

**Michael Foster
and
Thomas Henry Huxley,
Correspondence, 1865–1895**

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Huxley Papers 4:163

Huntingdon

Dec 27 [1867]¹

My dear Mr Huxley,

Some little time ago I obtained possession of parts of a human skeleton found about two feet below surface in the fen peat near Chatteris, accompanied by no works of art or signs of burial. The remains are unfortunately very fragmentary – hind part of skull, portions of pelvis, long bones, vertebrae &c.

I see nothing particularly remarkable in them, & their position in the earth was quite compatible with a comparatively little as well as a rather great antiquity.

I am rather inclined however to think, from their condition etc. that they are not quite of yesterday.

If you would at all care to see them, I will bring them with me when I come up to town – which I hope will be very shortly.

Believe me

Yours ever truly

M. Foster jr

¹ Although this has been dated to 1867 in Warren R. Dawson, *The Huxley papers*, London, Macmillan, 1946, it is undoubtedly an earlier letter, given its formality.

2

Huxley Papers 4:151

[1865]

May I offer you a little hash, Mr Huxley?

I tried to give a regular account of Playfair's¹ shy fit for your aft cabin. But found that it would be wrong to enlarge upon it without criticism – & my criticism became so biliosa that I gave the thing up in despair. I then tried a more popular thing & adapted to your fok'sel to which I send you. It does not contain much about Playfair but I dare say it won't be any the worse for that. If it is, pitch it into the cloacina. I will look after Fick² & if I can make anything decent out of it will send it you very shortly.

By the bye talking of emancipation, don't you think science wants a little heroic striking off of fetters? I mean of course you do but don't you think something useful might be done by comparing in the Reader³ the scientific work done by Englishmen, with that done

1865

by furriners during the last 30 years, shewing the influence of fetters? In Physiology at least we should look very small.

Believe me
Yours ever
M. Foster jr

¹ Sir Lyon Playfair, FRS (1818–1898), British scientist and politician.

² Adolf Fick (1829–1901), German physiologist.

³ A weekly paper, *The Reader: A Review of Current Literature*, was established in January 1863 to promote open discussion of scientific and religious subjects. This was the forerunner of *Nature*.

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Huxley Papers 4:148

[1865]

My dear Captain

I can't make anything very suitable out of Fick – especially since the subject is closely allied to Heidenhain's¹ & I fear that Readers would get bored with too much muscle & nerve.

So to the other matter, I don't feel able to write on science in general – and besides, would there be much use in a single article? I should [*sic*] to see a solemn procession of representative articles from mathematical through physical, chemical, anatomical etc. to physiological, each singing a mournful song, & giving abundance of particular & personal facts. This would be more likely to shock the public than a single article on physiology alone for instance which would be put down to individual spleen or envy. However if you w^d like it, if I do not hear from you, I will send you a few ideas soon.

Believe me
Yours ever
M. Foster Jr

T. H. Huxley Esq.

¹ Rudolf Peter Heinrich Heidenhain (1834–1897), German physiologist.

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Huxley Papers 4:150

Huntingdon

July 1 1865

My dear Captain

I herewith send you a bit on “ourselves”. May the blessings of old Comte¹ go with it! In the first thing I ever read of yours, (ages ago!) you riled me so much by calling that old fellow a book-worm. Even now I don’t think you do justice to the blear-eyed little old prophet, whose breeches a certain H. S.² is trying to put on with a very large patch & a still larger hole visible on them.

You don’t happen to have half a dozen Taeniae by you do you? I find those gentlemen, as likewise the Lumbrici³ contain a thundering lot of glycogen – & fancy some wrinkle might be got out of them. Unfortunately I am short of them – having prodigally wasted in riotous boiling the only one I had by me.

Yours ever

M. Foster Jr

T. H. Huxley Esq.

If you are in a great hurry for copy, I don’t care so very much for proofs for either the Reader prints or I write most admirably well.

¹ Auguste Comte (1798–1857), French philosopher, founder of Positivism.

² Herbert Spencer (1820–1903), English evolutionary philosopher and man of letters.

³ A species of sea worm.

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Huxley Papers 4:153

Tents of Kedar

Oct. 22nd 1865

Βιολογιστικῶν Ποίμεν!¹

I herewith send you a little “jaw” for you to do with whatever seemeth unto you good.

You were cruel enough some little time ago to threaten to set Lewes² and the Fort-nightly upon me. That fierce man has as yet made no attack upon me, though I am in a

most favourable state for entirely succumbing to him – or rather shall be as soon as I have finished two or [*sic*] articles I am doing for Watts' Dictionary of Chemistry.³

I think as soon as I have done them, I shall assume the offensive myself under your shield.

I am grieved to hear that you have given the Reader bound over unto Satan.⁴ (I hope I have not put my foot into it here or else I shall begin to think I having [*sic*] a knack of reviling your friends).

You were so good as to like the last thing I sent you. Between yourself & me and one or two posts, I fancy I have one poor talent that of teaching – and that is at present wrapt up very tight in a dirty napkin. I only wish I were obliged to throw the napkin away.

Please don't go & write a long letter in return. A poor devil like me can afford time to write a letter now & then but I am sure you can't.

Yours ever very truly

M. Foster jr

¹ Βιολογιστικῶν is a made-up word and means "in matters of biology". In its usual meaning the word Ποίμην translates as "shepherd". However in Foster's context the idea of "shepherd" has the connotation of guide / leader / authority figure who guides the (learned community) flock.

² George Henry Lewes (1817–1878) editor of the *Fortnightly Review* 1865–6, naturalist, critic, and man of letters, and consort of the novelist George Eliot.

³ Henry Watts, *A dictionary of chemistry and the allied branches of other sciences*, 5 vols, London, Spottiswoode, 1868–1871.

⁴ The anthropologist Thomas Bendyshe (1827–1886), an atheist, took over *The Reader* in August 1865, see Desmond, *Huxley*, p. 343.

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Huxley Papers 4:155

Huntingdon

Nov 29 [1865]

My dear Captain

Many thanks for your letter and for your kindness in putting glycogen on the shelf where I wished it to be. I have been putting off this letter because I had some hopes of a tapeworm, but it has not turned down. As to the respiration of the *Ascaris*, I have noticed a fact which may interest you that the abdominal or somatic or whatever you like to call it fluid is what Schönbein¹ calls an ozonizer, that is it acts just like the red blood of vertebrata & white blood of invertebrata (to wit of a snail, to my knowledge & probably of other beasts too) in blueing guiacum etc. in conjunction with peroxide of hydrogen turpentine etc. It is the part of the animal to do this. I dare say it would alone blue guiacum under proper conditions but I have not managed that yet. Hence said fluid may be regarded as a respiratory (oxidative) fluid.

1866

Hercules forbid that you should run any risk of getting nabbed by Lewes² while making excursions on my behalf and please don't.

And please do write me a very long letter (since when I say don't you always do) for I hope to get an inspiration of wisdom and an expiration of rusticity by running up to London in a week or so – & may behold your face.

Yours ever truly

M. Foster jr

¹ Christian Friedrich Schönbein (1799–1868), German chemist.

² See previous letter.

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Huxley Papers 4:157

Charmouth
Dorset
Aug 20 1866

My dear Shepherd

I send you back this sheet¹ because at p 128 line 1 – you put 8 or 9 oz of O coming into body through lungs. The sentence before would lead the reader to suppose that you had calculated it from the CO₂ – as if the oxygen inspired were a little more by weight than the carbonic acid expired – whereas the oxygen inspired is a little more by weight than the oxygen of the carbonic acid which is itself equal in the volume to the carbonic acid which it is condensed to form. Wouldn't 10–12 oz be nearer the truth?

Item. Fig 26 is not a very good one – as far as I can see, the line attached to b seems to end not in a medulla but in the part between two, where it is monstrously wide – but I suppose the figures are done for.

Item. Fig 28^B the elementary reader would wonder where the b was pointing to.

Item. p 120. § 17 – “every reason to believe” – is not that a little too strong – as to urea in sweat, it's a puzzle – here's Ranke² swears 1st that sweating makes no difference to urea in urine though it effects the NaCl tremendous 2nd that in a good swill of sweat with a hot air bath there wasn't a jot of urea! Yet Funke's³ exps can't be poopooed – still the sentence certainly does not demand alteration.

Item. p 126 I have struck out “fatty”. They do not belong to the series of fatty acids technically so called – and there does not seem to be any advantage in calling them fatty here. As to the plan of the book it is wholly after my own heart – I'm so glad you have thrown overboard the confounded “functions” & gone into the book keeping debtor & creditor line. I am sure that's the way to handle at least human physiology.

I think the execution too in one sense admirable. You have said first what ought to be said – & left unsaid what wasn't wanted. Small as the book is, I can already see that you

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will get into it what the student will never learn from Carpenter,⁴ nothing withstanding his exhaustive references to “recent investigations”. The way you have dovetailed the anatomy in, is the most praiseworthy. But I have great fault to find with your style. You can write in the most lucid transparent way, witness your popular lectures (& sermons) – that little book on origin of species is splendidly easy. Of course here you have had to write in a very condensed way – and that’s the dickens the pay & takes more steam out of a man than anything else – and you appear to have put everything straight down & left it untouched – you haven’t given yourself any trouble or time about the style. On the whole I am sorry for it – the elementary reader is apt to think a difficulty in the construction of a sentence a difficulty in meaning – for him if for no one else everything should be as straightforward as possible so that all his mind may be led at once to the subject matter. As old Sharpey⁵ says “no sentence should need to be read twice in order to make out the grammatical meaning”. Now I am sure a good many of your sentences are tough bits, & “no offence I trust marm” I doubt if some of them are good grammar.

No one writes grammar by nature (witness this letter, writ under disadvantages) – & I guess you wrote the book at a very smart pace.

In this sheet I sent back to you there are many alterations I should like to make – but I respect your feelings touching Clay.

Alas I shall not be at Nottingham⁶ – my father has sent my wife and me down here as we thought Huntingdon was working upon her again – I expect to return home in a few days leaving her here. I have been talking with my father about leaving Huntingdon and he quite thinks with me that it is the right thing to do – but what else I shall do is at present by no means clear.

Trust you will have a good meeting – will send t’other sheets in a day or two.

Yours ever

M. Foster jr

¹ Comments on Huxley’s *Lessons in elementary physiology*, London, Macmillan, 1866.

² Johannes Ranke (1836–1916), German physiologist and anthropologist.

³ Otto Funke (1828–1879), German physiologist.

⁴ William Benjamin Carpenter (1813–1885), British naturalist. His various physiology textbooks dominated the science from the 1840s to the 1860s.

⁵ William Sharpey (1802–1886), British physiologist and Foster’s teacher at University College, London.

⁶ At the meeting of the British Association for the Advancement of Science.

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Huxley Papers 4:161

Huntingdon
 July 15 [1867?]

Dear General

This is a list of Hartnack¹ (21. Place Dauphine) for the simpler form of stand.
 The larger stand with rack & for coarse adjustment will cost 340 francs against 140.

Magnifying power

	OC 2	OC 3	OC 4
2.	32	45	
5.	125	160	240
7.	240	300	450
8.	300	400	600
9.	440	550	860
11.	690	850	1250

I shall be up on Thursday for the Univ. Lond Exam – but shall not come down to S.K. unless I am wanted for anything.

Ever Thine
 M. Foster jr

8 & 9 are both very good glasses.

Static No 8 (& Kästeben)		francs
{the simple one I described <u>as no 7 without</u> coarse adjustment rack}		140
Ocular 2. 3. 4.		30
Objectiv no 2.		20
5.		35
7.		40
8.		50
9.		75
11 ([immersion])		250
Camera		50
Condensor		50
Polarizing app.		60

¹ Edmund Hartnack (1826–1891), microscope manufacturer in Paris.

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Huxley Papers 4:1

Sept. 30 1867

My dear Foster

I judiciously gave orders that no letters should be forwarded to me from Jermyn St during my absence.

Hence your notes & blank forms for constants only reached me on Saturday when we all returned.

Happily your note has no date so I feel under no obligation to apologise (Internal evidence that it was written before the Association meeting counts for nothing).

The plan of the form for the constants seems most excellent – and I can suggest no improvements. It will be a great feature in Section 2.

I send them to Huntingdon not knowing where you may be – but I will keep the forms till I learn where you are.

Ever Yours faithfully

T. H. Huxley

I find I have missed Brücke¹ to my sorrow

¹ Ernst Wilhelm Brücke (1819–1892), professor of physiology in Vienna.

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Huxley Papers 4:3

[Nov. 1867]

My dear Foster

I find the Fullerian work¹ rather too heavy and am thinking of offering up a substitute for myself next year.

Would you be disposed to allow me to name you [text missing] for this purpose.

1867

The lectures will have to begin on the 5th May 1868 & will continue to 10th June – twelve lectures twice a week on Mondays & Thursdays at 3 p.m.

Let me know what you think about this proposition in a couple of days.

Ever yours faithfully

T. H. Huxley

P.S. If you accept give me a notion of your subject.

¹ Huxley was Fullerian Professor of the Royal Institution from 1866, see Desmond, *Huxley*, p. 347. Foster gave Huxley's Fullerian lectures in 1868.

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Huxley Papers 4:5

My dear Foster

Many thanks – I have qualified the muscle paragraph of course I ought to have recollected the muscles of the arteries to say nothing of what you mention.

I am not going to be done out of my bit of Shakespeare. It isn't often that I "gush" goodness knows.

My little black eyed girl Rachel was attacked last night – just as we thought we were safe. The other two are getting on famously – your prescription of sal ammoniac has done wonders for Marian and my wife blesses your name continually.¹

Ever Yours faithfully

T. H. Huxley

26 Abbey Place

Nov 26 1867

I put you up for the Linnean the other day.²

¹ Huxley's children had been ill with scarlet fever (except Jessie, who had had it seven years previously).

² Foster was elected a Fellow of the Linnean Society on 16 January 1868.

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Huxley Papers 4:164

Univ. Coll
Jan 17 [1868]

Honoured Episcopus

Very many thanks for the cheque a formal receipt for which I enclose; it will cheer my banker very much.

Very many thanks too for the proofs which will be very useful to me.

I am about to write to the gentleman from Capernaum to appoint a meeting. I'm afraid he will find me out on more scores than one – & think his interview very unprofitable. My mind just now is much fuller of eggs than anything else – & most of them are getting addled!!

Last Sunday I spent a most profitable & delightful afternoon reading your Sermon on Education.¹ The fact that the Daily News (not the least intelligent of papers) entirely missed the whole kernel of the address shows how necessary it is that that [*sic*] the matter should be brought again before the public. Or did they purposely misunderstand you in order to shunt the question? It ought to be printed on sheets in large letters – & the sheets strung on a roller – that it might be hung up in every body's study or parlour & a “daily portion” read every morning. If it were not for the sacrifice which would be entailed, I should immediately like to see it in the first number of the “London Student” – it would I think be the breath of life to that nascent periodical (which by the bye is possibly destined to do some good).²

Poor old Baer! I am afraid he will be disappointed to find you are not the Quarterly Reviewer – I forgive him the stupid error on account of him being a foreigner & therefore with all his in the English language practice unable to distinguish imitations from realities – but perhaps it will be some consolation to him to know that even in his life time the seed he has sown is bringing forth fruit in the third generation.³

Ever yours

M. Foster

¹ ‘A liberal education and where to find it’, inaugural address delivered to the South London Working Men's College, 4 January 1868. This was reported in the *Daily News* on 6 January 1868, issue 6763. Reprinted in *Collected essays*, vol. 3, pp. 76–110.

² The first issue of the monthly journal, *The London Student*, was published in April 1868.

³ Karl Ernst von Baer (1792–1876) had received the Copley Medal and suspected that Huxley was the author of a complementary review in the *Quarterly Review*. In fact Foster had himself reviewed von Baer's *Autobiography* in the *Quarterly Review*, 1867, **122**: 335–347.

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Huxley Papers 4:7

Jermyn St
May 28 1868

My dear Foster

I send herewith the [score] of the “Constants”¹ as these are the points I am not clear about – the first is the exact sense of “Lost Blood” at p. 331. I suppose you mean blood that may be drawn away as contradistinguished from that which stops in the body – but the infant mind will be bothered. Can’t we get rid of the etc. after muscular and substitute “and their appurtenances” or some such phrase.

The other is a question of bookkeeping.

You write water

Creditor	Debtor
36,500	40,000
<u>3,500</u>	
40,000	

which means that 3500 grains of water are manufactured in the body.

But at p. 335 you give 5000 gr. water as the quantity produced.

I take it this is about correct but in that case only 35000 grs water can be put down on the credit side.

I am ashamed to trouble you with all this just now – but I have been stirring up the printers & they will be writing if they do not get this [score] back in a day or two.

Please to send it straight to Macmillan with such modification as may be needed & don’t take the trouble to write to me about what you do.

Ever Yours very truly

T. H. Huxley

¹Foster drew up ‘A table of anatomical and physiological constants’, for the second edition of Huxley’s *Lessons in elementary physiology*, London, Macmillan, 1868, pp. 331–336.

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Huxley Papers 4:9

My dear Foster

I was sorry I was away when you called – but I have been laid up with a bad bout of influenza & am by no means right yet.

I have received no letter from you & I should be particularly glad to have a general notion what your views are towards my proposal by tomorrow afternoon.

Smith¹ has been talking to me about some article of yours which he has not accepted. He appears to doubt the wisdom of his own judgement in the matter and asks me to let him have mine.

Are you minded to let me see the article with that view?

Ever yours faithfully

T. H. Huxley

June 29 1868

¹ Sir William Smith (1813–1893), lexicographer and editor of the *Quarterly Review* from 1867. Foster's article on 'Science in schools' had appeared in the October 1867 issue and 'Animals and plants' was published in the January 1869 issue.

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Huxley Papers 4:11

My dear Foster

I hope your application did not come in at the Govt. Grant Committee¹ today as I could not be present. I shall be at the next meeting & will gladly support it if I am in time.

Thanks for the hints about the other.

Ever yours faithfully

T. H. Huxley

Aug 21 1868

¹ See Introduction, pp. xvii.

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Huxley Papers 4:12

[Feb 27 1869]

My dear Foster

Come & dine tomorrow at six P.M.

Ever yours very faithfully

T. H. Huxley

Friday Evg

Only just received your note.

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Huxley Papers 4:13

My dear Foster

The lecture business is settled at last as you will see by the inclosed documents which please return to me when you have read marked learned & inwardly digested them. I did not send them before as I could not ascertain about the fee. But I now hear that it is to be ten guineas a lecture – which will I hope be satisfactory.¹

You see what they say about the first lecture. I had sooner not be bothered with it, but you seemed the other day to think it well I should give it.

Will you now mature a scheme in detail (not going in for too much) & let us talk it over & finally settle matters within the next week or fortnight?

I am just back from Liverpool where I have been advocating the establishment of Scientific Sunday Schools.² The notion was received with much applause!

Ever Yours faithfully,

T. H. Huxley

Jermyn Street

April 10 1869

¹ See letter 10.

² 'Scientific education: notes of an after-dinner speech', delivered to the Liverpool Philomathic Society, 7 April 1869 (*Collected essays*, vol. 3, pp. 111–133).

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Huxley Papers 4:15

My dear Foster

I am very glad to know by a hasty note from Tyndall¹ that you are elected Fullerian Professor to the Royal Institution –

I congratulate you & them.

Ever Yours

T. H. Huxley

April 20 1869

¹ John Tyndall (1820–1893), physicist, was appointed professor of natural philosophy at the Royal Institution in 1853, and became superintendent on the death of Michael Faraday. See A. S. Eve and C. H. Creasey, *Life and work of John Tyndall*, London, Macmillan, 1945.

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Huxley Papers 4:16

My dear Foster

I have thought a good deal about you since I received your last letter though I have not written – there being not much to be said or done – beyond an appeal to the organ of “grin-and-bear-it-iveness” which is large in me by nature & has been developed by all the appliances of art.

Pray take care of yourself. I am inclined to be sorry they have given you the Fullerian the excitement, extortion & bother thereof being out of all proportion to the pay.

Writing as well as you do you should develop that line – it involves no excitement & pays better.

When you are ready about the programme come & dine quietly with me & we will talk it over. I think it will be as well not to be later than the end of next week.

Ever yours faithfully

T. H. Huxley

Jermyn Street

April 28 1869