaposition those of the same family name.

The list shews whom I have ascertained to be related together, those I have ascertained to be no relatives, and those about whom I do not know whether they were inter-related or not, and about whom I should be much obliged for information.

Lastly, I applied to the Viceroy Jui-lin for aid, and he most courteously sent me the very interesting letter which will be found at the end of this paper.

List of the Chuang Yuan, Pang-yen and Tan-hwa, i.e. Three first Scholars of the Chinese Empire, at the great examinations during the present dynasty.

Chinese Year.	*English Year.*	*Name.*	*Place.*	*Province.*
Shun-chi 2	1645	Foo-i-chien	1st	Shantung
		Su-tsan-tsoo	2nd	Chi-li
		Si-hsi-tang	3rd	Peking
,, 4	1647	Lu-kung	1st	Kiang-nan
		Ching-fang-chao	2nd	,,
		Chiang-chao	3rd	,,
,, 5	1648	Liu-tze-chang	1st	Hu-quang
		Hung-po-lung	2nd	,,
		Chang-tien-chi	3rd	Chékiang
,, 9	1652	Tso-chung-i	1st	Kiang-nan
		Chang-yung-chi	2nd	Peking
		Shên-chien	3rd	Kiang-nan
,, 12	1656	Shih-ta-chen	1st	Chékiang
		Tai-yu-lun	2nd	Chi-li
		Ch'in-pin	3rd	Kiang-nan
,, 15	1659	Hsun-chêng-ngen	1st	,,
		Hsun-i-chih	2nd	,,
		Wu-kwo-fing	3rd	,,
,, 16	1660	Hsu-yuan-wên	1st	,,
		Hwa-i-chiang	2nd	,,
		Yeh-fang-chi	3rd	,,
,, 18	1662	Ma-shih-chun	1st	,,
		Li-hsien-kêu	2nd	(Not known)
		Wu-kwang	3rd	Chékiang
Kang-hi 6	1668	Mo-tung	1st	Kiang-nan
		Chang-yu-tsai	2nd	,,
		Tung-na	3rd	Shantung
,, 9	1671	Tsai-chi-tsun	1st	Chékiang
		Hsun-tsai-fêng	2nd	,,
		Hsu-chien-hsio	3rd	Kiang-nan
,, 12	1674	Han-yen	1st	,,
		Wang-tu-hsin	2nd	,,
		Hsu-ping-i	3rd	,,
,, 16	1678	Pêng-tung-chin	1st	,,
		Hu-wei-sze	2nd	Chékiang
		Hung-shu-yuan	3rd	Chi-li
,, 18	1680	Kwei-yun-shu	1st	Kiang-nan
		Hsun-cho	2nd	,,
		Mao-tien-ching	3rd	Chékiang
,, 21	1683	Ts'ai-yuan	1st	,,
		Wu-han	2nd	,,
		Peng-ling-chiu	nrd	Kiang-nan
,, 24	1686	Su-kêng-tang	1st	,,
		Chên-yuan-lung	2nd	Chékiang
		Hwang-mêng-chi	3rd	Kiang-nan
,, 27	1689	Shên-ting-wên	1st	Chékiang
		Cha-sze-han	2nd	,,
		Chang-yü-hsien	3rd	Kiang-nan
,, 30	1692	Tai-yu-chi	1st	,,
		Wu-ping	2nd	,,
		Hwang-hsu-ling	3rd	Peking
,, 33	1695	Hu-jen-hsing	1st	Kiang-nan
		Ku-tu-hu	2nd	,,
		Ku-yue-hsi	3rd	Chékiang

Chinese Year.	*English Year.*	*Name.*	*Place.*	*Province.*
Kang-hi 36	1698	Li-pan	1st	Kiang-nan
		Yen-yu-shun	2nd	,,
		Chiang-shên-yin	3rd	Chékiang
,, 39	1701	Wang-tse	1st	Kiang-nan
		Li-yu	2nd	,,
		Wang-lin	3rd	Honan
,, 42	1704	Wang-shih-tan	1st	Kiang-nan
		Chao-chin	2nd	Fokien
		Chien-ming-shih	3rd	Kiang-nan
,, 45	1707	Wang-ching-yu	1st	,,
		Lu-pao-chung	2nd	Chékiang
		Chia-kwo-hwui	3rd	Kiang-nan
,, 48	1710	Chao-hung-ning	1st	,,
		Tai-ming-shih	2nd	,,
		Mo-yuan	3rd	,,
,, 51	1713	Wang-shih-shen	1st	,,
		Shên-shu-pen	2nd	Chékiang
		Hsu-pao-kwang	3rd	Kiang-nan
,, 52	1714	Wang-ching-ming	1st	,,
		Jen-lan-chi	2nd	,,
		Wei-ting-chen	3rd	Chi-li
,, 54	1716	Hsu-tao-hsin	1st	Kiang-nan
		Mo-li-tien	2nd	,,
		Foo-wang-li	3rd	Chékiang
,, 57	1719	Wang-ying-chien	1st	Kiang-nan
		Chang-ting-hsia	2nd	,,
		Shen-yang-yu	3rd	Chékiang
,, 60	1722	Teng-chung-ngo	1st	Shantung
		Wu-wen-wang	2nd	Fokien
		Cheng-yuan-chang	3rd	Honan
Yung-cheng 1	1723	Yü-chên	1st	Kiang-nan
		Tai-hau	2nd	,,
		Yang-ping	3rd	Hu-quang
,, 2	1724	Chên-tê-hwa	1st	Chi-li
		Wang-an-kuo	2nd	Kiang.nan
		Wang.té-yung	3rd	Chékiang
,, 5	1727	Pêng-chi feng	1st	Kiang-nan
		Pêng-chi-yuan	2nd	Fokien
		Ma-yun-chi	3rd	Kiang-nan
,, 8	1730	Chow-su	1st	Chékiang
		Shên-chang tsyu	2nd	,,
		Liang-hai-chêng	3rd	,,
,, 11	1733	Chên-yen	1st	Kiang-nan
		Tien-chi-ching	2nd	Peking
		Shen-wen-kao	3rd	Chékiang
Kien-lung 2	1737	Yü-min-chung	1st	Kiang-nan
		Lin-chi-chun	2nd	Fokien
		Yên-twan-shu	3rd	Kiang-nan
,, 3	1738	Chin-tê-ying	1st	Chékiang
		Hwang-hsun-mo	2nd	Shantung
		Ch'in-wei-tien	3rd	Kiang-nan
,, 4	1739	Chwang-yu-kung	1st	Kwang-tung
		Tu-fêng-chen	2nd	Kiang hsi
		Ch'in-yun-shun	3rd	Kiang nan
,, 7	1742	Chin-shêng	1st	Chékiang
		Yung-hwan-chin	2nd	Kiang-nan
		Tong-ta-shêng	3rd	,,
,, 10	1745	Chin-wei-cheng	1st	,,
		Chwang-tsun-tien	2nd	,,
		Wang-chi-hwa	3rd	Chékiang

Chinese Year.	*English Year.*	*Name.*	*Place.*	*Province.*
Kien-lung 13.....	1748	Siang-koo-chi.....	1st	Chékiang
		Ch'en-nan	2nd	,,
		Wang-ting-tien.....	3rd	Kiang-nan
,, 16.....	1751	Wu-hung	1st	Chékiang
		Yao-hsiao-chu	2nd	Kiang-hsi
		Chow-li.....	3rd	Chékiang
,, 17.....	1752	Ch'in-ta-sze	1st	Kiang-nan
		Fan-yü-shih	2nd	,,
		Lu-wen-shao	3rd	Chékiang
,, 19..	1754	Chwang-pei-yin	1st	Kiang-nan
		Wang-ming-shêng.....	2nd	,,
		Ni-chën-kwan.....	3rd	Chékiang
,, 22.....	1757	Tsai-i-shih.....	1st	,,
		Mei-li-pên.....	2nd	Kiang-nan
		Tso-li-hiao	3rd	,,
,, 25.....	1760	Pi-yuan.....	1st	,,
		Chu-suy-kwan	2nd	Chékiang
		Wang-wën-chi.....	3rd	Kiang-nan
,, 26.....	1761	Wang-chi	1st	Shën-hsi
		Hu-kao-wang.....	2nd	Chékiang
		Chao-i	3rd	Kiang-nan
,, 28.....	1763	Chin-ta-chën.....	1st	,,
		Shên-tsu	2nd	Chékiang
		Wei-chien-hêng	3rd	Kiang-nan
,, 31.....	1766	Chang-shu-hsun	1st	,,
		Yao-î.....	2nd	Kiang-hsi
		Liu-yo-yung.....	3rd	Kiang-nan
,, 34.....	1769	Chên-tsu-chi	1st	,,
		Hsu-tien-chu.....	2nd	Chékiang
		Chên-shih-lung.....	3rd	,,
,, 36.....	1771	Hwang-chien.....	1st	Kiang-nan
		Wang-tsêng	2nd	Chékiang
		Fan-tsung	3rd	,,
,, 37.....	1772	Chin-pang	1st	Kiang-nan
		Hsun-shên-tung.....	2nd	Chékiang
		Yü-ta-yu.....	3rd	Peking
,, 40.....	1776	Wu-hsi-ling	1st	Kiang-nan
		Wang-pien.....	2nd	Shantung
		Shên-ching-chao	3rd	Kiang-nan
,, 43.....	1779	Tsai-chin-hêng.....	1st	,,
		Tsai-ting-hêng	2nd	Chékiang
		Hsun-hsi-tan.....	3rd	,,
,, 45.....	1781	Wang-joo-yang.....	1st	,,
		Chêng-chang-che.....	2nd	Kiang-nan
		Chiang-tê-hang.....	3rd	,,
,, 46.....	1782	Chien-chi	1st	,,
		Chên-wang-ching.....	2nd	Chékiang
		Wang-hsi-chin.....	3rd	Kiang-soo
,, 49.....	1785	Yü-fên.....	1st	Chékiang
		Shao-yu-ching.....	2nd	Chi-li
		Shao-ying.....	3rd	Chékiang
,, 52.....	1788	Shih-chi-kwang	1st	,,
		Hsun-hsing-yen.....	2nd	Kiang-nan
		Chu-li.....	3rd	,,
,, 54.....	1790	Hu-chang-lin	1st	,,
		Wang-ting-chën.....	2nd	,,
		Liu-fêng-kao.....	3rd	Kiang-hsi
,, 55	1791	Shih-yun-yu.....	1st	Kiang-nan
		Hung-liang.....	2nd	,,
		Wang-tsung-chên.....	3rd	,,

Chinese Year.	*English Year.*	*Name.*	*Place.*	*Province.*
Kien-lung 58.....	1794	Pan-shih-ngên	1st	Kiang-nan
		Chên-yun	2nd	Chi-li
		Chen-hsi-tseng	3rd	Kiang-hsi
,, 60.....	1796	Wang-i-han.....	1st	Chékiang
		Mo-ching.....	2nd	,,
		Pan-shih	3rd	Kiang-soo
Kia-ching 1.....	1797	Chao-wên-chieh	1st	An-hui
		Wang-shou-ho.....	2nd	Kiang-soo
		Shai-chên-yung	3rd	Hu-pei
,, 4.....	1800	Yao-wên-tien.....	1st	Chekiang
		Soo-chao-teng.....	2nd	Shantung
		Wang-yin-chi	3rd	Kiang-soo
,, 6.....	1802	Ku-kao	1st	,,
		Lin-pin-sze.....	2nd	Hu-pei
		Tso-chia hsi.....	3rd	Kiang-hsi
,, 7.....	1803	Wu-ting-sheng	1st	Kiang-soo
		Li-tsun-fang.....	2nd	Kiang-hsi
		Chu-sze-yun	3rd	Kiang-soo
,, 10.....	1806	Pêng-chin	1st	Hunan
		Hou-hao.....	2nd	Kiang-soo
		Ho-ling-han	3rd	Hunan
,, 13.....	1809	Wu-hsin-chung.....	1st	Kiang-soo
		Hsieh-chieh-shu.....	2nd	Kiang-hsi
		Shih-yung	3rd	Hunan
,, 14.....	1810	Hung-yung.....	1st	An-hui
		Chang-wo-sung.....	2nd	Fokien
		Chang-wo-sung.....	3rd	Kwang-tung
,, 16.....	1812	Chiang.li-chin	1st	Hu-pei
		Hwang-yu-hao	2nd	Kiang-soo
		Wu-ting-chên.....	3rd	,,
,, 19.....	1815	Lung-joo-yen	1st	An-hui
		Chuh-chin-fan	2nd	Honan
		Wu-chang-hwa	3rd	Kiang-soo
,, 22.....	1818	Wu-chi-chin.....	1st	Honan
		Lin-tai-fêng.....	2nd	An-hui
		Wu-ching-pêng.....	3rd	Chékiang
,, 24.....	1820	Chên-kan.....	1st	Hu-pei
		Yang-chin-wan.....	2nd	Chékiang
		Hu-ta-yuan.....	3rd	Hunan
,, 25.....	1821	Chêng-chi-chang.....	1st	Kwang-hsi
		Hou-wai-pu.....	2nd	Chékiang
		Chên-luan.....	3rd	Hu-pei
Tao-kwang 2.....	1822	Tai-lan-fen	1st	An-hui
		Chêng-pin-tien	2nd	Kiang-hsi
		Lo-wên-ching.....	3rd	Kwang-tung
,, 3.....	1823	Lin-shao-tang	1st	,,
		Wang-kwang-yin.....	2nd	Kiang-soo
		Chow-kai-chi.....	3rd	,,
,, 6.....	1826	Chu-chang-i.....	1st	Chékiang
		Chia-chêng.....	2nd	Shantung
		Shai-fang-wei.....	3rd	Kiang-hsi
,, 9...	1829	Li-chen-chun	1st	An-hui
		Chien-fu-shang.....	2nd	Chékiang
		Chu-lan	3rd	,,
,, 12.....	1832	Wu-chung-chiu.....	1st	Kiang-soo
		Chü-fêng-piao	2nd	Chékiang
		Li-chi-chang	3rd	Kiang-soo
,, 13.....	1833	Wang-ming-hsiang.....	1st	Kiang-hsi
		Tsao-hin-tai.....	2nd	,,
		Chiang-yuan	3rd	Hu-pei

Chinese Year.	*English Year.*	*Name.*	*Place.*	*Province.*
Tao-kwang 15.....	1835	Lin-tê.....	1st	Kiang-hsi
		Tsao-luan-kwei.....	2nd	,,
		Chao-chin-fêng.....	3rd	Shan-hsi
,, 16.....	1836	Lin-ming-nien.....	1st	Fo-kien
		Ho-kwang-ying.....	2nd	,,
		Soo-ching-neng.....	3rd	Shang-tung
,, 18.....	1838	Niu-fu-pao.....	1st	Chê-kiang
		Chin-kwo-chun.....	2nd	Hu-pei
		Chiang-kwo-lin	3rd	Sze-chuan
,, 20.....	1840	Li-chêng-hui.....	1st	Kiang-soo
		Feng-kwei-fên.....	2nd	Chê-kiang
		Chang-pu-kwei.....	3rd	,,
,, 21.....	1841	Sung chi-jui.....	1st	Kwang-hsi
		Kung-pao-lien.....	2nd	Peking
		Wu-chiu-yu,.....	3rd	Kiang-hsi
,, 24.....	1844	Hsun-yu-kwei.....	1st	Shang-tung
		Chow-hsio-chin	2nd	Ché-kiang
		Fêng-pei-yuan	3rd	,,
,, 25.....	1845	Hsiao-ching-chung	1st	Hu-nan
		Chin-tsung-ching.....	2nd	Ché-kiang
		Wu-fou-min.....	3rd	,,
,, 27.....	1847	Chang-chi-wang.....	1st	Chi-li
		Yuan-ching-mo	2nd	Wanping
		Pan-chung-lu	3rd	Kiang-soo
,, 30.....	1850	Lu-ts'ang-chiang.....	1st	,,
		Hsu-chi-kwang	2nd	Kwang-tung
		Hsieh-tsêng.....	3rd	Kiang-soo
Hien-fêng 2.....	1852	Chang-chun	1st	Che-kiang
		Yang-sze-hsun	2nd	Kiang-soo
		Pan-tsoo-yen.....	3rd	Wu-hien
,, 3.....	1853	Hsun-chien.....	1st	Shang-tung
		Wu-feng-tsao.....	2nd	Ché-kiang
		Lu-chao-juy	3rd	An-hui
,, 6.....	1856	Hung-tung-yo	1st	Chê-kiang
		Hsun-yü-shih.....	2nd	Shang-tung
		Hung-chang-yu.....	3rd	Chê-kiang
,, 9.....	1859	Hsun-chia-nai.....	1st	An-hui
		Hsun-nien-tsoo	2nd	Chê-kiang
		Li-wen-tien	3rd	Kwang-tung
,, 10.....	1860	Chung-chin-shêng.....	1st	Chê-kiang
		Lin-ping-nien	2nd	Kwang-tung
		Ngo-yang-pao-ki.....	3rd	Hu-pei
Tung-chi 1.....	1862	Hsü-pu	1st	Kiang-soo
		Ho-chin-show	2nd	Hu-pei
		Wên-chang-lun.....	3rd	Shang-tung
,, 2.....	1863	Hung-chiang-yuan.....	1st	Kiang-soo
		Kung-chên-chun	2nd	Hu-nan
		Chang-chi-tung.....	3rd	Chi-li
,, 4.....	1865	Tsung-i.....	1st	Mongolian
		Yu-chien-chang.....	2nd	Kwang-hsi
		Yang-chi.....	3rd	Tartar
,, 7.....	1868	Hung-chun.....	1st	Kiang-soo
		Hwang-tze-yuan	2nd	Hu-nan
		Wang-wen-tsai..... ...	3rd	Shan-hsi
,, 10.....	1871	Liang-yao-shu	1st	Kwang-tung
		Kao-yo-sung.....	2nd	Shên-hsi
		Yu-kuen.....	3rd	Ché-kiang

Including the year 1871, we have the following to work upon.

Province.	*Chwang-yuan.*	*Pang-yen.*	*Tan-hwa.*	*Total.*
Shantung, ...	4	5	3	12
Chili, ...	2	4	3	9
Peking, ...	...	3	3	6
Kiangnan, ...	39	25	29	93
Huquang, ...	5	6	8	19
Chêkiang, ...	19	26	25	70
Unknown, ...	...	1	...	1
Honan, ...	1	1	2	4
Fokien, ...	1	6	...	7
Kianghsi, ...	3	9	5	17
Shenhsi, ...	1	1	...	2
Kiangsoo, ...	10	5	10	25
Anhui, ...	6	1	1	8
Kwangtung, .	3	2	3	8
Kwanghsi, ...	2	1	...	3
Shanhsi, ...	...	...	2	2
Szechuan, ...	...	...	1	1
Wuping, ...	...	1	...	1
Wuhsien, ...	...	...	1	1
Mongol, ...	1	...	...	1
Tartar, ...	...	1	...	1
Total, ...	97	97	97	291

Of the successful candidates from Shantung we find surnames that only occur once. Hence there could be no paternal relationship between them and they can consequently be dismissed from our enquiry. There are three men named Hsün. One was Chwang-yuan in 1844, one Chwang-yuan in 1853, and one Pang-yen in 1856. I have discovered that the Chwang-yuan in 1844 was brother to the Pang-yen in 1856, and am enquiring whether the Chwang-yuan of 1853 was also a relative.

One name Soo 蘇 occurs as Pang-yen 1800; and as Tan-hwa 1836. I am enquiring if they are relatives.

Of the Chili successful candidates from Peking, 5 names occur only once. 2 names occur twice.

Chen 陳 occurs as Chwang-yuan 1724; Pang-yen 1794. I am enquiring if they were relatives.

Chang 張 occurs as Chwang-yuan 1847; Tan-hwa 1863. The two Chang were brothers.

Of the 6 Peking successful candidates there are 6 surnames only occurring once, and consequently dismissed.

Of Kiangnan successful candidates there are 24 surnames only occurring once, and hence to be dismissed.

Tso 鄒 occurs twice: Chwang-yuan 1652; Tan-hwa 1757. I am enquiring if they were relatives.

Hsün 孫 occurs as Chwang-yuan 1859; Pang-yen 1659, 1680, 1788. I am enquiring, if any relationship existed between these four men.

Hsü 徐 occurs as Chwang-yuan 1660, 1716; Tan-hwa 1674, 1671, 1713. The Chwang-yuan of 1660 was brother to Tan-hwa 1671 and brother to Tan-hwa 1674. I am enquiring, if any further relationship existed between these five men.

Ma 馬 occurs as Chwang-yaun 1662; Tan-hwa 1727. I am enquiring.

Mo 繆 occurs a Chwang-yuan 1668; Pang-yen 1716; Tan-hwa 1710. I am enquiring, but the name Mo is so rare that I feel sure there is some relationship.

Pêng 彭 occurs as Chwang-yuan 1878, 1727; Tan-hwa 1683. The Chwang-yuan of 1678 is brother to Tan-hwa 1683, and father of the Chwang-yuan of 1727.

Tai 戴 occurs as Chwang-yuan 1692; Pang-yen 1710, 1723.

Hu 胡 occurs as Chwang-yuan 1695, 1890.

Li 李 occurs as Chwang-yuan 1698; Pang-yen 1701.

Wang 汪 occurs as Chwang-yuan 1701, 1719. Pang-yen 1790; Tan-hwa 1748. The Tan-hwa 1748 is brother to Pang-yen of 1790.

Wang 王 occurs as Chwang yuan 1704, 1707, 1713, 174; Pang yen 1574, 1724, 1754; Tan hwa 1760, 1791.

Chao 趙 occurs as Chwang yuan 1710; Tan hwa 1761.

Yu 于 occurs as Chwang yuan 1723, 1737.

Chien 錢 occurs as Chwang yuan 1745, 1783; Tan hwa 1704.

Ch'in 秦 occurs as Chwang yuan 1752, 1763, Brothers; Tan hwa 1656, 1738, 1739, Chwang yuan of 1752 and 1763, brothers.

F.6r

1 Chwang yuan whose paternal cousin was Pang yen.

17 men inter-related. 2 of same name not related, leaving 145 persons who may or may not be related.

Of these 145 again I find many had distinguished relations. Vide letter of Viceroy Jui-lin below.

Now it is possible that at least as many maternal as paternal relationships existed, and if those theorists are to be trusted who think that genius is more apt to descend from the mother than the father there are probably more persons maternally than paternally related. I conclude this paper with a translation of a letter on the subject from Jui-lin, Viceroy of the Two Kwang and Senior Guardian of the Throne. It runs as follows:—

"I have to acknowledge receipt of your note informing me that you wish to make enquiries with regard to hereditary genius in all countries, and you forward me a list of persons belonging to the same province who have the same surnames, and have distinguished themselves by gaining the first places in the great examinations; and you ask me to find out whether any relationship existed between these persons either of parentage, grand-parentage, or brotherhood &c. I beg to congratulate you on having undertaken such a study, and in reply would beg to inform you that during the present dynasty (more than 200 years) there are innumerable cases of great grand-fathers, grand-fathers, fathers, sons, brothers, maternal and paternal uncles, all being successful candidates at the higher examinations. But your letter confines itself to asking whether there is the relationship of father and son or brotherhood between the men who gained the first three places during the period referred to.

I only know for certain that the Chwang yuan of 1660, Hsu yuan wên, had an elder brother and a younger brother who were both Tan-hwa in the reign of Kanghi. Their names were Hsu Chien-hsu and Hsu Ping-i (1671 and 1674). Again, Wang nung-hsu, who was Pang Yen in 1674, had two elder brothers, Wang Hsieh-long and Wang Chin-ling, who both attained the degree of Han-lin. Chen Yuan-lung who was Pang yen in 1686 had three sons Chen Pung-chi, Chên Shih-kwan and Chen Shih-jen, who were all Han lin.

"Of Tsai chin-hêng, Chwang yuan in 1779, the father, Tsai ti yuan, and paternal uncle Tsai chun yuan were both Han lin.

Of Wang tsung chen, Tan hwa in 1791, the father, Wang i shu, was a Han lin. All the above being men of genius and well known I am able to give the above particulars about them; but with regard to other relationships I can't at the moment recall any. But the names of all and their family are recorded on tablets at the office of the Imperial astronomers at Peking and it is impossible to obtain details in the outer provinces; and again it is very difficult to get a sight of family registers where such facts as you require would be noted. Consequently I can only forward you the instances set down in my present letter &c., &c."

CHA[illegible] GARDNER.

Christopher J. Gardner
Vice Consul Canton

Chwang 莊 occurs as Chwang yuan 1654; Pang yen 1745.

Hwang 黃 occurs as Chwang yuan 1771; Tan hwa 1686.

Wu 吳 occurs as Chwang yuan 1776; Pang yen 1692; Tan hwa 1659.

Yen 任 occurs as Pang yen 1714; Tan hwa 1737.

I am making enquiries about the preceding 13 names.

Of Chè kiang there are 24 names only occurring once which band can be dismissed. Enquiries have to be made regarding the following 13 names:—

Shih 史 occurs as Chwang yuan 1656, 1788.

Tsai 蔡 occurs as Chwang yuan 1671, 1683, 1757; Pang yen 1779.

Shên 沈 occurs as Chwang yuan 1689; Pang yen 1713, 1730, 1763; Tan hwa 1719, 1776.

Chao 周 occurs as Chwang yuan 1730; Pang yen 1844; Tan hwa 1751.

Ch'in 金 occurs as Chwang yuen 1738, 1742; Tan hwa 1846.

Liang 梁 occurs as Chwang yuan 1748; Tan hwa 1730.

Wu 吳 occurs as Chwang yuan 1751; Pang yen 1683, cousins of some sort, 1853; Tan hwa 1662, 1818, 1845.

Wang 汪 occurs as Chwang yuan 1781; Tan hwa 1724.

Wang 王 occurs as Pang yen 1771; Chwang yuan 1696; Tan hwa 1745.

Chu 朱 occurs as Chwang yuan 1826; Pang yen 1832; Tan hwa 1829.

Hsün 孫 occurs as Pang yen 1671, 1772, 1859; Tan hwa 1779.

Hu 胡 occurs as Pang yen 1678, 1761.

Chén 陳 occurs as Pang yen 1686, 1748, 1782; Tan hwa 1769.

Unknown 1 name, Honan 4 names, and Fokien 6 names, only occur once and can be dismissed.

Of Fokien the name Lin occurs twice.

Lin 林 Chwang yuan 1836; Pang yen 1737.

Of Kiang-hsi successful candidates 11 names only occur once and can be dismissed from the enquiry.

Wang 汪 occurs as Chwang yuan 1833; Pang yen 1797.

Liu 劉 occurs as Chwang yuan 1835; Tan hwa 1790,

Tsao 曹 occurs as Pang yen 1833; 1835.

Of Shen hsi there are two names only occurring once.

Of Kiangsoo there are 14 names only occurring once and so to be dismissed.

Wu 吳 Chwang yuan 1803, 1809, 1832; Tan hwa 1812.

Of Tan hwa of 1812 is brother of the Chwang yuan of 1803.

Li 李 Chwang yuan 1840; Tan hwa 1832.

Hsu 徐 Chwang yuan 1862; Pang yen 1806.

Wan 王 Pang yen 1823; Tan hwa 1800.

Of Anhui there are 8 names only occuring once. Of Kwangtung there are 5 names occurring once. And one name, Liu 劉, occurs as Chwang yuan 1823; Pang yen 1860. These I know not to be relatives.

Of Kwang-hsi 3 names only occur once.

Of Shan-hsi	2	,,	,,
Szechuan	1	,,	,,
Wanping	1	,,	,,
Mongol	1	,,	,,
Tartar	1	,,	,,

Of Huquang 18 names only occur once.

Liu 劉 occurs as Chwang yuan 1648; Pang yen 1802.

Out of 291 men say at least of the 1st class, and with no means of ascertaining maternal relationships, we find 147 names occurring once and consequently not paternally related.

We find 4 Chwang yuan whose son was a Chwang yuan, and brother a Tan hwa.

1 Chwang yuan whose brother was a Chwang yuan.

3 Chwang yuan whose brothers were Tan hwa, one of whom had two brothers Tan hwa.

1 Pang yen whose brother was a Tan hwa.

F. 1r

December 4th 1868.

Dear Sir,

I return you interesting genealogical tree of the Anderssen - Gregory - Alison family; with much regret that I cannot aid your researches -

My father, Dr. Olinthus Gilbert Gregory, was the son of a Robert Gregory, a small Yeoman in Huntingdonshire.

To Francis Galton Esq.

My father was not aware of
any relationship with the
East Scotch family, although
there may probably be some
tie, even a remote one.
His belief was that his
ancestors had been MacGregors
and that one of them adopted
the name of Gregory when
the Clan was outlawed. He
had a vague idea of some
family relationship to Rob Roy
and a still vaguer notion of
a left handed descent from
Charles II. I cannot

F.2

however Sir I am any authority
for these ideas; and I
have no means of either
verifying or disproving them.
I think that in one of Scotts
works (. perhaps Some Edition of
Rob Roy.) there is a notice
of the Gregory family, given in
a preface or a footnote.
If I am of Scotch descent
I ought to be ashamed, as well
as sorry that I know so little
of my ancestors
I am dear Sir
Yours faithfully
Charles Darwin

F. 1 c.

New Lanark
May 30. / 70

Dear Sir, I am at present
requested from my business
and much of my
spare hours I have on the subject
of the Gregory Family. but
from what I recollect. I
do not think I shall be

of much use to you —
The Scotch painter
Jamieson is certainly not
connected with us in any
way — very little is known
of his relations.
I have a magical mach-
ine history of the Gypsy's
written by Dorcas Gypsy.

when I enquire of by
the Miss Jacob's for
you, but he was not there
but a Fellow of Trinity
Cambridge. Why this
Gregory is no relation of
ours. — I hold you with
a hare the manuscript
I refer to, I will bring
it with me to London

when I come up about
the 14th June. I will
send you a collection Photographs
of our Family, when I can
~~send~~ find my old copy.
I have been so busy
lately, I have not been
able to reply to your
letter before.
Yours faithfully
H. W. Gregory

18 South Parade Doncaster

F.11

Sir

I have been reading your very able & interesting work on "Hereditary Genius" and as the family of which I am a member seems to present an illustration of your theory I venture to give you some brief particulars. In 1690 Samuel Jobb married Elizabeth Gillions who as the family tradition says was grand. niece to John & Cornelius de Witt (the former being the grand Pensionary, the latter the Admiral of the fleet, of Holland) By the marriage of Samuel Jobb

with Elizabeth Gillivor a stream of ability flowed into the family (undistinguished, so far as I know, in Statistics, previously)

1 His eldest Son Richard was grand: father of the late D. Jebb Bishop of Limerick, this Brother the late Judge Jebb - great grand: father of the present Dr John Jebb Canon of Hereford, & Author: and great great: grand father of the present R. C. Jebb Senior Classic, & one of the most rising Scholars of the day.

2 His second Son Samuel Jebb M. D. b 1692, a non juror &

learned writer of the last century
His son was Sir Richard Jebb
Bart M. D Physician in ordin-
ary to the King between 1750
1787.

3 The third son was the great
friend and pattron of the late Sr Joshua
Jebb K. C. B. Inspector of Prison
(Note The son & grandson of
the above were eminently clever
people, but did not attempt
public life)

4 The fourth son John Jebb was
Dean of Ardfert and Father
of Dr John Jebb who died in
1786, a man of great abilities

of much distinction in his day. He is left by Dr Disney.

Daughters of Samuel Jebb & Elizabeth Sullivan

1 Hannah m. Robert Hallifax
The eldest Son was Samuel Hallifax Bp of St Asaph
He second Son was a distinguished Physician in the reign of George III^rd

2 Amelia Jebb m. William Oates
Their daughter m. Wm Ward
whose child was Ann Radcliffe the authoress of the Mysteries of Udolpho.

—

All the names I have given

F.3.

was mentioned by Nichols in
his Literary Anecdotes of the last
Century, who I think notices the
traditional descent from Dr Webb
- as does also the writer of the
life of the late Bp Jebb

I am Sir your very faithful
Servant.
(Revd) Henry. G. Jebb.

18 South Parade Doncaster

30th August 1870

My dear Sir

I have been unable to reply to your letter before today. I am afraid that the instances I can give of strong memory in the family will be scarcely satisfactory to you as evidence in any theory but I will mention them, & you shall judge. 1st There are three sons of a mother who was a Jebb. The mother is extremely "practical", but naturally rather above the average in ability. Father a sensible average man. Two of the sons I place in the Class (F) (See page 34 of Hered. Genius) The eldest son who

could by no possible effort get
through his Little-Go at Cambridge
knows the Army List in all its changes
progressively by rote. Every thing
connected with it, pay, facings, &c
of all commissioned Non-commissioned
officers, & of all the Regiments.
His youngest son who has just sufficient intellect to be not an idiot
(I place him at 9) has a singular
memory for very often people have noticed
memory for minute facts, especially the
Peerage & Baronetage: he is quite unable
to do any thing for himself, lives
at home idly with his elder Brother.
His 2nd Son is rather clever in a very
strange way, & earned his commission at Sandhurst
He also has a very good memory.
2nd Charles Jebb my elder Brother

lately dead, a man perhaps in class
A or B, had a very remarkable
memory: he was blind for 25 years
& was permitted by a Bishop to give
a sermon in an outlying district.
He did the whole of this by memory,
lessons, Psalms, prayers, besides
conducting & leading the singing.
3rd a Niece of mine (somewhere about
7 or 8) has a remarkable memory
for dates.

These facts if of any value to you
might be stated generally, but
detached from the name (as I should
get into a scrape) as instances of
memory without much intellect
in family where several members
had shown great ability. I should
say, in fact, that the family memory

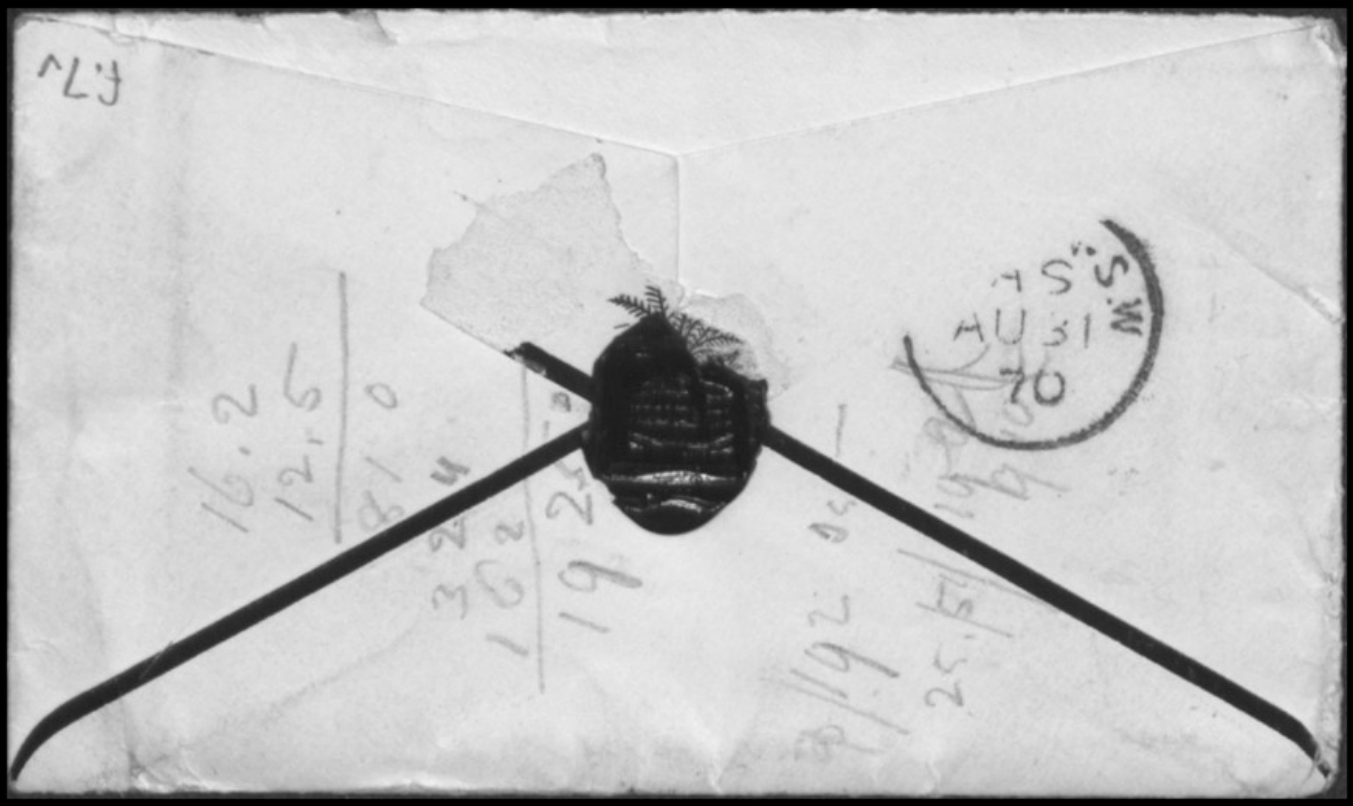
is decidedly above the average. My Father (Brother of the late Sir J. Jebb) has a very good one; I have also; so has my elder sister. The memory of Mrs Mills, my Aunt, is wonderfully strong in every point: & the memory of R. C. Jebb & the Greek Classics is quite marvellous. Donovan the physiologist has twice, with an interval of eleven years, asserted that I have a very feeble memory. I can only with great trouble & effort be made to recollect anything. But all people who know me, & particularly Dr Paley when he was here, have remarked the contrary. It is true I have taken a good deal of pains to keep my memory fresh. If I can at any moment

being not anything more satisfactory
than by a larger range of inquiry
I will gladly do so.

I am afraid I shall not immediately be able to respond the time
& money which investigation calls
for. Dr Witt descends with Osgood
- it suggested the late Mr Joseph
Hunter Author of the History of
Doncaster, would be a hard nut
to crack.

When you come this way you
must not only call, but be
prepared to stay. We shall always
find a bed for you, & give you a
sincere welcome. Believe me
yours very faithfully
H. G. Jebb.


DONCASTER
E
AU 30
70
POSTAGE
125
ONE PENNY
To
Francis Galton Esq
42 Rutland Gate
London
S. W.
Petts
F.7r
GALTON
PAPERS


AUG 31
70

F.8r

10 South Parade Doncaster 24th August 1870

Dear Sir

I thank you very much for your kind letter in reply to my former communication which I made solely because I thought it illustrative of your theory - certainly with no desire to obtrude a notice of our family upon you. I have endeavoured in the enclosed paper to give you as clearly & fully as I can able the individuals who have shown ability in the family from time to time.

The first stream of superior intellect evidently came into the race through Elizabeth Gillivers: it was not for want of means or educational opportunities that no individual were previously distinguished

The descending ability seems to have gone through the Jebbs male & female. Exception in the case of R. C. Jebb (mother a Hinsley) none of the wives of the Jebbs seem to have sprung from families distinguished by eminent talents.

As to the collateral descent from the two Dr Wills. I told you I have never yet discovered the trade

connexion. It rests merely on a family tradition
You shall judge of the grounds on which it rests.
1st It has always been an article of faith in the family
of Judge Job (separated from the other branches for
150 years) the Judge was able to recollect his grand-
father Richard (II) whose wife Elizabeth was Sullivan
(the daughter as it is said of Amelia the niece of Dr Witt)
lived to great age
2nd Dr John Job of Petersburg (V) has been known repeated
to have come from Dr Witt
3rd Joshua Job (XII) lived till his 100th year, &
I have often heard his grandson Joshua Job (XIII)
assert the same thing
4th The circumstance is mentioned in Scott's Life of Mrs
Radcliffe, & I believe in the Gentleman's Magazine
I hope to be able to give absolute proof of the
fact when I have more time to search in the proper
quarters.
As to Joshua Job (XII) Mrs Seward visited
him in his 98th year, & gives an account of
him in her skittish Pembarton way in one of her

printed letters. She calls him "a perfect Briton in eloquence"!! but admits defective utterance by reason of too little old age.

I hope you will in every way modify any thing which family feeling may have coloured. But the lives of Dr John Jebb, and of Bp Jebb, Nichols's Literary Anecdotes, and the Gentleman's Magazine, will bear out my facts

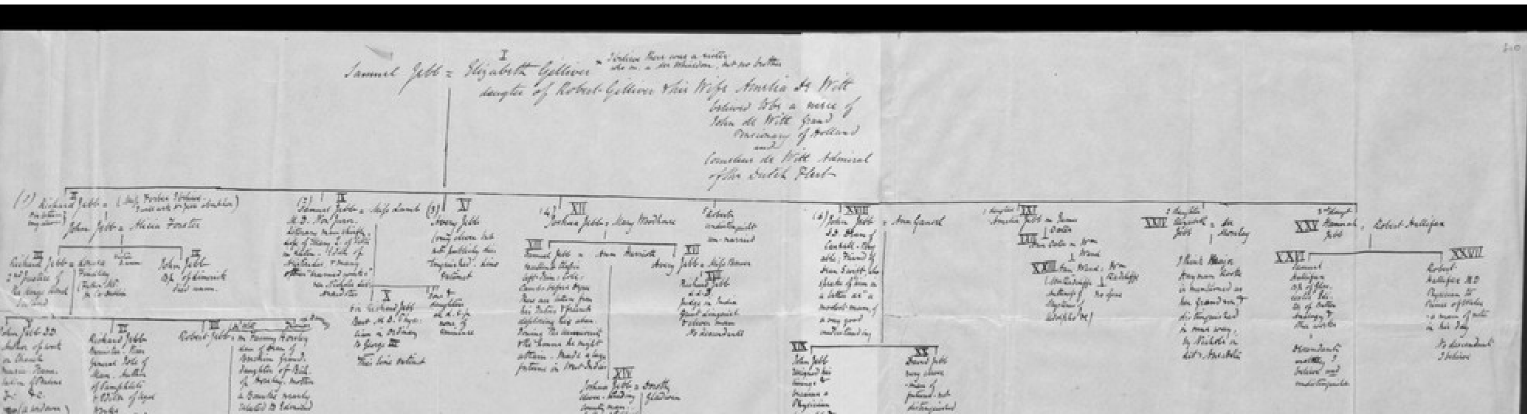
The existing Jebbs have all (I think) excellent memories. Even the dances, of which are several, have that endowment. One great-dancer (by her) has the whole army List by heart, a greater still has a stupendous memory for tonnage of ships.

And now let me say how truly pleased the Jebbs & I should be if ever you come north & will visit us here. I really mean this. I need to know me of your name Capt Doyle, Enders. Believe me yours very faithfully

H. G. Jebb

f. 9v

Jebb


I
Samuel Jebb = Elizabeth Gulliver
daughter of Robert Gulliver & his Wife Amelia de Witt
believed to be a niece of John de Witt Grand Pensionary of Holland and Cornelius de Witt Admiral of the Dutch Fleet
(1) II Richard Jebb
John Jebb = Alicia Forster
III Richard Jebb
IV John Jebb Bp of Limerick
Richard Jebb
Robert Jebb
VIII Richard Claverhouse Jebb
(2) IX Samuel Jebb M.D. = Miss Lamb
X Sir Richard Jebb Bart. M.D. Physician to George III
This line extinct
(3) XI Avery Jebb
(4) XII Joshua Jebb = Mary Woodhouse
XIII Samuel Jebb = Ann Harrison
XII Avery Jebb = Miss Bowen
XIII Richard Jebb
No descendants
Roberts undistinguished un-married
XIV Joshua Jebb = Dorothy Gladwin
XV Joshua Jebb = Mary
(6) XVIII John Jebb D.D. Dean of Cashel = Ann Gansel
XIX John Jebb
XX David Jebb
XXI Amelia Jebb = James Dobbs
XXII Ann Dobbs = Wm Wood
XXIII Ann Wood = Wm Radcliffe
XXIV Elizabeth Jebb = Dr Moseley
XXV Hannah Jebb = Robert Halifax
XXVI Samuel Halifax
XXVII Robert Halifax M.D. Physician to Prince of Wales
No descendants

Easton, Maryland
March 28th 1873

Francis Galton, Esq

Dear Sir

In re-reading lately your work on "Hereditary Genius" in Appleton's edition of 1871, I accidentally noticed a slight error made by you, or more probably, by the American editor.

In the appendix to chapter X, pp. 173 and 190 Miss Sarah Austen's identity is confounded with that of Miss Austin.

the novelist, and author of
"Pride and Prejudice" etc.
I do not think that Austen
was a writer of fiction: at
least the only works of hers
not religious or didactic
which I have come under
my limited observation, are
an essay on Goethe,
and several translations, from
the German.
I hope that you will
pardon the liberty, I
have taken in calling
your attention to this
unimportant fact: naturally

when we see a work especially free from mistakes, we are thereby the more desirous of making it thoroughly so.

We always look with anxiety, in this country, for your productions: I myself am rather frightened by your project of a selected race: it seems as if the logical sequence of the selection of the fittest were inevitably the rejection of the least fit and I see that already under the name of euthanasia

the latter doctrine is advanced.
But here my liberty is growing
into audacity which I hope you
will already have forgiven: and
I may only add that I am
your very sincere admirer
H. C. Lay, Jr.
Care of Rev. Dr. Lay
Bishop of
Easton
Maryland.

A 1r

The Fortnightly Review,

OFFICE — 193, PICCADILLY.

Wednesday 186

My dear Sir

I have read your paper with so much interest that I am very very sorry not to be able to publish it. Were the Review my own property I would not hesitate; but dealing with other people's money makes one more particular, & I think your paper would cause such an outcry as to place me in an awkward position with our proprietor. I am already in the ticklish position of having Xians for proprietors being myself avowedly not a Xian. But it is understood between us that no direct attacks are to be admitted — & as your paper is too terribly earnest

GALTON/2/4/1/4/13

reputation not [illegible] a tonnes
best, I think.

Don't let this discourage you
from writing something else for us. The
copyright of your paper will
remain with you in the usual way.

Ever yours
[illegible]

F Galton Esq

Bramley nr Guildford
Jan 31st 1873

My dear Galton

I thank you for your kindness in writing to me to express your sympathy with us in our sorrow for our dear Father, and for what you say of him & of your pleasant recollections of your visit to

Ockham. We must each of us
try to recall & keep alive the
memory of the happiness we have
had; but at the present moment
my Sisters at Ockham are in
everything sadly reminded of
their loss, however, they deserve
all praise for the courage &
self-restraint with which they
fought through the first sad week;
and Mrs Gaskin & you will be glad
to hear that they & my Aunt Mrs Catt

F. 2

are all pretty well. Except from his mouth (which was very painful for some days with fever & thrush) my Father did not suffer and he kept his mind & his faculties clear to the last, but his body wearily lifted out with the weight of years & had a craving for rest.

I hope Mrs Galton & you are both well.

Yours very truly

Jno B. Lushington.

F, 1r

21 Eccleston Square
Nov 19/69

My dear Galton

I send you the Fairfaxes. This family is I think a very striking instance of hereditary talent. Two judges, father & son, then two great generals* father & son: and in the intervening generations a poet of eminence, and a military commander of great promise.

[redacted]

Observe too that the two eminent
Parliamentary commanders — the
cousins Sir Thomas (3d Lord) and Sir William
Fairfax had mothers who
were sisters, daughters of
Lord Sheffield; who was
himself a military commander
and statesman of some eminence
under Elizabeth, and many
years President of the North
under James I. But look
at it all for yourself.

I also send you the History of the Markham Family written by my father (but barely finished and never corrected, when he died) which I printed for private circulation in 1854

Yours sincerely

Clements R. Markham

The present Mr. Fairfax of Steeton is one of the cleverest men I know; but he has never done anything. Shy & reserved.

Lord Fairfax

from preface to Markham's life

"No ancient house ~~in~~ in England was more careful than that of the Fairfaxes in preserving and handing down its archives; and for four generations there was always an ancient scholar & antiquary in the family. ... The great Lord was the greatest ornament of a most distinguished family — an illustrious house - a house that for learning and valour has no peer among the families of Yorkshire." "

(p. 2) The great historical name of Fairfax occurs wherever there was hard fighting all through the 16th & 17th centuries and it is equally famous in the annals of literature & scholarship!

Mem: Mrs Somerville who was a Fairfax, is no kinswoman to Lord F., as mentioned to me. C.L.

Richard Fairfax of Walton

A Ryder of Ryder = Sir Guy Fairfax of Steeton (1477 Judge of Kings Bench) (See Foss's Judges.)

Sir Nicholas Fairfax (Knight of Rhodes) (See Fuller's Worthies.)

A Manners of Ross = Sir William Fairfax (1509 Judge of Common Pleas) (See Foss's Judges.)

Isabel Thwaits, Heiress of Denton = Sir William Fairfax (In the Pilgrimage of Grace) (See Froude's Hist of England.)

A Gale of Scotton Same family as the Cleaned Sr Gale, Dean of York = Sir Thomas Fairfax of Denton

Gabriel Fairfax of Steeton

Wife one of the Ashes of Aughton. For whom see the account of the Pilgrimage of Grace in Froude's Hist of England. An able family.

1st Lord Fairfax

Edward Fairfax (The Poet. 1600) (See Atterbury Corr. vol III. Translator of Tasso.)

Col. Charles Fairfax (Govr. of Oxford) (See Ware's Commentaries) Slain at Oxford.

Sir Wm Fairfax

Lord Sheffield 1st Earl of Mulgrave (President of the North)

(Younger brothers of the second Lord)

Charles Fairfax Lawyer Antiquary Colonel under Genl Monk Governor of Hull. 1660

Henry Fairfax (Rector of Bolton Percy) Wife of Cholmley of Whitby

William John (Young officers of great promise) Both slain at the siege of Scarborough

Ferdinando 2d Lord Fairfax General of the Horse to the Earl of (History of England passim)

Mary

Frances = Sir Philip Fairfax

Thomas 3d Lord Fairfax Commander in Chief of the armies of the Parliament (History of England passim)

Duchess of Buckingham (no children)

※ Chaloner of Guisboro' (a family of clever men) See Noble's Regicides

Sir William Fairfax an enterprising Earl's officer. Slain at siege of Montgomery Castle at Bridge-hill, Commanded a regt. at Marston Moore

Stapylton of Myhill (a remarkable family) Her uncle Sir Philip a great Parliamentary leader. Died 1647.

William Fairfax

Admiral Robert Fairfax at taking of Gibraltar M. P. for York &c &c.

Thomas

John

※ A Chaloner of Guisboro' = Thomas

Thomas Fairfax Esq now of Steeton and Newton Kyme

Thomas Ferdinand 1849

4th Lord Fairfax

Brian Fairfax (a learned antiquary)

Brian Fairfax (Commissioner of Customs & an eminent antiquary) No children.

Dr = Mrs Fairfax (Dean of Norwich) Beaded Judge Jeffries. See Macaulay's Hist of England (No children)

5th Lord Fairfax

6th Lord Fairfax Settled in Virginia A most remarkable man (See Burnaby's travels) No children.

Henry Fairfax

William Fairfax President of the Council in Virginia Judge of the Bahamas

Brian 8th Lord Fairfax (In America)

Mrs Lee

Thomas 9th Lord

Albert 10th Lord

11th Lord

Genl Robt Lee Commander in Chief of the Confederate army.

Fairfaces

UNIVERSITY COLLEGE LONDON GALTON PAPERS

Those who were distinguished under-lined with red.

Puttenham: Guildford.
Nov. 2. 72.

My dear Sir,

I have read your paper with lively interest. It is undoubtedly a most striking performance. After certain anxious doubtings, I have come to the conclusion that we have too many out of the way projects on hand in the Fortnightly & add another to the list just now. I shall ~~be~~ wish not to lose this either as cowardly, or as disrespectful to your scheme. I have given it my reasoned & anxious. Thanks very sincerely for letting me see the paper &c. I now return. I trust that this with

not however to pass to sending me something on some other occasion.

I remain, Dear Sir,

Yours very truly,

John Austen.

Francis Galton, Esq.

18 Hanover Terrace
Jany 5th

Dear Mr. Galton

Enclosed you will find a few particulars of the Wilde family which you wished to have. As far as they go they are correct - as my Husband took

there down this
afternoon at Oscar Wilde's
dictation. My favourite
theory, & credit to
the Mother- is I think
supported in this
instance, as Oscar Wilde
was saying that
the Mother of the
first Lord Iveagh
was a woman

of great energy
& character - generally
Also you will
notice that the
Maternal Uncle
of Lord Penguin
was a Colonial
Judge.
With our kind
regards & hopes
Yrs faithfully

well — I am
very truly yours
Amelia Bloch

F.3

Thos: Wilde, raised himself
· wife first cousin
Attorney –

Sir John Wilde Chief Justice & Speaker of Assembly Cape of Good Hope

Lord Truro

Ld. Archer – ×

Charles Henry Wilde Registrar in Lunacy

Sir James Lord Penzance

Col. Sir Alfred Wilde K.C.B.

Wilde

× he married a Miss Henry sister to Sir William Henry who was Chief Justice of Ceylon –

F.1

59, Montagu Square,
London, W.

24th Nov. 1869.

Dear Galton

After what you said at the Athenaeum today I venture to send you a few words on the "Hereditary Genius" on the fly leaf of the sheet -

Yours truly

W. V. Bullock

X

Hereditary Genius —
Lond: 1869.

p. 69. 2d. Truro's brother the Ch: Just:
Cape of Good Hope, was
Sir John Wilde.

— Judges — The Cursitor. Baron was not
a judicial officer — &
in late days was a
Sinecure — now abolished.

p. 90
to 92. Brougham & Lyndhurst were
never knights — Each was
made Chancellor without
having served any office to
which knighthood is usually
an addition

p. 99. S. Pollock F. not a Master in Chancery
— an office abolished many years
since — but a Master of the Court
of Exchequer — a place in the
staff of the Chief Baron, & not of
sufficient importance to be
mentioned, except to better
identify its holder —

F.G.

[P] Frederick. not grandson of Rt. Hon. J.C. Herries – but his grandnephew – (WS – sister's daughter's son).

p. 173 & 190. Jane Austen the Novelist (author of Sense & Sensibility &c) is confounded with Sarah Austin nee Taylor &c &c –

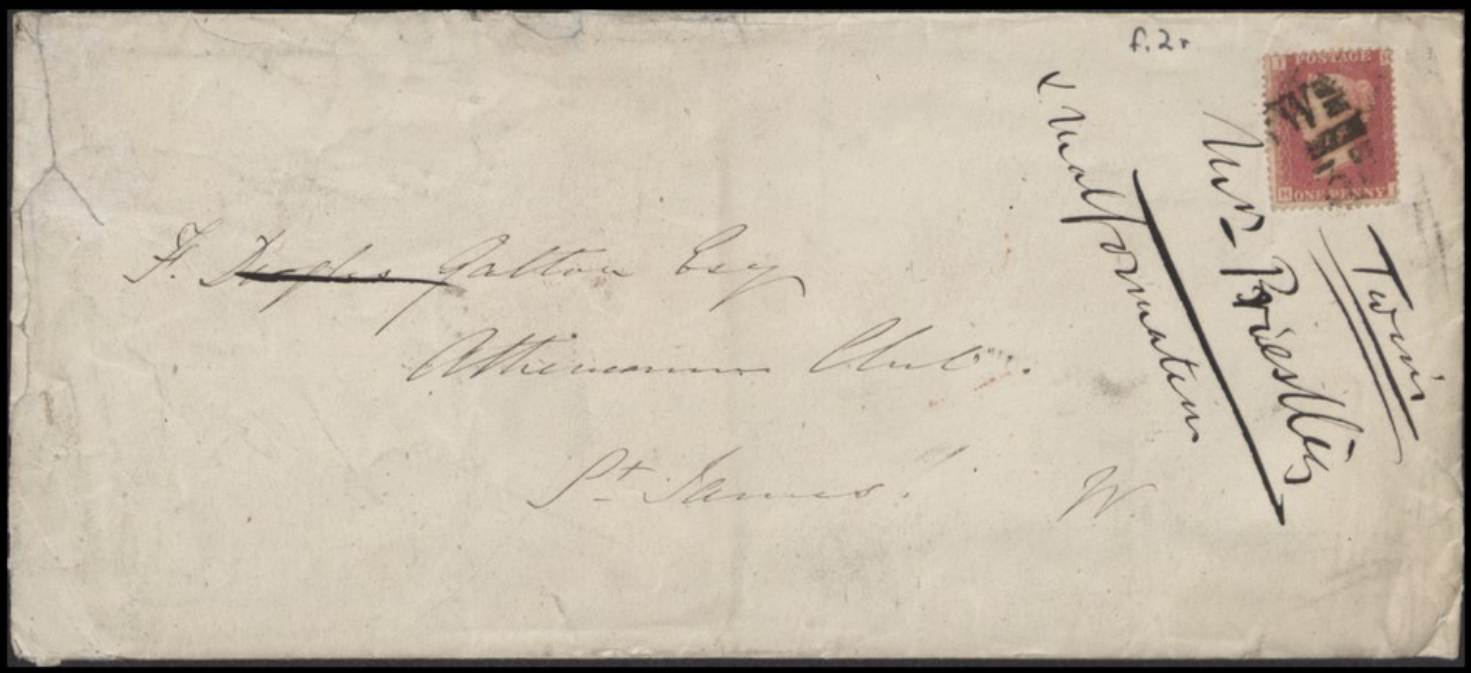
p. 334. The Rumble pedigree omits Fanny Rumble – (Mrs Butler) sister of Adelaide & John Mitchell – actress, & author –

17 Hertford Street.
Mayfair. W.

I now send you
the papers I promised
to obtain for you
from Prof. Stubbs.
We are anxiously
looking for Jones
which has not yet
arrived.

Yr very truly
C. Pritchett.

GALTON/2/4/1/4/19



Memoranda as to Malformations

1 William, the first born child, 1800, (empty) had six fingers on each hand and six toes on each foot. The supernumerary members were a repetition of the little finger and little toe. These members were perfect, with a nail, but they were attached loosely; that is, had no connexion with the bones in the hand or foot. They were easily removed by a pair of scissors. Marks, however, were left, which still remain, resembling a small wart.

2 Robert, the second born, 1802, had a more determined malformation. As in the preceding case he had six fingers on each hand and six toes on each foot. As regards the supernumerary fingers they were easily removed. The toes were different. They were distinctly connected with the bones of the foot, just like the other toes. Their removal was therefore a more serious operation. Unfortunately, this operation was very badly performed, and left two stumps, with tender points, which in after years were a source of incalculable agony, and produced a certain lameness. One of the stumps, more tormenting than the other, was successfully removed late in life, by Professor James Syme of Edinburgh.

3 Margaret, the third born, 1804, had six fingers on each hand, but no supernumerary toes. The fingers were easily removed, as in the former two cases.

After this there were three other children, but without any malformation.

The parents of these six children had no malformation, and they could give no explanation of the phenomenon above mentioned, further than this - that during the gestation of the first child, the mother was startled and affected by the sight of a beggar at the door, with two thumbs. Whether this produced any physiological effect, no one can say.

William, the first born, has had three children, but none of them had any supernumerary fingers or toes.

Robert, the second born, in whom the malformation was more determinate, had a large family of children, two of whom at least, had the supernumerary fingers and toes, and were very strongly marked cases.

X.

I find that my Uncle Wm Chambers has been written an article on the subject but he sends me three letters. I have given him a continuation &c. Show the tendency to twins on my mother's part.

F.G.

X

My mother (wife of Robert Chambers) had sixteen children inclusive of twins on three different occasions. Twin boys were still born, as twin girls one died shortly after birth, the surviving twin lived & was the mother of three children none of whom had the malformation. The next twin girls were the tallest & largest women of the family, the one dying at 27 unmarried, the other (myself) still surviving & the mother of four children none of whom have shown abnormal signs.

It was only in the singles children that six toes and six fingers were found. The youngest child, a girl, has now ten six toes on the one foot all clubbed together, I forget about the other foot, but remember seeing one little finger hanging from the hand which a friend could have dismembered, if

6th.

Whereas on the other hand the finger grew straight from the wrist. This was amputated a few days after birth by Dr Sophia Jex but it showed a determination not to be left behind and continued to grow as if nothing had happened. It was again amputated from the same place - the finger (not the wrist) joint - but again refused to be surgically treated and is now a curious stump standing out from the hand.

(Is this young lady is to be married next month I shall let you know what the future brings forth.)

The other daughter who had six fingers and six toes began her married life by having twin boys, but not of the child there are no abnormal appearances.

C. Pressley.

F.S

P. 7 v

Fig. 1. L.

Fig. 1. R.

Fig. 2.

Fig. 3

Fig. 4.

Fig. 6.

Fig. 5

W. H. M.r Farlane, Lith.r Edin.r

f. 8.

ON VARIATION

IN THE

NUMBER OF FINGERS AND TOES,

AND IN THE

NUMBER OF PHALANGES, IN MAN.

By JOHN STRUTHERS, M.D., F.R.C.S.,

LECTURER ON ANATOMY IN THE EDINBURGH SCHOOL OF MEDICINE.

[From the Edinburgh New Philosophical Journal, New Series, for July 1863.]

At the present time when the subject of variation is attracting so much attention, the following illustrations will, perhaps, be read with additional interest. I have arranged the cases of increase in the number of digits into two groups, those which illustrate original variation, and those which illustrate the phenomena of hereditary transmission. The cases of variation in the number of the phalanges are given separately, as belonging to a different order of variation. In regard to those cases for which I am indebted to the kindness of various medical friends, whose names will appear, I may mention that they have been most carefully described to me in reply to a series of inquiries relating both to the anatomical condition and the hereditary history, and that what is stated may be relied on both for accuracy and for all possible completeness. A few

EXPLANATION OF THE PLATE.

Fig. 1. R. and L. Hands of J—— O——. Case 1. From a photograph.
Fig. 2. Feet of J—— O——. Case 1. From a photograph.
Fig. 3. Feet of C—— O——, younger brother to the last—Case 1. From a photograph.
Fig. 4. Hand of G—— S——. Case 14. From a sketch.
Fig. 5. Hand of J—— M——. Case 24. From a cast.
Fig. 6. Hand of J—— J——. With additional phalanx in the thumb. Case 26. From a photograph.

remarks are added at the end on some of the points in variation and inheritance which the cases illustrate, and on the special point of the absence of a bone in the thumb and great toe, as compared with the other digits.

PART I.—VARIATION IN THE NUMBER OF DIGITS.

Section 1.—INCREASE IN THE NUMBER.

Group 1.—Cases which could not be traced to a Hereditary Origin.

1. *Case of Six Digits in three members of a family, occurring Symmetrically.*

In this family of seven children, one of the daughters was born with six digits on each foot, and two of the sons with six digits on each foot and on each hand. I am indebted to the kindness of Dr John Alexander Smith for a full account of the case, and for affording me the opportunity of seeing the persons who are the subjects of the variety.

(*a.*) M—— O——, female, æt. 22, Edinburgh, was born with a sixth toe on the outer side of each foot. That on the right foot, being loosely attached, was removed by the surgeon a fortnight after birth, and the cicatrix is visible. The sixth toe on the left foot is fully equal in size to the fifth, and is supported on the fifth metatarsal bone. The hands are normal.

(*b.*) The elder brother, J—— O——, æt. 19, has six fingers on each hand and six toes on each foot. The additional digits are placed on the outer side of the limb. Figs. 1 and 2 are taken from photographs of the hands and feet. Each sixth finger diverges considerably, reaches to a little beyond the joint between the proximal and middle phalanges of the fifth finger, and contains two phalanges, the proximal $1\frac{1}{4}$, the distal $\frac{3}{4}$ inch in length, the distal phalanx being somewhat longer on the left hand. The fifth and sixth fingers rest on one metacarpal bone, which broadens considerably in its distal third, where it is first grooved and then deeply notched, so that the bifurcated ends are as wide apart as the other knuckles. The left sixth finger looks shorter than the right, owing to the metacarpal head which supports it being farther back. The other fingers have the usual proportionate length. Each sixth finger moves with strength and quite as independently as the other fingers, without the others being held, and there is no tendency to move the fifth when he moves the sixth. The flexor and extensor tendons are, therefore, separate up to the muscles.

The sixth toe is well formed on each foot, lying parallel in the series. The fifth is of normal size, and the sixth rather larger than it, although, from commencing farther back, it does not project so much as the fifth. The fifth metatarsal broadens and then bifurcates to support the fifth and sixth toes, the bifurcation being

greatest on the right side. Although it is not very easy to make this out, the sixth toe appears to have only two phalanges on each foot. The fifth and sixth toes are slightly webbed, but less so than the second and third, which are, as is common, webbed for ¼ to ⅓ of an inch.

(*c.*) The younger brother, C—— O——, æt. 10, was born with twenty-four digits, like his brother. The toes, as seen in fig. 3, also from a photograph, exactly resemble those of the elder brother (fig. 2), making allowance for the latter having corns. I can make out three phalanges in all the lesser toes except the sixth, which appears to have but two. The fifth metatarsal bones bifurcate as in the brother. The sixth fingers projected outwards so inconveniently, that they were removed, together with their supporting head of the bifurcated fifth metacarpal bone, three years ago by Dr Smith, and a cicatrix and slight bony eminence remain. On examination of one of the removed fingers I find it to contain two phalanges, which appear to be entirely destitute of flexor tendons, the proximal phalanx alone having an extensor tendon.

History of the O—— Family.—The father and mother have the fingers and toes normal, and the variety was previously unknown in the family on either side. Both grandmothers were present at the birth of the daughter, the first child which presented the variety, and both stated that they had never known or heard of it in their ancestors, neither having ever heard of such a thing before except in the case of the son of the giant in Gath, which they called to recollection in discussing the wonder. The first child of this family was a boy, without any digital peculiarity. The mother next had four miscarriages, between the 4th and 7th months, two boys and two girls, also it is stated with the hands and feet quite natural. The sixth child, the daughter M——, was the first to present the variety; she had six toes as above described. The family had lived in Forfarshire, and now went to Glasgow.

When again pregnant, the mother's thoughts must have been strongly turned in this direction, as she relates that she heard as it were a distinct voice from the wall of the room say that the child would have more than the last. This was about the second or third month, and made a deep impression on her mind. The child was the boy James O—— above described as presenting six fingers and six toes. Three daughters, successively, were the next children born, whose hands and feet were quite natural. Lastly came the boy Charles O——, above described as having been born with an additional digit both on the feet and hands.

Dr Smith has attended two of the daughters in their confinement; one has had three children all of whom have the fingers and toes normal; the other, the daughter who was born with six toes, has had one child, a male, who lived only a few days, in whom the toes and fingers were normal. M——, J——, and C—— O—— have two paternal uncles and two paternal aunts, and one maternal uncle and five maternal aunts, all of whom have families, and in none of them—uncles, aunts, or children—do the fingers or toes

present any variety. The mother, Mrs O——, was a twin, and the twin sister has had three children.

The mother, Mrs O——, mentions that she used to work with a girl who had a double thumb, but this was years before she was married. The father mentions that after the variety had occurred in his own family, he saw a man who was exhibited as a giant with six fingers and six toes. The O—— family mention the case of a railway guard (George B——), known to them after the variety had appeared among them, who had an additional finger on the ulnar side of his right hand, and an additional toe, also said to be on the right foot. He died a few months ago and leaves five or six children, none of whom have additional fingers or toes.*

The following Seven Cases present an Additional Thumb on one Hand.

2. J—— S——, æt. 25, Berwickshire, has an additional thumb on the right hand. The metacarpal bone bifurcates to support the two thumbs, which are of nearly equal length and thickness, that next the forefinger being slightly thicker and more powerful than the other. Each contains two phalanges, the proximal 1½ inch, the distal 1 inch in length, being as long as those of the thumb of the left hand, except the distal phalanges, which are ⅛ inch shorter.

* *Case of several Members of a Family with an Additional Digit.*

For the case of this family I am indebted to Dr Strachan of Dollar. It arrived too late except for brief notice in the Journal, and is now given in full. Of a family of eight brothers and three sisters, three brothers and one sister were born with the variety, in the following various degrees:—

(*a.*) M—— R——, æt. 19, Clackmannanshire, has an additional finger on the outer side of the left hand. It has nearly the same length and thickness as the fifth finger, has three phalanges, and is articulated, along with the fifth, on the fifth metacarpal bone. It cannot be moved separately from the fifth, and neither the fifth nor the sixth have much motion at their phalangeal joints, but both move freely together on the metacarpal bone.

(*b.*) C—— R——, æt. 12, has six fingers on each hand and six toes on each foot,—the additional digit being on the outer side on all the four limbs. On the right hand, the sixth finger is much shorter and thinner than the fifth, has two phalanges, and is articulated to the outside of the distal end of the fifth metacarpal bone. On the left hand, the additional digit was removed by Dr Strachan a few days after birth. On the left foot, the sixth toe is smaller and shorter than the fifth, and it is doubtful whether there is an additional metatarsal bone. The sixth toes move only with the fifth.

(*c.*) J—— R——, æt. 2, has an additional toe on the outer side of the right foot. It is of the same length and thickness as the fifth toe, has two phalanges, and rests on the fifth metatarsal bone, which is not bifurcated or broader than usual.

(*d.*) W—— R——, female, deceased, had a sixth toe on the right foot, which was externally separate from the fifth toe only at the nails.

The father is quite certain that so far back as his own grandfather and grandmother there has been no digital variety in the family, a statement which is corroborated by his mother, who is still alive, and who recollects her own and her husband's parents well. Nor is any ancestor or relative of the family known to have had digital variety. The mother states that her first child was normal. When six months pregnant of her second (viz., the elder of the above cases), the little finger of her right hand was crushed and afterwards amputated, and she was very sorry about it.

In girth, each is only a little less than the left-hand thumb. The twin thumbs diverge from each other by their proximal phalanges, and converge by their distal phalanges, and are webbed half-way. In extension, the distal phalanges become parallel; in flexion, their points come together by their edges, and give a firm nip. Each can be flexed and extended separately when the other is held, but not otherwise. Flexion at the metacarpo-phalangeal joint is less extensive than usual. Motion at the carpo-metacarpal joint is free, and, in the movements of opposition, both the thumbs move together across the hand. In writing, the pen lies between the approximated points of the two thumbs. He is right-handed as usual.

He states that variation in the number of the fingers or toes was previously unknown in the family.

3. E—— N——, æt. 13, Edinburgh (brought to me by my pupil Mr George Dickson), has an additional thumb on the left hand. The metacarpal bone is bifurcated for $\frac{1}{4}$ to $\frac{1}{3}$ inch, and forms two diverging heads for the two thumbs. The thumb next the forefinger is the larger of the two, and has nearly the usual length, but is not thicker than the last two divisions of the forefinger. The lesser thumb at first diverges to the radial side, and then curves forwards at the metacarpo-phalangeal joint, which is somewhat loose. It has only one phalanx, which is $\frac{8}{10}$ inch in length, the two phalanges of the greater thumb measuring together $1\frac{1}{2}$ inch. The two thumbs move together in opposing the fingers. The lesser thumb is flexed and extended in common with the other, and has considerable power in flexion.

Her mother states that variety in the number of fingers or toes was previously unknown in the family.

4. W—— G——, æt. 3 months, Edinburgh (kindly sent to me by Mr Edwards), has the thumb of the right hand double. The thumb next the forefinger is of good size, and has the usual number of bones. The lesser thumb consists of one phalanx, which is attached, firmly but quite moveably, to the inner side of the proximal phalanx of the greater thumb beyond its middle. It is about half the thickness of the greater thumb, is half the nail's length shorter, and they are webbed together as far as opposite the beginning of the two nails.

The mother states that the variety was previously unknown in the family.

5. I am indebted to Dr Edward Robertson of Otterburn for a note of the case of T—— H——, æt. about 6 months, Northumberland, who had an additional thumb on the right hand. It was rather loosely attached at the radial side of the metacarpo-phalangeal articulation of the greater thumb, which, again, was rather smaller than the thumb of the left hand. Dr Robertson lately removed the lesser thumb, and I find that it contains one phalanx only.

The father, mother, and maternal grandmother, all state that nothing of the kind was before known in the family.

6. My pupil, Mr Purves of Dryburgh, has procured for me a note, by his father, of the case of J—— W——, Berwickshire, a

man who has a small-sized additional thumb on the left hand. It contains one phalanx, which is attached rather loosely at the end of the metacarpal bone, as if by dense tissue and skin, without connection with the joint. He has no voluntary power over it, but it is more sensitive to pain than the greater thumb. It is over an inch in length, and has a well-formed nail.

He states that "there is no hereditary tendency in his family to such formations."

7. For this (and for case 10. of this group) I am indebted to Dr Gibson of Campbeltown. —— M'M——, æt. 14, Argyleshire, has a double thumb on the right hand. The metacarpal bone is much larger than its fellow in the left hand. The proximal phalanx is double, the two being wrapped in a common investment of skin, presenting a broad flattened appearance externally. The distal phalanges are separate, with a little space between them. They converge again at the points, giving the thumb a lobster's claw appearance. He is able to pick up small objects between the two points, and thinks such a thumb rather an acquisition, as in picking small things out of his vest pocket. He has the full use of the thumb in opposing the fingers.

He has three brothers and four sisters, none of whom have any digital variety. Neither have the father nor mother, nor do they know of any such variety in past generations of their families. The mother accounts for it from her seeing a man with a double thumb when she was pregnant, but says it was not the same kind of double thumb.

8. I am indebted to Dr Henderson of Fordoun for the particulars of the case of H—— K——, Kincardineshire, æt. 32, who has an additional thumb on the right hand. The thumb to the radial side, constituting the sixth digit, is considerably smaller and shorter than the other, and they are partially webbed. She can move the thumbs together so as to hold a pen between them.

A former child of the mother's, by a first marriage, had a sixth finger on the ulnar side of one hand, but lived only three weeks. No previous case is known in the family on either side. The mother has no story as to the cause.

Three Cases (two of them Brothers) presenting an Additional Little Finger on one Hand.

9. Dr Edward Robertson mentions to me also the case of John B——, æt. 5 years, Northumberland, from whom immediately after birth he removed a small supernumerary little finger from the left hand. A brother, who is now dead, had a similar supernumerary finger also on the outer side of the left hand.

The father and mother have never heard of any such variety in their ancestors, or in any relative of the family.

10. J—— G——, æt. 20 months, Argyleshire, has a sixth finger loosely attached to the outer side of the little finger of the left hand, near the middle of the proximal phalanx, and set at right

angles to the little finger. It is ¾ of an inch in length, and has two phalanges. The little finger (fifth finger) is two inches in length. He is an only child. The father and mother have no such variety, and never heard of it occurring in the family before.

Three Cases presenting Six Toes on one Foot.

11. J—— S——, Liverpool, æt. 39, brother to one of my students, has six toes on the right foot. The external metatarsal bone is not broader at its middle than in the other foot, but becomes grooved and then bifurcated for a short distance at the head, supporting the fifth and sixth toes. I can make out three phalanges in the fifth toe, but the sixth seems to have only two. The long extensor tendon is felt and seen to bifurcate for the fifth and sixth toes. The five lesser toes form a regular series retiring outwards, with nothing to attract notice except the number. It was some months, he mentions, before his mother made the discovery that he had a toe more on one foot than on the other. There is no trace of any attempt to throw out a sixth digit on the other foot, or on the hands.

He states that variety of the toes or fingers was previously unknown in the family, and he can trace his ancestors for several generations back. He is one of six brothers, none of whom are married but himself, and he has no family, although there have been several miscarriages. He has five sisters, four of whom are married and have families, but none present any digital variety. He is a very tall man, standing six feet four inches in his shoes. The brothers are rather tall, but under six feet. The mother and sisters are not tall. The father was under six feet.

12. I am indebted to Dr Finlay of Trinity, Edinburgh, for the opportunity of examining this case, and also the two next :—

J—— L——, æt. 40, Newhaven, has six toes on the left foot. The fifth metatarsal bone is broader than the corresponding bone in the right foot, and supports the fifth and sixth toes. The fifth toe is narrower than the sixth, and has three phalanges, while the sixth seems to have only two phalanges. The extensor tendons of the fifth and sixth toes are seen to come forward together. The fourth and fifth toes are partially webbed.

No instance of digital variety is known to have occurred among his ancestors on the father's side, who have lived in Newhaven from time immemorial. The grandmother came from Edinburgh, and said that it was equally unknown among her ancestors. J—— L—— has a brother and four sisters; he himself has a family of four boys and one girl; his brother has one son; and three of his four sisters are married, and have families of sons and daughters; but no member or relative of the family has any digital variety except himself.

13. R—— L——, æt. 15, Newhaven, has six toes on the left foot. The fifth and sixth toes are supported on one metatarsal bone. The fifth is a small toe, the sixth thicker than the little toe

of the other foot. The fifth and sixth toes have each only two phalanges; the proximal phalanges are close together, but can be made to move past each other. Digital variety is unknown in the family on either side. R—— L—— is one of nine children, three boys and six girls. The father's family have, as usual with the Newhaven fishermen, always been in Newhaven. The grandmother came from the Highlands, and never knew of such a thing on her side of the family. Both the father and mother have brothers and sisters in Newhaven, all with families of sons and daughters. The mother states that her father's left little toe grew very awkwardly across the others, not in consequence of the pressure of the shoe, but naturally.

A friend showed me the other day a peculiar curve of his little finger, which two of his brothers also have. His father's mother had exactly the same peculiarity; also some of the children of a paternal uncle.

14. *Case in which one Hand presents Seven or Eight Digits, forming an approach to the condition of Double Hand.*

G—— S——, æt. 5, has seven digits on the left hand, and the one corresponding to the thumb double at its distal segment, constituting so far an eighth digit. In every other respect the boy is well formed. The appearance presented by the hand is seen in fig. 4. There are seven distinct metacarpal bones. The four fingers on the outer side present the usual form and proportionate length, each with its three phalanges. The fifth has the position and opposing action of the thumb. Besides the metacarpal bone, it has two segments, the distal of which contains two phalanges placed side by side, while the proximal phalanx is single. The twin distal phalanges can be made to move a little past each other, and the one to the inner or radial side ends partly by a prominent non-articular angle, as if its proximal phalanx were wanting. They are closely enveloped in a common integument, and their nails join at their contiguous edges. He moves the thumb independently and freely, so that all its tendons must be separate from those of the digits on either side. The sixth and seventh digits are like the ring and little fingers of a right hand, except that the little finger is proportionately small. Each has three phalanges, and they are webbed most of the way between the proximal phalanges. Their metacarpal bones are quite separate and moveable, and, as they pass up, have a direction forwards to the palmar aspect of the carpus. These two fingers are associated together in their movements, and can be moved independently of the rest of the hand, but there is a tendency to flex the other fingers at the same time. In general grasping, the thumb and sixth and seventh digits oppose the other four and clasp down upon them. The hand is flat where the ball of the thumb should be.*

* A somewhat similar case, in which the duplicity of the hand was more complete, with a rudimentary condition of the thumbs, by Mr J. Jardine

A grandfather and grandmother are still alive. The father has three brothers and three sisters, besides two sisters who died. Two of the brothers and the three sisters are married, all of whom have families of sons and daughters, except one of the brothers whose children are all daughters; and the father himself has three daughters and another boy besides G——. But no other case of such, or of any, digital variety has been or is known in the family, either on the father's or on the mother's side.

Group 2.—Cases of Increase in the Number of Digits, with Hereditary Origin.

15. *Case in which the Variety has been transmitted through at least Four Generations.*

I am indebted to Dr Hamilton of Falkirk for the following case (and for case 16), and have to thank him for the great trouble and interest he has taken in ascertaining the genealogy of the family.

The great-great-grandmother, Esther P—— (who married A—— L——), had a sixth little finger on one hand. Of their eighteen children (twelve daughters and six sons), only one (Charles) is known to have had digital variety. We have the history of the descendants of three of the sons, Andrew, Charles, and James.

(1.) Andrew L—— had two sons, Thomas and Andrew; and Thomas had two sons; all without digital variety. Here we have three successive generations without the variety possessed by the great-grandmother showing itself.

(2.) James L——, who was normal, had two sons and seven daughters, also normal. One of the daughters became Mrs J—— (one of the informants), and had three daughters and five sons, all normal except one of the sons James J——, now æt. 17, who had six fingers on each hand. The additional fingers in this boy's case were loosely attached at the metacarpo-phalangeal joint of the little finger, and were removed by Dr Hamilton a few days after birth.

In this branch of the descendants of Esther, we see it passing over two generations and reappearing in one member of the third generation, and now on both hands.

(3.) Charles L——, the only child of Esther who had digital variety, had six fingers on each hand. He had three sons, James, Thomas, and John, all of whom were born with six fingers on each hand, while John has also a sixth toe on one foot. He had also five other sons and four daughters, all of whom were normal.

(*a*) Of the normal children of this, the third generation, the five sons have had twelve sons and twelve daughters, and the four

Murray of Brighton, was lately communicated to the Royal Medico-Chirurgical Society of London. Noticed in "The Lancet," Dec. 20, 1862. I am aware of a case of a child with double foot, at least at the digital and metatarsal part, the additional foot having the great toe separate, and two lesser toes wrapped together in a common integument, the latter being next the normal great toe; but I have as yet seen only a sketch of it.

daughters have had four sons and four daughters, being the fourth generation, all of whom were normal. A fifth generation in this sub-group consists as yet of only two boys and two girls, who are also normal.

In this sub-branch, we see the variety of the first generation present in the second, passing over the third and fourth, and also the fifth as far as it has yet gone.

(*b*) James, had three sons and two daughters who are normal.

(*c*) Thomas, had four sons and five daughters who are normal; and has two grandsons, also normal.

In this sub-branch of the descent, we see the variety of the first generation, showing itself in the second and third, and passing over the fourth, and (as far as it as yet exists) the fifth generation.

(*d*) John L—— (one of the informants) had six fingers, the additional finger being attached on the outer side, as in the case of his brothers James and Thomas. All of them had the additional digits removed. John has also a sixth toe on one foot, situated on the outer side. The fifth and sixth toes have a common proximal phalanx, and a common integument invests the middle and distal phalanges, each having a separate nail.

John L—— has a son who is normal, and a daughter, Jane, who was born with six fingers on each hand and six toes on each foot. The sixth fingers were removed. The sixth toes are not wrapped in the same integument with the fifth, as in her father's case, but are distinct from them. The son has a son and daughter, who, like himself, are normal.

In this, the most interesting sub-branch of the descent, we see digital increase, which appeared in the first generation on one limb, appearing in the second on two limbs, the hands; in the third on three limbs, the hands and one foot; in the fourth on all the four limbs. There is as yet no fifth generation in uninterrupted transmission of the variety. The variety does not yet occur in any member of the fifth generation of Esther's descendants, which consists, as yet, only of three boys and one girl, whose parents were normal, and of two boys and two girls whose grand-parents were normal. It is not known whether, in the case of the great-great-grandmother, Esther P——, the variety was original or inherited.

16. *Case of Additional Thumb, with distant Hereditary Origin.*

—— B—— æt. 3, Linlithgowshire, was born with an additional thumb on the left hand, which Dr Hamilton removed when she was a few months old. The upper end of the proximal phalanx was left, for security to the metacarpo-phalangeal joint, and has since grown to some extent. It was not much smaller than the thumb which was left. The only other child, also a daughter, is normal.

The mother's maternal uncle (W——) had a thumb of the same kind, which Dr Hamilton has seen. His five sons and five daughters, however, were normal. The mother of the girl B—— is one of a family of four brothers and five sisters, all of whom are normal, and

their children, twenty-four sons and twenty-seven daughters, were likewise all normal, except one of Mrs B——'s daughters, being the case under description.

The occurrence of it in the maternal grand-uncle, indicates the variety to have existed in some generation previous to his. The case shows it to have passed over at least two generations, the grandmother and the mother, and to have reappeared in the third generation in the case of the girl B——.

For this and the five following cases 17, 17 (*a*), 18, 18 (*a*), 19, 19 (*a*), I am indebted to Dr Gibson of Campbeltown, who has most kindly taken much interest and trouble in obtaining and sending me the information.

17. *Case of Additional Digit on one Hand, with Three Phalanges and a Metacarpal Bone; and Additional Digit on each Foot. Direct Hereditary Origin.*

W—— S——, æt. 73, Argyleshire, has, on his left hand, a sixth finger, placed midway between the thumb and fore-finger. It has three phalanges and a metacarpal bone, all clearly felt. It hangs pendulous, not having the power of extension. Its length is $3\frac{1}{2}$ inches, that of the thumb being $2\frac{1}{2}$, that of the fore-finger 4 inches. The thumb and fore-finger are each 3 inches in circumference, the intermediate digit $2\frac{3}{4}$.

He states that he has six toes on each foot, and that the additional toe is placed and formed in the very same way as in the hand. His children, four in number, are without digital variety, but it is hereditary, as fully given with the next case—that of a sister.

17 (*a*). *Case of Two Thumbs, one of them with Three Phalanges on each Hand; and Two Great Toes on each Foot, with an Additional Metatarsal Bone on one Foot. Direct Hereditary Origin.*

A—— S——, Argyleshire, has six digits on each hand and on each foot. The additional digit is on the inner side. One of the thumbs presents three phalanges, on each hand, and one of the additional great toes has a separate metatarsal bone.

The two thumbs are supported on one unbifurcated metacarpal bone. The thumb next the fore-finger is clearly felt to have three phalanges, while the lesser thumb has two phalanges. Both hands are the same. The greater thumb is $2\frac{3}{4}$ inches in length on the left hand, and $2\frac{1}{2}$ on the right; the lesser thumb is 2 inches in length on both hands. The circumference of the greater thumbs on the left and right sides, respectively, is $2\frac{1}{2}$ and $2\frac{1}{4}$, that of the lesser thumbs being 2 inches. The two thumbs are webbed at their base. In each hand, it is the thumb next the fore-finger which is used.

In the *left foot* there are two great toes growing from one metatarsal bone, each having two phalanges, which are distinctly felt. The inner toe is the greatest, is $2\frac{1}{2}$ inches in length and $3\frac{1}{2}$ in circumference; the outer is 2 inches in length and 2 inches in circumference.

On the *right foot* there are six toes very regularly set, and six metatarsal bones. The great inner toe has two phalanges, is 2 inches in length, and $3\frac{1}{2}$ in circumference; the second is $1\frac{3}{4}$ in length, and $2\frac{3}{4}$ in circumference, and has two phalanges. The outer of the two great toes—that next the other toes—is therefore the lesser on both feet.

The variety is in the family. It came through the paternal grandmother, who was a relative of the —— family, in which digital variation exists. This grandmother herself is not stated to have had the variety, but the father of A—— S—— had six toes on each foot and "very long thumbs." Of his seven children, a daughter and three sons have no digital variety; the other daughter has, as above described, six digits on each hand and foot; a son has the great toes double; and the remaining son, whose case is last described, has six digits on each foot and on one hand. This son has four children, who are all normal. Of the other sons, two, who are normal, are married and have fifteen children, all of whom are likewise normal.

18. *Case of Double Distal Phalanx of Thumb, with distant Hereditary Origin.*

J—— H——, æt. 70, Argyleshire, has the thumb on the right hand double at the distal phalanx, while the metacarpal bone, and the proximal phalanx, are single. The distal segment is at first much flattened, and then bifurcated for about half an inch; each has a separate phalanx, and a nail. The distal divided segment remains constantly extended.

None of his six brothers, or eight sisters, or father or mother, had any digital variety. His maternal grandmother, herself normal, was a member of the family already alluded to, among whom such variety exists; and the next case is that of a sister's grand-daughter.

18 (*a*). *Case of Additional Thumb on each Hand, with Additional Metacarpal Bones, and Double Great Toe on one Foot. Distant Hereditary Origin, connected with the preceding case.*

J—— D——, æt. 4, Argyleshire, has two thumbs of equal size on each hand, and a double great toe on the left foot. The two thumbs on each hand have each two phalanges, and also each a metacarpal bone. The two thumbs of each hand possess flexion and extension and other motions perfect, and are equally useful.

The metatarsal bone of the left great toe appears to be grooved

but not bifurcated. Each of the great toes which it supports has two phalanges. They are wrapped in a common integument, except near the point, where they separate. Each has a nail. The phalanges of the outer lie partly upon those of the inner great toe. She has a brother and two sisters, but no member of the family, later than the brother of her maternal grandmother (case of J—— H——, last related), has any digital variety. She is, through the same channel, a distant cousin of the family, already alluded to, among whom digital variety exists.

19. *Case of Additional Thumb on one Hand, with distant Hereditary Origin.*

J—— F——, æt. 8, Argyleshire, has an additional thumb on the left hand. The distal end of the metacarpal bone is bifurcated. The lesser thumb is situated on the inner side, and has two phalanges. It is 1½ inch in length, the larger thumb being 2 inches. The distal phalanx of the lesser thumb remains in the flexed position, and cannot be extended voluntarily. The thumb of the right hand is longer than usual, and is somewhat finger-like.

He has one brother and two sisters, neither of whom have digital variety, nor have the father or mother. The father's great-grandfather is said to have had some digital variety. The thumb on the right hand is longer than usual, and somewhat finger-like.

19 (*a*). *Case of Additional Thumb on one Hand, with Additional Metacarpal Bone. Distant Hereditary Origin.*

S—— M——, æt. 7, Argyleshire, has an additional thumb on the right hand. It has two phalanges and a metacarpal bone, which articulates with the inner side of the metacarpal bone of the greater thumb, near the carpal extremity. The larger thumb is 2 inches in length, the lesser 1½. It begins to leave the greater thumb opposite about the middle of the metacarpal bone of the latter, and its point reaches to the last joint of the greater thumb, along the side of which it lies. All the bones are clearly felt.

She has four brothers and five sisters, who, as well as the father and mother, have no digital variety. A first cousin, daughter of a maternal uncle, had a double thumb.

20. *Case of Six Fingers and Toes, with Interrupted Hereditary Origin.*

I am indebted to Mr J. Jardine Murray, F.R.C.S. Edinburgh, of Brighton, for a note of the case of C—— G——, æt. 12 months, who was born with six fingers on each hand, the additional finger being on the ulnar side, and six toes on the right foot. The sixth toe is on the outer side of the foot, and lies more upon the dorsum

than to the outer side of the fifth toe. Mr Murray removed the supernumerary fingers in July 1862.

A brother has the same variety. The grandmother, on the father's side, had the same variety; also a sister of the father's.

Section 3.—Diminution in the Number of the Digits.

21. *Dissection of Three Limbs of a Child, presenting Diminution in the Number of the Digits.*

The child was born with the right hand presenting only two fingers, webbed together; the right foot presenting but three toes; and the left foot with the fourth and fifth toes united at their base. I was indebted to the kindness of Dr Keiller for obtaining the limbs. I have no history of the case, but have thought it worthy of notice from the opportunity of ascertaining by dissection how far the variation affected the deeper parts—the bones, muscles, and nerves.

(1.) Dissection of Hand.—Externally there are two digits, one on the radial side considerably thicker than the other. It will be convenient to speak of the first as the pollex, and of the other as the little finger. They are webbed to the end, presenting a notch at the end on the palmar aspect. The nails are distinct, but close together. The palm is the same breadth as the forearm, and gradually tapers into the fingers. Both palm and fingers have the usual length in proportion to the forearm.

Bones.—Each digit has only two phalanges, the proximal about twice the length of the distal. There are two metacarpal bones. The four bones of the proximal carpal row are present, the second, or semilunar, small. The second row of carpals is represented by two bones, which have coalesced with, or are prolonged from, the first row. The piece supporting the ulnar metacarpal, corresponds in position to the unciform, and is fused with the cuneiform. The piece supporting the radial metacarpal is fused behind with the scaphoid, and may represent the os magnum, trapezoid, or trapezium, or all three fused together. The bones and joints of the forearm are fully developed.

Muscles.—All the muscles of the forearm are present except one. The pronators and supinators are unusually large, as is also the Flexor Carpi Ulnaris. The *Flexor Sublimis Digitorum* is small, wants its radial origin, and ends in two tendons; one joins the tendon of the deep flexor, which goes to the little finger, the other ends in the annular ligament. The *Flexor Profundus Digitorum* is full sized, and ends in two tendons; one, the larger, ends in the annular ligament, the other forms a strong flexor tendon, going on to the distal phalanx of the little finger. The latter is joined at the wrist by the tendon of the superficial flexor, which is here pierced by the deep tendon, after which the two are incorporated.

The absence of a tendo perforatus proceeding separately to the finger corresponds to the fact of the absence of one of the phalanges. The *Flexor Longus Pollicis* is large, arising also from the edge of the ulna. It proceeds entirely to the distal phalanx of the pollex. It is not joined by any slip, except that, above, the fleshy slip which usually descends to the muscle from the condyloid origin of the flexor sublimis is unusually large.

The short muscles of the little finger are all present with the usual attachments. So also the short muscles of the thumb, with some modification. The Abductor is large. The Adductor arises from the annular ligament. The Opponens is small, much smaller than the opponens (flexor ossis meta-carpi) minimi digiti. The Flexor Brevis Pollicis, undersized, arises from the two sides of the metacarpal bone; the ulnar head appearing like a second interosseous. There is one *Interosseous* muscle for the little finger, along its radial side.

Extensor Muscles.—The *Extensor Carpi Radialis Longior* sends a small tendon to the base of the metacarpal bone of the pollex, and a large tendon to the bases of both metacarpals, chiefly to the ulnar. The *Extensor Carpi Radialis Brevior*, also large, goes to the carpus just above the ulnar metacarpal. The *Extensor Carpi Ulnaris* is entirely wanting. The *Extensor Communis Digitorum* gives a tendon to each finger, that to the pollex only a little the largest. The *Extensor Minimi Digiti* is quite distinct from the latter as a muscle. Its only tendon goes to the little finger, joining with the tendon to that finger from the common extensor, the latter being the larger. Two muscles form the deep layer. One has the fleshy attachments of the Extensor Ossis Metacarpi Pollicis, but its tendon goes to the first phalanx, and is therefore the Extensor Primi Internodii. The other muscle has the fleshy attachments of the long extensor of the thumb, and the extensor of the fore-finger. Besides two tendinous slips to the back of the carpus, it ends in two tendons which join the tendons of the long common extensor. One of them, therefore, represents the *Extensor Secundi Internodii Pollicis*; the other the *Extensor Indicis*, going to the only remaining finger.

Nerves.—The *Ulnar* supplies the ulnar side of the little finger, and unites with the Median for the supply of the radial side of the same finger. The *Median* supplies both sides of the pollex, and is also the principal nerve for the ulnar side of the little finger. The interdigital space receives for its supply, as above described, a series of nerves, three from the median and two from the ulnar, as if the nerves of the wanting fingers had been crowded into the cleft.

(2.) Dissection of Right Foot.—This foot presents three toes, the internal having the usual characters of the great toe.

Bones.—Each of the lesser toes has the three phalanges—the great toe the usual two. The *metatarsal* bones are three in number, the internal having its usual great size. The second *tarsal* row presents a bone for the support of each metatarsal—two cuneiform bones and the cuboid—but the latter is fused with the os calcis.

The part corresponding to the cuboid has a separate bony nucleus, smaller than the nucleus of the os calcis. Of the first row, the astragalus is fused with the os calcis, and the scaphoid is wanting or fused with the astragalus.

Muscles.—The *Flexor Brevis Digitorum* sends tendons to the two lesser toes, that to the external being much the largest. The *Flexor Longus Digitorum* and *Flexor Longus Pollicis* are separate muscles in the leg, but at the ancle form a common tendon, which at the middle of the foot, after receiving a large accessorius, divides into two, one for the great toe, the other for the second toe, which perforates the tendon of the short flexor. There is one *Lumbricalis*, arising from both sides of the long tendon to the second toe, and going to the tibial side of the same toe. Two muscular bundles arise from the abductor minimi digiti, besides the usual tendon of that muscle, and proceed one to the fibular side of the second toe, the other to the tibial side of the outer toe. They are like large lumbricales, or additional short flexors. The *Flexor Brevis Minimi Digiti* is wanting. There are two plantar *Interossei*, one for the tibial side of each of the two lesser toes; and one dorsal, in the outer space, for the middle toe.

Extensors.—The *Extensor Brevis Digitorum*, gives five distinct digital tendons, three to the middle toe, one of which is larger than the tendon to the outer or to the great toe. All the five come, as usual with the tendons of this muscle, from separate portions of the muscle. A sixth portion and tendon passes to the external metatarsal bone, and here represents the peroneus tertius, which is wanting in its usual situation. The *Extensor Longus Digitorum* is small, and gives at the ancle a tendon to join the extensor longus pollicis, the rest of the tendon ending on the os calcis. It is just possible that an intra-uterine fracture of the tibia which had taken place, with angular union, may account for the atrophy of this muscle, but the other muscles of the leg are well formed. The *Extensor Longus Pollicis* is large and separate throughout, except that it receives a tendon from the extensor longus digitorum.

The muscles not alluded to in these notes present their usual arrangement.

Nerves.—The distribution of the plantar digital nerves is somewhat remarkable. The *external plantar* sends a nerve to the fibular side of the outer toe, and a second to both sides of the outer interdigital cleft. The *internal plantar*, which has the usual preponderance in size, sends, first, a nerve for the tibial side of the great toe; second, a branch to the internal cleft which gives off first one and then a second set of subdivisions to the sides of the cleft, the double nerve on each side keeping a plantar course; third, a branch to join with the external plantar in supplying both sides of the outer cleft. There is also a twig from the deep or muscular division of the external plantar, below the flexor brevis digitorum muscle, to join one of the branches of the internal plantar to the fibular side of the great toe. A similarly derived and similarly

placed connecting twig passed from the ulnar nerve to the median in the right hand.

The distribution of the internal plantar nerve, taken alone, would indicate that the wanting toes are the two outer; while the distribution of the external plantar, taken alone, would indicate that the second and third are the wanting toes; but the double apparatus of nerves to each cleft, and their source, is exactly explained by supposing the second and fourth to be the wanting toes.

(3.) Dissection of Left Foot.—The fourth and fifth toes are united at their bases. The foot is in the condition of talipes varus.

Bones.—The bases of the proximal phalanges of the fourth and fifth toes are united in a single piece, and in front of this they are held together by a strong transverse ligament, with an anterior concave edge. Each of the lesser toes has three phalanges, except the fifth, in which the distinction between the second and third phalanges is not evident, but the softness and smallness of the parts render it difficult to pronounce as to this. It has, however, a tendon from the flexor brevis digitorum muscle. The fifth *metatarsal* bone is wanting. The fourth is double sized, broader but not bulkier than that of the hallux, but it presents no trace of duplicity externally, and a section shows one large medullary canal. The *tarsal* bones present no variety, except that the cuboid is narrower than usual, having only one metatarsal bone to support, and that the astragalus is fused with the os calcis.

Muscles.—The fourth and fifth toes receive no tendon from the *Extensor Brevis Digitorum*, and but one tendon from the *Extensor Longus Digitorum*, which divides at the metatarso-phalangeal joint into a tendon for each of the partially united toes. The external tendon of the *Flexor Brevis Digitorum* divides in the same manner at the head of the metatarsal bone to supply these two toes. So does the external tendon of the *Flexor Longus Digitorum*, after crossing the metatarso-phalangeal joint.

The most external of three *Lumbricales* is double-sized and goes to the tibial side of the fourth toe. The first lumbricalis, besides going to the tibial side of the second toe, sends a slip to the fibular side of the great toe. A muscle arises partly with, partly behind, the adductor pollicis, and goes to the neighbouring sides of the second and third toes. Of the two plantar *Interossei*, the external is very large and goes to the fourth toe. The *Flexor Longus Digitorum* and *Flexor Longus Pollicis* form a common muscle and tendon. The muscle splits naturally enough into two, but the outer portion comes mainly from the tibia and partly from the upper part of the fibula, the usual place of origin of the flexor longus pollicis from the fibula being unoccupied. The tendons of these two portions form one indivisible tendon above the ankle, which after receiving the accessorius, divides into four tendons, the internal for the hallux being the greatest, the external, as already noticed, for the two partially united outer toes.*

* It is an error to regard the so-called "Flexor Longus Pollicis" as a flexor of the great toe only, or to consider the presence of a tendon from it to

PART II.—VARIATION IN THE NUMBER OF PHALANGES.

SECTION 1.—DIMINUTION IN THE NUMBER.

22. *Case in which all the Fingers and Toes want a Phalanx, in several Members of a Family.*

I am indebted to Dr Oswald H. Bell of St Andrews for the description and history of this case, and for affording me an opportunity of seeing the boy.

David M——, æt. 18, St Andrews, wants a phalanx in each of his fingers and toes, and has a brother and sister similarly formed. The two hands are precisely similar. The thumb consists of a short metacarpal bone ($\frac{6}{8}$ inch in length) and of one phalanx, $1\frac{1}{8}$ inch in length, the joint between them being loose, as if composed of some soft intermediate tissue. The fore finger is so much longer than the others as to suggest the appearance of a hand in the act of pointing. This is due to the greater length of its metacarpal bone, which is 3 inches in length, while the next two metacarpals are under half that length. The metacarpal of the little finger is just $1\frac{1}{2}$ inch in length, but, from its obliquity, does not project so far as the fourth. The proximal phalanx of the fingers measures, in the index $1\frac{3}{8}$, in the middle $1\frac{3}{8}$, in the ring 1, in the little finger $1\frac{1}{8}$; the distal phalanx, in the index and middle, $\frac{7}{8}$, in the ring and little fingers $\frac{6}{8}$ inch. On the left side, the distal phalanx of the index finger is proportionately shorter. Except in the case of the fore finger, the five digits present their usual relative projection. The metacarpo-phalangeal joints, especially of the index and middle fingers, are considerably sunk behind the web, and are loose, while the joint between the two phalanges does not bend down with the usual degree of angularity.

He can easily seize and retain minute articles as a needle or pin, between the thumb and index finger, and can write with comparative ease. He is a groom, and can drive tolerably well, though he is apt to let the reins slip, as he is unable in the usual way to form the digital hook which the third phalanx naturally completes.

The feet are well formed as far forward as the distal ends of the metatarsal bones. The toes are short, pulpy, and very loosely articulated. The lesser toes have two phalanges each, and are much turned up at the interphalangeal joint; the great toe has its usual proportionate greatness, but, like the thumb, has only one phalanx.

the second toe as an occasional occurrence only. The tendinous slip commonly described as passing between the Flexor Longus Pollicis and the Flexor Longus Digitorum, in the sole of the foot, is nothing less than a tendon from the former to at least the second toe, of good size when the proportionate size of the two toes is considered. It is, normally, the principal flexor tendon of the second toe, and the first lumbricalis muscle is attached chiefly to it. (See communication by the author to the Edin. Medico-Chirurgical Society, "Edin. Medical Journal," July 1863.)

The pads below the anterior end of the metatarsal bones, behind both the great and lesser toes, are more developed than usual. No one would suspect from his gait any deficiency in the feet. He is 5 feet 2 inches in height, healthy and active.

Family history.—He is one of a family numbering ten in all, who were born in the following order. First, a son, and then successively three daughters, all normal. Fifth, a son, the first member of the family who presented the digital variety. Sixth and seventh twin girls, normal. Eighth and ninth, twin boys, one normal, the other whose case is above described. Tenth, a girl, with fingers and toes as in this boy, and, in addition, the feet turned in. Neither Dr Bell nor I have seen the brother and sister who have the variety, but the boy states that their fingers and toes are exactly similar to his. The brother is a clerk, and is said to write an excellent "hand." We have no information as to the ancestors, but neither of the parents, uncles, aunts, or cousins, had or have any deformity.

23. *Case in which four Fingers of one Hand possess but one Phalanx each, the Thumb having two Phalanges.*

Dr Henderson of Fordoun sends me a note and sketch also of the case of A—— W——, æt. 3½ years. The four outer digits of the left hand are short nipple-like processes containing one phalanx each, so loosely attached to the metacarpals that they can be easily twisted round. Each has its little nail. The thumb contains two phalanges, is as large as that of the other hand, projects a long way beyond the fingers, and she makes great use of it.

Her father has an aunt with two thumbs on the left hand, similar to the case of H—— K—— (No. 8).

24. *Case in which the Fingers are formed so as to give the Hand a resemblance to a Foot.*

I am indebted to Dr Grierson of Thornhill for the description, and for sketches of the hand, of this case, a cast of which I had previously seen, obtained through Dr A. Mitchell and Dr A. Simpson.

J—— M——, æt. 16, Dumfriesshire. The hand may be described, generally, as having a remarkable general resemblance to a foot, in the size and straight direction of the thumb, and the little development and outward lessening of the fingers. The sketch (fig. 5) will give a correct idea of the form of the hand. The thumb is the longest and thickest of the digits, and lies parallel to the fingers. It can be abducted, and only half crossed over the palm. It has two phalanges, besides the metacarpal bone. The distal end of the latter extends a little way beyond the separation between the thumb and next finger. The thumb alone has a nail. The next two fingers project for about an inch, the index more, the middle less. The

ring and little fingers appear only as fleshy finger points. There is a bone projecting some way into the index and also into the middle finger, either a phalanx or a prolongation of the metacarpal bone. The fourth and fifth fingers have no phalanges. The fingers have no voluntary motion. Viewed on the palm, the "ball" of the thumb is flat and narrow, but the eminence formed by the muscles of the little finger is prominent.

The other hand and the feet are normal. She is the third child in a family consisting of six daughters and three sons, all the rest of whom, as well as the father and mother, are normal. No such formation is known to have been presented by any ancestor. The mother's story is that in her third month of pregnancy she had a vivid dream that she saw a man killed and his fingers cut off, at her own door; that she told this at the time to her husband and neighbours, and could not for long get rid of the idea of the cut-off fingers.

25. *Case of Five Rudimentary Digits on one Hand.*

Mr James R. Crease of Gateshead, sends me the particulars and a sketch of the case of a female child, M—— J—— T——, ten days old, whose right hand presents a very rudimentary condition. The four fingers are present as mere rudiments, without nails; the thumb is about $\frac{1}{4}$ inch in length and has a nail. After the radius and ulna there are no bones to be felt in the hand, except one supporting the thumb. The rest of the limb is well formed.

Digital variety was previously unknown in the family history. There are three other children, boys, all well formed. An aunt on the father's side, had all the fingers, but not the thumb, of the right hand amputated, but the mother had not seen her for many years. When the mother was three months pregnant, her attention was attracted by a woman singing in the street who had a deformed right hand. For a time she always thought she saw this woman, but had no idea that anything would be wrong with the child.

Section 2.—INCREASE IN THE NUMBER OF PHALANGES.

26. *Case of Additional Phalanx in the Thumb, on both Hands. Probably of Hereditary Origin.*

J—— J—— æt. 21, Roxburghshire, now in Edinburgh, has the thumb on both hands of unusual length and form, as represented in Fig. 6, which is taken from a photograph. In examining the thumbs I was surprised to find an additional joint, giving three phalanges besides the metacarpal bone, the additional bone being placed in the position of a middle phalanx. A case so unusual deserves careful examination.

The metacarpal bone is $2\frac{1}{4}$ inches in length and appears to be quite normal. The first phalanx is $1\frac{3}{4}$ inch in length, and is, therefore, longer than usual. The *additional bone*, occupying the position of a middle phalanx, is broader on the inner, or radial, side than on

the side next the index finger, having a triangular or wedge-shaped figure, which gives the distal phalanx an inclination towards the index. It measures along the radial side $\frac{5}{8}$ inch, along the ulnar side $\frac{1}{4}$ inch, and $\frac{1}{2}$ an inch along the middle. The position of the base of this wedge-shaped additional bone is shown in the sketch by the double protuberance on the radial side. Between these a depression may be felt corresponding to the short shaft between the two articular ends. The distal phalanx is an inch in length. The measurements were made exactly from the joints, avoiding the error of including the knuckle twice.

When the thumb is straightened, its point passes a sixth of an inch beyond the joint between the proximal and middle phalanges of the index finger. The thumb of the right hand scarcely advances so far as that joint. The unusual length of the thumbs in this case is gained by the proportionately greater length of the proximal phalanx and by the presence of the additional bone, while the distal phalanx is a little shorter than usual. At the joint on the proximal side of the additional phalanx there is the usual extent of flexion and extension. Between it and the distal phalanx passive motion is free and readily felt in both thumbs, although it cannot be carried so far as to cause an angle or additional knuckle. Some motion in the lateral direction also can be made at this joint. The utility of the thumb is not impaired. The fingers are longer than usual (their lengths, from the metacarpo-phalangeal articulation, are, fore-finger $3\frac{7}{8}$, middle $4\frac{3}{8}$, ring $4\frac{3}{8}$, little $3\frac{1}{2}$, inches. The whole hand is 8 inches in length), present the usual proportionate length, and have three phalanges each. The great toes present the usual length, size, and number of phalanges. He is of full average stature, his height being 5 feet $9\frac{1}{2}$ inches.

A maternal aunt had the same kind of thumb on the right hand, being the only instance of the occurrence of the peculiarity in any relative of the family. This aunt has a son and three daughters. The mother had three other sisters and two brothers, all of whom, except one of the sons, have families of sons and daughters. The mother never heard that any of her ancestors had it.

REMARKS.

As some of the cases in the hereditary group show the tendency to have passed over at least two generations and then to have reappeared, it is possible that some of the cases recorded as original, may be cases of distant inheritance. But it must have had a beginning in these too. Careful inquiry was made in all the cases, and the previous occurrence of such a thing in the family is pretty sure to be investigated when a child is born with it. The cases one would feel most inclined to doubt on this score, are those in

which it appeared in more than one child of the family, as in cases 1, 8, and 9. In such cases we may suppose the cause which determined the occurrence in one child might equally determine it in another, or it might be held that the first case having occurred spontaneously, the circumstance had operated by an impression on the mind of the mother.

In all the cases of original variation, except in Case 1, and in one of the children in Dr Strachan's case, it appeared on one limb only. It was not to any marked extent on one side of the body more frequently than on the other. The greater acquired strength of the right hand and foot might be supposed to operate on the offspring, but in the above cases it so happens that it appeared rather more frequently on the left side. Throughout the animal kingdom, when one side is more developed than the other, the right side is not selected more frequently than the left.*

The variation begins more frequently on the hand than on the foot. In the non-hereditary group of cases in which it affected either a hand or a foot only, it appeared on the hand in eleven of the cases, on the foot in four cases. The hereditary cases, by multiplying the fact, show a still higher proportion affecting the hand than the foot; and in the cases in which it occurs on three of the limbs, it is on a foot more often than on a hand that the sixth digit is wanting. None of the cases show hereditary transmission of the peculiarity on the feet alone, while the cases of hereditary transmission on the hands only are more numerous than those showing it on the hands and feet. This greater frequency of its appearance on the hand may be connected with the zoological fact that in those mammals in which the digits differ in number on the two feet, the greater number is on the fore foot; or, more generally, with the fact that greater separate use is made of the digits on the hand than on the foot.

The additional digit appears with nearly equal frequency on the outer or on the inner side of the limb. In the non-hereditary group, reckoning the first case as one, it appeared in 7 cases on the outer side, and in 7 cases on the inner side, as an additional thumb. Three of the seven external cases were

* See a paper by the author in the "Edin. Medical Journal," June 1863.

on feet, on the outer side. In the hereditary group, taken as families, it is on the inner side in the majority of the cases. In one family only [cases 17, 17 (*a*), 18 (*a*)] does it affect the big toes. As far as these cases show, it would, therefore, seem to be more common on the outer side of the foot, and, on the hand, more frequent on the inner than the outer side. Were we to connect these facts with those regarding the order in which the toes appear, or disappear, among the mammalia, we would require to consider not only the fact that the inner digit is the last to be added, but that the increase, or decrease, takes place alternately on the inner and outer sides.

On the hand, the additional digit was smaller than the next, always so in the case of an additional little finger, and nearly always so in the case of an additional thumb, but in case 18 (*a*) the two thumbs were equal, and in case 2 nearly equal. On the foot, in cases 12 and 13, the sixth toe is thicker than the fifth, although it has a phalanx less, but the thickness does not seem to depend on the bones. Among the hereditary cases, in case 17 (*a*) the internal of the two great toes is the larger.

Cases of non-hereditary increase in the number of the digits appear to be of not unfrequent occurrence. Most surgeons have met with cases, and it is a common practice to remove the additional digit early. The above cases show that the removal of the digit, in cases in which it is inherited, does not eradicate the atavic influence. But most of the cases of original variation do not appear to transmit the tendency, for, besides the facts mentioned in some of the cases, cases of original variation are much more common than hereditary cases, even reckoning each member of the existing family as a separate case.

Hereditary Transmission of the Variety.—The transmission of a newly acquired variety depends, so to speak, on the comparative strength of the new influence and the prior normal influence; and, if the former prevails, it has, so long as only one parent presents the variety, farther to depend for its continuance on the chance that one parent may exert more influence than the other on some of the young. Thus if not itself at the beginning overcome by

atavism, it is liable to be lost at every new union, and, we should suppose, liable to be worn out at last. The case of the L—— family (case 15) illustrates various phenomena of variation and transmission. (1.) In the line of descent through Andrew L——, we see three successive generations without the variety, and it is apparently extinguished. (2.) In the line through James L——, he and his children were normal, but it re-appears in his grandchildren, having passed over two generations. In case 19, it had passed over three, and in case 16, over at least two, generations. In case 18 (*a*) although the grandmother's brother had it, the great-grandparents had not, so that it had passed over three generations in the direct line and reappeared in the fourth.

(3.) We see uninterrupted transmission in the line of descent through John L——, from Esther in the first (if she was the first), to Jane in the fourth generation. The six-fingered tendency had here maintained itself against three successive unions with five-fingered persons. In the first offspring it succeeded, as far as we know, in only one out of 18. In the offspring of this one (Charles L——) it succeeded in 3 out of 12. Two of these three did not transmit it to the next generation; the third transmitted it to one of two children, thus directly continuing it to the fourth generation.

It is interesting to notice, too, how the variety, so far from being weakened, had gathered force in each new generation, even although it had not the advantage of the greater development attending utility, to enable it to increase its hold on the organism. In the first known ancestor (case 15) it occurred on one hand; in the second generation on both hands; in the third on both hands of two brothers, and on both hands and one foot of a third brother; and in the fourth generation on all the four limbs; thus, so far from becoming weaker, making its way to an additional limb in each successive generation.

Besides thus extending itself symmetrically and serially, it may extend in depth, beginning as one phalanx and extending at length to the metacarpal or metatarsal region. In some of the cases of original variation, there was only

one phalanx, in most of them two phalanges. Among the hereditary cases, in case 19 (*a*) there is a metacarpal bone besides two phalanges; and, in case 18 (*a*), the same occurs in both hands, while on the six-toed foot it has not extended to the metatarsal bone. In case 17 (*a*) one of the thumbs on each hand presents three phalanges without an additional metacarpal, while the two great toes have, on both feet, two phalanges each, and one foot has an additional metatarsal bone. In case 17 there is an additional metacarpal bone and three phalanges. We do not know how it was with the ancestors of these cases, but in none of the cases of non-hereditary variation did it extend so deeply into the limb.*

When the variety is transmitted it is on the same side of the limb. In case 15, the additional digit was external, both on the hands and feet, in all the ramifications of the descent. Also in case 20. In cases 17, 17 (*a*) 18, and 18 (*a*), in which the variety is derived from a common ancestor by different lines of descent, it is on the inside of the hand or foot, or on the inside of both hand and foot. Also in case 16. In none of the cases was it external on one limb and internal on another limb of the same person, or in the same family. In case 8, of two children in the same family, one had an additional little finger, the other an additional thumb, but the case is one of the non-hereditary group, and there is the curious fact that they were the children of different fathers, though of the same mother. The influence of sex does not appear to any marked extent in the hereditary transmission in the above cases.

Diminution in the Number of the Digits.—Diminution in

* When the additional digit is supported, as it generally is when well formed, on one end of a more or less bifurcated metacarpal or metatarsal bone, it might be supposed that this indicated the original presence of an additional metacarpal or metatarsal bone, which had become more or less confluent with the next, as in the development of the metacarpus and metatarsus in the ruminant. But while this can be easily shown in the ruminant, there is no proof that here there is anything but a more or less extensive bifurcation of one bone. In the dissection of the left foot in case 21, in which the fourth and fifth toes were partially united and supported on one metatarsal bone, the fifth metatarsal being wanting, the fourth metatarsal was twice the normal thickness, but presented no trace of double origin, externally or internally, although the foot was that of a new-born child.

the number of the digits appears to be a much less frequent variation than increase, both in man and in mammals generally, although many mammals have normally less than five. Among these the occurrence of an additional digit is generally but the development of the concealed rudiment of a suppressed digit. In man, although he normally possesses the full mammalian number, the tendency is to farther increase rather than to decrease in the number.

Variation in the Number of Phalanges.—In this group of cases there was diminution of the number of phalanges in four cases, in none of which was it hereditary, although one of the cases embraces two brothers and a sister.*

From cases 23, 24 and 25, in which the fingers were more or less rudimentary, while the thumb was either not at all or less reduced, it would seem as if the thumb were the last to suffer reduction. Two cases have been mentioned to me, however, although I have not seen them, in which the thumb alone is wanting, in one of the cases on both hands. Homologically considered, we would expect

* See a case of hereditary transmission of deficient phalanx by Alf. Robert, mentioned in an able paper by Mr Sedgwick "On the Influence of Sex in the Hereditary Transmission of Disease" (*Brit. and Foreign Med. Chir. Review*, April 1863). Also a case by Dr Kellie of Leith (*Edin. Med. and Surg. Journal*, 1808, p. 252); but the mother's statement that it had been transmitted for ten generations must be received with caution, when we consider what ten generations implies. Among the more interesting cases of hereditary transmission of increased number of digits on record are—The case of the Maltese family, by Commander Godehew (*Mémoires de l'Académie Royale des Sciences*, 1751), more fully related by Reaumur (*L'Art de faire eclorre et d'elever des Oiseaux Domestiques*, tom. ii. p. 377): The case by Sir A. Carlisle (*Philosophical Transactions*, London 1814, p. 94): A case by Dr Crawford of Peebles (*Edinburgh Monthly Journal of Medical Science*, Oct. 1851, p. 356): A case by Mr J. B. Thomson of Perth (*Edin. Medical Journal*, 1858–59, p. 502); and a case noticed in "Medical Times and Gazette," Dec. 20, 1860, from the "American Medical Times," possibly a branch of the family whose case is related by Sir A. Carlisle. On this subject may be also consulted, Haller (*Elementa Physiologiæ*, t. viii. pp. 97, 98, 99, 1766): Morand (*Mem. de l'Acad. des Sciences*, 1770): Isodore Geoffroy St-Hilaire (*Histoire Générale et Particulière des Anomalies de l'Organisation*, 1832–36): and A. W. Otto (*Monstrorum Sexcentorum Descriptio Anatomica*, 1841). The oldest recorded case is that of one of the sons of the giant of Gath (2 Samuel, ch. xxi., v. 20; and 1 Chronicles, ch. xx., v. 6) who had six fingers on each hand and six toes on each foot. Pliny notices two cases, among the Romans, of six fingers on each hand (XI. Book, ch. 43). Anne Boleyn is said to have had six fingers on each hand.

the thumb to be the first, teleologically considered, the last, to suffer reduction.

Increase in the number of phalanges occurs in the thumb only, or as in cases 17 and 17(*a*), in the digit serially corresponding to the thumb when six digits are present. None of the cases presented a higher number than three, the full number in the mammalian type. Case 26, in which, without any increase in the number of the digits, the thumb presents an additional phalanx, is a very remarkable one when we consider the mammalian law. It may have been the same in the father of cases 17 and 17 (*a*), who is described as having had very long thumbs, while his son and daughter had three phalanges in the corresponding digit, and a thumb with two phalanges added by its side.

On the absence of a Bone in the Thumb and great Toe, as compared with the other Digits ; and on the Nature of the "Metacarpal" or "Metatarsal" Bone of the Internal Digit.

The occurrence, normally, of a bone less in the thumb or great toe than in the other digits, is part of a law exemplified in the inner digit of all five-toed mammals,* and may be supposed to find its explanation in the fact that the internal is the small toe, and the one which has disappeared when the number is reduced to four. Whatever be its meaning, this law is maintained in the few cases in which the internal digit undergoes great teleological development, as in the seal and walrus,† in which the internal digit is longer and thicker than the three middle digits, and in

* This law is not without exception in cases of variation, as in case 26; and I have lately been presented by Mr Robertson of Kelso with a pig's foot, presenting five toes, in each of which there are three phalanges besides the metacarpal bone.

† I have seen a skeleton of the walrus with three phalanges in the pollex, but on trying with my penknife, I found one of them to be a piece of wood. In the skeleton of a seal I once saw three natural phalanges in the inner digit, but the first and fifth toes had been transposed. The phalanges and metacarpals and metatarsals of the seal are arranged and developed exactly as in man, and the presence of only two phalanges in the pollex and hallux is easily felt in the living seal.

man in whom the great toe and thumb are the most important of the digits. As the erect posture requires a great toe on the inner side of the foot, and a long one, the phalanges of the inner digit are, accordingly, developed in length as well as in thickness. The thumb, again, being better adapted for opposition by being shorter, is developed in thickness, and still retains its character as the shortest digit.*

It has long been a subject of discussion in human anatomy, whether the absent bone in the thumb and great toe is a phalanx or a metacarpal or metatarsal bone. The view that it is the middle phalanx which is wanting is supported by the arrangement of the muscles,—(*a.*) by the absence of the tendo perforatus; (*b.*) by the attachment to the first phalanx of the short muscles which correspond to the short muscles of the little finger, which are attached to its first phalanx; (*c.*) by the attachment to the metacarpal bone (with its resulting prismatic form) of the muscles which correspond to those which are attached to the metacarpal bone of the little finger; and (*d.*) by the position of its metacarpal bone in the metacarpal range.

Opposed to this view is the one fact, that the so called metacarpal bone of the thumb is developed like a phalanx, having its epiphysis at the proximal end, while the other metacarpal bones have their epiphyses at the distal end. The discussion stood there, the difficulty being to say what value should be given to the developmental fact. There might be some special reason for the changed position of the epiphysis, although it would be very difficult to suggest any such reason, either on the longitudinal growth, or on the elasticity, theories of the use of epiphyses, especially

* I have been in the habit of pointing out the interesting fact, that the relative length of the digits on the human hand indicates the order in which the digits disappear in the downward progression from the five to the one toed mammal,—the internal disappearing first, next the external or fifth, next the index or second, lastly the ring or fourth,—the extreme digit disappearing on alternate sides, beginning on the inner, until the middle digit alone remains in the foot of the horse, as demonstrated by Professor Owen in his work "On the Nature of Limbs." Nor need this correspondence be regarded as a mere coincidence, when we consider the relative function of the digits in an ordinary five-toed limb. The exceptions presented to this, in the human foot, and in the lateral toes of the pinnigrade carnivora, are special adaptive modifications of certain digits.

in the case of the great toe, the distal end of whose metatarsal bone is the most developed. Comparative anatomy, however, sets this question at rest. I find that the distal position of an epiphysis on a metacarpal and metatarsal bone, and its proximal position on the phalanges, belongs to other mammalia as well as to man, and is adhered to notwithstanding the most varied proportionate size which the two kinds of bones, or their two ends, attain.* In the horse and ruminant, in which the great metacarpals and metatarsals attain enormous size, they have still only one epiphysis, while the radius and humerus have an epiphysis at both ends; and the metacarpals and metatarsals have their epiphysis distal, while on the phalanges it is proximal. The short and flat thigh-bone of the seal has epiphyses at both ends, while the greatly elongated metacarpals, metatarsals, and phalanges, have but one epiphysis each, placed as on the corresponding bones in the human hand and foot. A still more striking example of this law is presented in the development of the rudimentary metacarpals and metatarsals of the horse; the large upper ends of which, serving an articular function, are developed without an epiphysis, the epiphysis being kept for the little "button" which terminates the tapering lower end. The more we compare the muscles of the two limbs, and in the limbs of different animals, the less dependence do we place on their attachments for the determination of homology; and the above facts in comparative osteogeny show, that the position of the epiphysis is decisive in establishing the view that the bone which is wanting in the human thumb and great toe, and in the internal digit of other five-toed mammals, is the metacarpal and metatarsal, although custom and convenience lead us to apply these terms to the bone which homologically is the proximal phalanx.

* The cetacea present an exception to the mammalian law of three phalanges, in the occurrence of more than three in the longer digits of the paddle, making an approach in this respect to the digital type of the fish. I have observed that the cetacean digits present another exception in the presence of epiphyses at both ends of each phalanx, and also at both ends of the metacarpal bones. In contrast to this, we have the great distal phalanx of the horse, ruminant, pig, and some others, developed without an epiphysis, while in man it is present on the distal phalanx also.

F.1r

see account of Hirsch Daenemark in
Procter Lucas. I, 413-419

3, Clifton Road,
St John's Wood. N.W.

May 20. 1873

Dear Sir,

Your letter of yesterday relates to a subject so interesting as to make me wish that my present state of convalescence did not compel me to confine myself to a few observations.

The feat of memory to which you allude, was not performed by my father, but by a Polish Rabbi, whose name I think was Hirsch Norwegen, and who was popularly called the "Schas-Pole", i.e. the Talmud-Pole ("Schas" being composed of the initial letters of the Hebrew words meaning "the six sections" of the Talmud), and who, travelling through the principal parts of Europe about the year 1840, astonished even such men as Zunz in Berlin, Rappoport in Prague, and Luzzatto in Padua. He was not only able to tell the words which a pin, thrust through one leaf in any part of the Talmud, would pass-on the next, but on any number of subsequent leaves.

But my dear father also had indeed a very remarkable memory: when he was seven years old he could say by heart the whole of the Pentateuch in Hebrew, verse by verse, together with the remarks of the principal Commentators Jarchi, Ebn

Ezra, and Rashbam; and throughout life — he died two years ago at the age of 77 — his knowledge of the vast Talmudical and Rabbinical literature was such, that he was constantly appealed to for ob pointing out the sources of obscure references or allusions, and in fact he seemed never to forget anything — whether places, persons, facts, or ideas — with which he had once become acquainted.

My little boy began his lessons when he was five years and a half, and after six weeks, with two hours instruction a-day, and no taskwork, he was able to read fluently, to write tolerably, and to manage the four rules of arithmetic with some facility. I pass over the other details of a similar nature, and will only observe that a year ago, alarmed by the progress he made at home, I sent him to a good grammar-school in this neighbourhood, with urgent injunctions upon the Lead-master to keep back the boy as much as possible: he is now just ten years old, is the fifth boy in the school, and in Latin and Greek the first, and reads Horace and Homer without difficulty. I shall, of course, be obliged to remove him from the school very soon, for I must find means to give rest to his brain, although there is nothing of that kind of precociousness

F.2

about him which seems to imply an unhealthful and abnormal condition. But as my poor father joined with his memory a peculiar power of subtle combination and keen humour, so my boy adds to it a remarkable clearness of thought and general intelligence, and his judgment on works of art and literature is not seldom surprising.

My father was an only child; I have a brother and a sister (twins); the former is not married, the latter has two daughters of good average ability.

Assuring you that I should be happy to give you any information that might be useful or interesting to you, I am

Yours faithfully

M. Kalisch.

f. 1r

25 Wilton Crescent
Feb 13.

Dear Mr Galton

In your very interesting work "Hereditary Genius" at page 121 will you allow me to point out the omission of a woman. It is under Lord Castlereagh's administration

F. IV

Sir George Hamilton,
G C B. should be
Sir Geo: Hamilton Seymour
G.C.B =

I also take the
opportunity of
mentioning that
in the list of
Judges I do not
see Ryder Sir D.
Ch. K.B. Geo 2d

who died upon
his patent of
peerage was com-
-pleted but I
believe he had
been on the bench
a year or two -
The peerage (Har-
-rowby) was given
to his son / who
in consequence
took the motto

F.2V

Servatus pides
civiori His prand.
- ion having been a
statesman of some
distinction as well
as he is on the present
rest being so. con-
- tributes to strengthe-
- ning your theory
I shall me
trust yrs
F. D. Chichton Stuart

Doncaster
June 20 1870.

Sir

In "Hereditary Genius" you would have mentioned I think, had you known the fact, that our late Vicar now Master of the Temple is a descendant of the Philip Henry p. 290. My authority is a MS

volume of Pedigrees com-
piled by the late
Mr Joseph Hunter F.S.A.
entitled "Stemmata?
Minorum Gentium"
among the Additional
MSS at the British
Museum, if I am mistaken
not N° 24458.
The volume is a storehouse
of information about

the descents of non-
conformists & others,
and I think would
interest you.

I am Sir
Yours obediently
John Sykes M.D.

Francis Galton Esq.

The Bishop of Ripon is a
descendant of the Pares family.

Philip Henry = an ejected minister

John Tylston = Catherine

M.D. of Whitchurch & Chester d. 1699

John Tylston = Eliz. th Colley

Adam Lightbody = Eliz. th

John Pares = Agnes died 31 Aug. 1812

of Leicester

..... = Agnes

Vaughan

Catherine = Bickerstith

Edward Lucy Charles

Doncaster
July 9 1870

Dear Sir

I believe the
MS of Mr Hunters that
I pointed out to you
is entitled not "Stemmata
but "Familiæ minorum
gentium" — Families
of lesser gentry, yeomanry,
professional men &c.

In it you will find numerous prejudices of Dissenters, and in other MSS of Mr Hunters much biographical information. He was a laborious enquirer in family history and biography, and has left an invaluable lot

of notes on these and
kindred subjects which
are fortunately accessible
at the Museum.

The subject that I am
curious about, as a
genealogist, is the
Jewish descent of
some of our English
families. There must
be many such if

we only knew them.
The present Minister
Rt. Hn Childers is a descendant
of Lord Eardley or Sir
Gideon Sampson, a
Jew. Many such
instances there are
doubtless. This enquiry
might furnish a
chapter for a future
edition of "Hereditary Genius"
Yours faithfully
John Sykes

F. 1r.

Richmond Road
Shalvern Link.
Oct. 19th / 75

Dear Sir,

May I be permitted to add an item to the mass of statistics which you have brought to bear upon the theory - or Law - of Hereditary Genius?

The Senior Wrangler at Cambridge in the year 1870 - or 1871 - I forget which - was Mr John Hopkinson, of Manchester; and as you will see by the slip I enclose, equal distinction

at the University of Oxford was attained, a year or two later, by his brother Alfred Hopkinson. He was second, I believe, on that year's list. But the contest was so severe that the number of marks he gained exceeded that of many who in other years had stood first.

Another instance of hereditary talent which has come under my observation is that of the two brothers, Henry and Albert Moore, artists; both of

whom hold a distinguished place among living British artists. The father was an artist of lesser note, as also three elder brothers.

Pray pardon my sending you these minor illustrations of ~~a~~ Paisley which to me appears so ely. evident that confirmation can hardly be required. May I venture also to express the very great interest with which I have just, for the first time, read your

work upon the Subject?

I am,

Very truly Yours,

Mary E. Pabor.

Miss Mary

HAMPTON LUCY,

WARWICK.

24 June. 1898.

Dr. sir,

In your "Hereditary Genius" you say it would be exceedingly interesting to know more of the children of Wm. Whitaker (1547-1595). In Tucker's "English church in other lands" Longmans 1886: p. 8, he says that "Whitaker the son of a master of S. Johns" "Wh. Wm. Whitaker was — not of Queens' as mistakenly printed in

the paragraph in "Hereditary Genius" — was an influential member of the Virginia Company.

and, secondly, in K. L. Bates' "American Literature" macmillan, 1898, she says that Rev Alexander Whitaker (15-83 — 1617?) was "the apostle of Virginia" and "had no successor." "He would have been the Eliot of the Chesapeake Indians, but his day of labor was cut short." It seems certain that

the one first mentioned was
a son of Wm: and almost
certain that the other - to
use an Irishism - was, in fact
the same person, a brother.
and Arthur as he was
born in 1583 and Wm.
the master d. Johnie died
in 1595 æt. 48 - he was
probably a son of the first
wife who was maternal
aunt to Wm. Gough and
whose hereditary chancels
were so high. all this
refers to p. 28 of the
1892 edition of your
Book. should you find
out any account of the
"apostle of Virginia" I shd
be very grateful for the

reference on a p. card.
I don't know whether
it is merely a coincidence
that there was
Whitaker at St. John's
first in the first
class of the Classical
Tripos, 1870, afterwards
Chancellor of Truro
Cathedral, and later
Dean of St. Johns.

Believe me
yours faithfully
(Rev.) G. W. C. Ward.

I am aware that somewhere
you say ones immediate
ancestors are more interesting
than remote ones as to heredity
- but no doubt heredity
keeps cropping up for
centuries.

HAMPTON LUCY,

WARWICK.

11 July. 1898.

Dear Sir,

I have lit on the
some information I wanted
and though it is now
only of secondary practical
interest to you I send
it. Mr. Whitakers
was, as seemed so
probable, the son of
Dr. W. Whitaker, master
of St. Johns, Cambridge:
though by which ~~me~~ wife
I dont know.
This is stated in
Samuel Wilberforce's

History of the american
church. Pub. Burns. 1844.
Ch. 1. S. Wilberforce's
authority for what he
says about Whitaker
is Hawks Virginia,
p. 28.
Nicholas Ferrar it seems
it was who called Whitaker
the "apostle of Virginia."
Hawks quotes W. Crashaw
(probably W Crashaw father
of the Poet) as praising
~~his~~ Whitaker's
self denial and
affability. It was
Whitaker who

baptized the native
princess Pocohontas,
so celebrated in John
smiths experiences.

I am sorry you have been
obliged to supersede
Hereditary Genius in your
present researches as I
am sure this is a little
addition like the above
named one.

Believe me
yours faithfully =
G. W. C. Ward.

Watson.

The Rectory,
Berkeswell.

Ld. 7/80

My dear Galton

Thank you very much for the handsome volume which has just arrived & let me tell you how very glad I am to hear that Darwin has often so affectionately

— I planned first very ill of a little natural anxiety, at your chapter on mathematical training. Will you allow me a few remarks upon it, and I the

intention of departing from the tone of
~~[illegible]~~ disparagement in which it is
written for indeed I have long agreed
with a good deal of it, but because I think
the more you there advance hitherto a hostile
~~[illegible]~~ attempt in your ~~[illegible]~~ speculations on
hereditary traits in these matters – I mean
that you do not allow perhaps sufficient
importance to the influence of associations
& surrounding circumstances on the
determination of a man's career & to the

time of University degree. For myself I
can as confidently ~~[illegible]~~ conjecture as
I can of anything that has not happened
that if I had been the son of a moderately
well to do clergyman or barrister, or even of
a man moving in any extent in educated
society I should have gone up to Cambridge
duped ill a school reputation for classics
& mathematics & should have done well
in the classical tripos - perhaps not so well
as in the mathematical & not have perhaps been
put in for fellowships -

The fact stands out that my father
was neither a recluse, not much educated

I learned [illegible] from [illegible] and [illegible]
we may [illegible] about 15, ~~Capt [illegible]~~
If he had been sent I must say to Rugby
However but to send a school as Merchant
or St Paul's, or Marlborough I am confident
from my recollection of my actual school
days that I should have been what is called
a very promising [illegible] - At least my
[illegible] at school was that I was always
A. 1. in [illegible] was remarkable for [illegible]
in arithmetic - Now there must be many
cases similar to mine - I have known
[illegible] many [illegible] conversa- - there men have
come to Cambridge with special reputations for
[illegible] in [illegible] - sometimes succeeded & sometimes
not, but there their real test was towards the

F.3r

The Rectory,
Berkeswell,
Coventry.

Feb 26. 1877

My dear Galton

I have delayed thanking you for the inclosed in the hope that I might possibly be able to make use of them, but I fear this is impossible, so I return them with best

should be deprived of the ultimate
use of them.

We have just published our
Trifles with a very elaborate
list of subscribers which has been
most pleasant to us.

As you are interested in
general questions of science you
will I think like to hear that
I shall now my own separate
working of the first seven &
two quite astonished to find that

At the exception / the 3rd ranges
Rowe / who hardly took in the lighter
plyers Therefore fell comparatively
(being in my papers) the men came
out - almost (a bracket - i the
order of the final list. Then the
Mr Coles were

Final		Walton	
Mc Alister	6597	— Mc Alister	17 4 7
Gibbons	6182	5th { Gibbons	15 8 1
Rowe	6083	{ Smith (P	15 4 3
Smith (P.	5693	{ Coales	12 9 4
Knight }	5602	{ Wilson	12 8 1
Coales }	5373	~~10 6 9~~	
Wilson }	5429	{ Knight	11 1 3
		{ Rowe	10.6 9

the only difference being that Knight falls
below the bracket & Mr Smith rises

Burlington St
Monday

very dear Galton

Ld Balhurst
the Chancellor was
the younger & not the
elder brother as I felt
certain before ascer-
-taining it. You still
appear to me to overlook
the immense part of
indolence in the world

where no necessity
controls it— That some
men who need not
work, like Sir R Peel, have
been laborious is true.
But you much mis-
conceive the real life
of Parliament, if you
imagine that exertion
is in proportion to
ability. Men frequently
begin, succeed, & meet
with adequate encourage-
ment, but have not

her sobriquet to conceal
such was the case
on the last century
with Hamilton, Horace
Walpole. it is now
with Sir J. Ramsden
Henry Cooper, Hallbyd.
Horsman often celebrated
for months. the other
day. thos died at
Brighton the Rev
Chas. Townsend
who never published
anything; but was
known for his sonnets

oh all deemed superior
to Wordsworth— the fact
is men are not born
with equal natural
& acquired (by nature) extensive
(by want) powers. Some cannot
therefore be a measure
although it is of course
a consequence of talent
that Shakspeare should
possessed 500 £ a year
a piece he would not
have seen Othello or
the Rivals. If Structure
& denouement & accuracy of
your principles, it is

only wider than
Scott's Lay of the Minstrel
Scott's success
Campbell's