

## CHAPTER V

### LEHRJAHRE AND WANDERJAHRE

#### PART II. MATHEMATICAL STUDIES AND CAMBRIDGE PLEASURES

IN October, 1840, we find Francis Galton established in Trinity College, Cambridge. It was, he says, a notable day in his life when, escorted by his father, Tertius, he arrived on the top of a stage coach in the town of Cambridge. No man was ever a more loyal son of Alma Mater than Galton, and nothing gave him greater joy in later life than the honours conferred on him by his College and University. That the portrait of him—a mere pollman—should hang with those of great heroes in the dining-hall, that he could once again order audit ale and dine by right at the Fellows' table were matters which gave him inexpressible delight. Those who have never left the University have little knowledge of how very tender, and largely unreasoning is the affection of the old Cambridge man to his University. The existing life of the place he feels has nothing to do with him, it is transient, interloping. The permanent and substantial is the old environment, peopled with many familiar forms, with the wonted figures crossing the court, the friendly shout from the windows, the tones of voices long silent or now grown unsympathetic, the midnight fireside, the enthusiasms of youth (*our* youth, of course!), and the seniors with their failings, which have grown to be essential virtues, landmarks of that time, with their indulgent tolerations, and their moulding affectionate sarcasm of our certainties. We own the place, we people it; the present population are but lessees of our ancestral halls, intrusive, alien, anomalous. The magic fascination of it all is merely thwarted by the reality; for us "the ideal shall be the real." And when two Cambridge exiles talk together of the place—they unconsciously mingle in one same environment, two races of men separated, perhaps, by a generation. We know them all: Harry Hallam<sup>1</sup>, "with his singular sweetness and

<sup>1</sup> Brother of Tennyson's Arthur Hallam.

attractiveness of manner, with a love of harmless banter and paradox"; F. Campbell<sup>1</sup>, who set for himself "an ideal of public life too high for his powers" yet who had a disposition unalloyed by pettiness, and when consulted about difficulties "put things in fresh lights, and always with noble intent"; Johnson<sup>2</sup> of King's, the active member of the Epigram Club—of which more anon; Maine<sup>3</sup> of Pembroke, one of the few men as thoroughly at home in Trinity as in his own college; Kay, the idler of the staircase, but the effective man in later life; Charles Buxton, with none of the exceptional brilliancy of the others but with "manly virtues and as much common sense as was consistent with a charming dash of originality"; W. G. Clark<sup>4</sup>,—who like many men gave promise of high achievement, but failed to fulfil, and could but sing:

"Truly there's something wanting in the world";

Mathew Boulton, the boy known from the old school and from home (see p. 77), and the relative, Cousin Theodore<sup>5</sup>, to complete the circle. Galton tells us of these friends<sup>6</sup> in his *Memories* (pp. 65—70) with a few brief lines of characterisation. Surely they are not more his friends than our own? Are they not types that we ourselves have known thirty to forty years after Galton? types which, under other names, yet haunt to-day, thirty and more years later still, the old staircases, and even now assemble to express in new language the old dreams and ever new ambitions round the ancient fireplaces, where they seem to our generation intruders, and where we seem to them shadows of a profitless past, which they dismiss as mid-Victorian!

Galton knew and loved his Cambridge right well; it gave him friends and some mental training. He appreciated the thoroughness of its

<sup>1</sup> Afterward Lord Campbell; he was son of the Chancellor.

<sup>2</sup> William Johnson Cory, the Eton master.

<sup>3</sup> Afterwards Sir Henry Maine. Among Galton's personalia I have come across Maine's undergraduate visiting card.

<sup>4</sup> Public Orator of the University and Vice-Master of Trinity College.

<sup>5</sup> Theodore Howard Galton, see Pedigree Plate A.

<sup>6</sup> They were, apart from degree standard, in many respects a brilliant group. Maine in 1842, Johnson in 1843, won the Chancellor's English Medal; Clark got the Porson in 1843, and the Greek Ode in 1842 and 1843, and the Epigrams in 1842; Maine the Latin Ode in 1842 and 1843 and the Epigrams in 1843, and the Camden in 1842; M. Boulton the Epigrams in 1841; Johnson the Camden in 1844. Maine got the Craven in 1843, Johnson in 1844, Maine and Clark the Chancellor's Classical Medals in 1844 and Hallam got them in 1846.

studies, but complained—even bitterly—of their narrowness. Luckily for him his medical studies had supplemented them at the very point where they were most defective—the training in observation and experiment. In 1840 there was no Natural Science Tripos, and of course Moral Science and History had not been thought of. There were Professors of Chemistry, Botany, Geology, Natural Philosophy and Mineralogy, but as the honours students must read for either the Mathematical or Classical Tripos, these professors did not attract the able students who were working for fellowships. Indeed Laboratory and Museum accommodation was very limited in Cambridge in 1840, and the modern idea of laboratory training may be said to have been practically unknown. In a certain sense Galton's training had been of a far more modern character in London than it could be in Cambridge, but at the same time the intensive study of mathematics was a distinct gain and one which was of great help to Galton. His first letter to his father, after the latter's departure from Cambridge, runs as follows :

TRIN. COLL. CAMBRIDGE. *Monday, Oct. [19], 1840.*

MY DEAR FATHER,

Thank you for your letter. Six silver teaspoons will be amply sufficient. If you cannot send wine easily from Leamington, the best plan will be to write to your London wine-merchant as there is a carrier direct from there. There are no letters for you from the post, but I enclose one from Adèle which I received today in a letter to me from her. I have had as yet no answer from Leonard Horner. O'Brien has not yet returned to Cambridge, but was expected today. He fell desperately in love at Inverary where he went with a party as tutor. I will write to you on completing my arrangements.

My rooms are very comfortable. Emma's pictures are quite at home, as usual, in my bedroom, and I am going to invest in a plaster bust of Newton and get it bronzed over and put up opposite the fireplace [see Plate LI]. I have got everything except my linen which is not quite got ready. I shall however be able to send you my accounts in two days. Theodore has returned, but I cannot find him, he arrived about an hour since.

Perry<sup>1</sup> gave us his first lecture today ; what a pleasure it is to hear a real senior wrangler speak. My organ of veneration is so very strong that I doubt when I shall dare to address him. What a fine sight a surplice night is, the bright light of the wax candles and the white dresses so well contrasting with the dark panelled oak behind gives no slight resemblance to a scene in Revelations.....I am as happy as possible and am preparing for a long and strong pull at reading. Love to Mater and all.

Your affectionate Son FRAS. GALTON.

<sup>1</sup> Senior Wrangler in 1828, Tutor of Trinity, 1837—1841, and afterwards Bishop of Melbourne, 1847—1876.

The following letters provide a more intimate picture of Galton's life at college :

Oct. 23<sup>rd</sup>, 1840, TRINITY, CAMBRIDGE.

MY DEAR FATHER,

I did not write before, as I wished to hear whether Mr O'Brien<sup>1</sup> would have me or not, before sending my letter. However I have just learnt that he will and I begin with him on Monday next ; he recommends me not to go over with him *now* my old subjects, but to start off and read as I can of Differentials and their application to Statics and Dynamics, and after this term to read over again what I have done against my first examination in May by which I am classed. Thanks for your letter received 2 days since. Port wine not arrived. The communication between the intellectual nucleus of Cambridge and the Boeotian town of Leamington is excessively tardy. I really think that our present economising Government must have made a contract with the *carrier* for the transmission of the mail-bag, as, if the postmaster at Warwick was not seized with an apoplexy and thereby occasioned a delay, your letters take 3 days to get here. Yesterday I had a letter directed to you in my mother's handwriting (the enclosed letter) sent me which must have slept on the road many days. I for a wager any day would undertake to be on the top of the Drachenfels by Bonn before a letter put in the post at Cambridge at midday, would reach Leamington. I waste paper fearfully, *i.e.* scribble over both sides of it innumerable  $x, y$ 's and funny looking triangles. Mrs Hoppit says that : "It's a great comfort to her to have a reading gentleman, because there is then always plenty of stuff to light the fires with." Theodore looks blooming, he hangs up pictures of Cerito<sup>2</sup> in his rooms and talks of the O-pey-ra. I tea with Boulton tonight ; he is not much altered, but very shy. Talking of tea, please send me some soon, as there are many sloe leaves in the Cambridge. I have proved this by microscopical observation. H—— is very goodnatured and has introduced me to some nice men ; he was officious at first, wanting I think to make me as dependent on him as Z. is, but there was then a difference of opinion between us, and now we are great allies.

Good bye, your affectionate son, FRAS. GALTON.

The letter is followed by the usual accounts, which this time include most of a freshman's needs—cap and gown, ironmongery, crockery, linen, etc. There are also a few lines on a little strip of paper somewhat characteristic of the man and rather hard on his father. Leonard Horner had clearly written to Tertius Galton praising the character of his son Francis—how we should like that letter now!—and Tertius had forwarded it to Cambridge. "Now I don't like being soaped ; in that letter there were 3 words or so on the subject of introductions ; why

<sup>1</sup> O'Brien was 3<sup>rd</sup> Wrangler in 1838 and afterwards Professor of Mathematics at the Royal Military Academy. He has given his name to one or two mathematical demonstrations.

<sup>2</sup> See *The Ingoldsby Legends*, "A Row in an Omnibus (Box)."

not copy them then? If I do not as yet like blarney, why try to make me fond of it by large doses?"

The next letter is endorsed by Tertius Galton, Nov. 3, 1840 :

MY DEAR FATHER,

I should have sent a letter to you yesterday if it had not been that the one that I had written was spoilt by an accident in my Gumption-Reviver machine which covered it with water. This machine as it has perhaps come into use since your time<sup>1</sup> I will describe to you.

[Sketch of the Gumption-Reviver machine : a student sits reading at a table, elbows on table and hands support head, lamp in front to right ; funnel dripping water which runs off a cloth bound round head to left. Additional sketches of galleys to carry funnel and of method of arranging cloth.]

"A large funnel is supported on a double stand about 6 ft. high, it has a graduated stopcock at the bottom by which the size of the aperture can be regulated. This as you read is placed above your head and filled with water. Round the head a napkin is tied, dependent on one side where the bow and end is so [arranged] that the water may drop off. Now it is calculated that as the number of hours of study increases in an arithmetic ratio, so will the weariness consequent on it increase in a geometrical ratio, and the stream of water must in that ratio be increased. The geometric ratio used in the 1st year, *i.e.* for freshmen is 2, in the 2nd year 3 and in the term before taking the degree 5. At that time the gyp has to call every quarter of an hour to refill the funnel; the clothes are then also not protected as damp shirts do not invite repose. We generally begin to use this machine about 10 at night and continue it till 1 or 2; it is very useful. My private tutor recommended it to me as the first thing; it is in fact quite indispensable to a high wrangler. I have received wine, spoons and tea, for all of which thank you. So Fanny Broadley is going to be spliced—I congratulate her heartily. Mr Burrows may think himself uncommonly lucky, for I think she was the prettiest girl I almost ever saw.

"You mention the case of Mr H—— of Catherine Hall. I hear that he had worked himself almost to madness, but was quite unable to succeed on account of his natural powers; poor fellow he did the best thing that he could do though. As to who were plucked nobody knows except the pluckers and the plucked; it is done very quietly. I have been reading very hard and am accordingly very dull. On going to O'Brien my private tutor (a 3rd Wrangler) he set me about Conic Sections, which I had not read before. He opened the book from which I was to learn them (Boucharlat 1v pages close print<sup>2</sup>) and asked me with a sort of grin if I could get it up by the next lesson in 2½ days. I took it in earnest and did get it up, but I verily believe that I never worked so hard before. I got up the bookwork pretty well, but I own that I was not able to

<sup>1</sup> These words seem to confirm the view that Tertius Galton actually went up to Trinity : see the first footnote, p. 52.

<sup>2</sup> Boucharlat, J. L.: *Théorie des courbes et des surfaces du second ordre....* 2<sup>e</sup> ed. Paris, 1810.

work problems and of course not having had time to accustom myself to a new subject. I will write to Hodgson.

"Distribution of Time. Up at Chapel at 7; ditto to 7½. Reading and breakfast to 9. Lectures to 11. Reading by myself and with O'Brien to 2, walk to 4—a 4 mile walk—Hall to 4.20. Read 10½ including tea. Lectures 2 hours a day, Reading (full tide) 10½ hours. I shall cut this down to 6, as it is really too much. Tell Bessy that there is the most extraordinary possible change in my complexion, the tan having quite disappeared. Breadth of phiz on the wane. Loves universally.

FRAS. GALTON."

On the 5th of November Galton writes home:

"I progress salubriously. . . By the bye in case any laughs are directed against Theodore I shall most pugnaciously take his part, as he certainly has got a very great deal of knowledge in Modern History etc. I have been quite surprised with the extent of his information on Hungarian, Turkish and other out of the way worthies. And though mathematics are most decidedly not his forte, yet still he has a great deal in him. Goodbye tell Mater I am much obliged for her house-keeping advice."

The salubrious progression was not of long duration:

[November 26, 1840.]

MY DEAR FATHER,

Thanks for letter received yesterday. I am much obliged to you about getting me nominated to the Athenaeum, please thank Uncle Howard for me. As he explained to me on a former occasion it will be much better to make use of his assistance than for me to get Daniell or Partridge to nominate me, in which latter case I should be sure of a *professional* opposition. I hope Bessy will get better soon....The reason why I write in pencil is as I am lying on my back I can't get a pen to write; I have been confined to my bed for some days, rheumatism not *over reading* but will shortly be released. It has put a pro tempore dead stop to Maths. I have just received a letter from Horner, he offers to get me an introduction to any men I may like, said he did not write before to give me time to settle and to find out the most desirable quarters for introductions. I must make many enquiries before answering his letter.

Goodbye, affect. Son, FRAS. GALTON.

Hurra for the Queen's Kinchin<sup>1</sup>! I have ordered 3 dozen of "audit ale" on a venture for you at Leamington but am afraid that it will not be ready for X<sup>mas</sup>. I shall be with you certainly not later than the 18th Dec<sup>r</sup>.

But the illness had been more serious than Francis had revealed. On Dec. 3<sup>2</sup> he writes to his father:

MY DEAR FATHER,

Would you please send me by return of post some money as I do not know what my doctor's bill will amount to. I was released part of Monday from bed (the

<sup>1</sup> Princess Victoria, Empress Friederich of Germany, born Nov. 21, 1840.

<sup>2</sup> Like his cousin Charles Darwin, Francis Galton was singularly remiss in dating his letters; we have to trust to Tertius Galton's endorsed dates.

12th day of my rigid confinement thereto). As I had been extremely ill, the Doctor came 4 times in two days (fever and touch of delirium). I am in a great hurry for the post. Shall not be with you before the 18th as I have some things to do in London; we are free for 5—7 weeks beginning on the 12th. Shall begin lectures again on Monday next. FRAS. GALTON.

A letter of Dec. 8th discusses continuing to read with O'Brien for the following term:

"Next term he tells me that I had better go over the early part of Maths. with him, where he would certainly be of the greatest use to me with reference to my approaching examination. For though I believe that I know these subjects very well in the way that I was taught them, yet a Cambridge gloss makes much difference in the marks.....

"P.S. I forgot to say that I am getting on well. Shall not I think dissect in London, but give up my time to Maths. and Classics."

The next day a letter is sent, showing that Francis had been up and about far too soon:

*Wednesday 9th, 1840.*

TRIN. COLL. CAMBRIDGE.

Please, bed made, warming pan in trim, plenty of hot and cold water by seven and a half o'clock Saturday Evening 12th.

Too ill for London, in bed again, cold in lecture room this morning, get out again tomorrow. FRAS. GALTON.

Of the influence of this serious illness of Galton in his first term at Cambridge upon his work we have little direct information. He undoubtedly worked too hard, and this probably contributed to his ultimate breakdown. But his mind must have been very active during all this period, and it is singular how closely his lines of thought even in little details followed ancestral tendencies. Francis Galton began—exactly as his grandfather Erasmus Darwin had done—to design simple mechanical contrivances, and Erasmus's *Commonplace Book* with one page covered with mechanisms and the next with medical lore might well have been the product of Francis himself. Nay, the very rhyming aptitudes of Erasmus were reiterated in Francis during the whole of his Cambridge career. Long and short poems occur not infrequently among his papers, and without the facility of Erasmus, he had still considerable power of producing a sonorous line. It would not be possible to say that the true instinct of the creative poet was behind the versification of either; Galton probably realised this as I have not come across any poetry later than 1844.

Already in November Francis had been writing to his father about hot oil lamps: he was interested in the question of the best

temperature at which the oil feeding the flame should be kept in order to give a maximum of illumination.

On Jan. 25, Galton is in London, at 17, New Street, Spring Gardens, again; he writes to his father:

MY DEAR FATHER,

I set off at 2 this afternoon for Paris, where I intend to stay till the end of the Vacation,—that is to say I should have done, but that plaguy thing conscience prevented me. The placards about Boulogne steamers looked very tempting. I have just been to Bramah about my lock, was more than  $1\frac{1}{2}$  hour with his top-sawyer man, who was in raptures and most deferential; he thinks about it today and I call again on Monday to explain anything that he may not fully understand. I enter my caveat for lamp on Monday. Now for proceedings.

Arrived at Brum at  $8\frac{1}{2}$  p.m., theatre and whiskey grog till  $12\frac{1}{2}$ . Was shut up in the coach with a frowsy fat old gentleman and a fast young gentleman whose lungs were, judging by his breath, entirely composed of full-flavoured cubas and the Cream of the Valley. The latter was not a very pleasant companion for vinous fumes ascending into his cranium displaced what reason had existed there, and showed their presence by causing him primarily to carol forth Nix my dolly pals—<sup>2<sup>ndly</sup></sup> to sing a very sentimental song, and at last to open the window and afford me a very convincing proof that gin and cigars act as a strong emetic.—Fell asleep and awoke about 10 miles from Bristol. Cross coach had had an accident, waited an hour till it was mended, occupying my time in eating 2 eggs, 4 slices of beef, 2 plates of muffins and half a quartern loaf and then sallied forth and studied St Mary Le Port. Went to Cross, box-seat, a provincial medical man sitting behind with 2 friends, we got into a dreadful quarrel about homoeopathy, and as he was giving in and I was blarneying about Hippocrates, a gust of wind carried my patent gossamer hat down a steep hill into the middle of a pond (what was more natural than that beaver should take to water). The guard reclaimed it, but it presented the appearance of a chemical filter [sketch], as well it might for on inspection I found that its substance was composed of brown paper. The day was beautiful. Arrived at Cross, Erasmus had been in the morning to meet the first coach, and had gone away again. I gigged it to Loxton. Sun shone, quite mild. Somersetshire is really the most beautiful country I have ever seen, north of the Alps (for Bessy), and of all dull pig-headed stupid bipeds the Somersetshire clown stands pre-eminent. Arrived at Loxton the manor house commodious but not gaudy<sup>1</sup>. Eras: girth visibly increased, Delly all smiles and lawn collar, the last mentioned article being as whitewash to a sepulchre or as charity, covering a multitude of deficiencies. They really both look as happy as possible; don't clash at all being separate all the morning, and in the evening whilst Delly writes letters for 4 hours and reads others for 1 quarter, Rassy pulls Track (the dog) by his tail and ears alternately, causing him to growl ferociously for 1 hour, then sleeps  $3\frac{1}{4}$ ; and after that both adjourn to the dinner room to edify 3 maid-servants and a small boy with a learned commentary on the psalms, giving the true interpretation, pronunciation, and critical dissertation upon the most difficult Hebrew or Chaldee words. Was knocked up next morning at 6, of course fell

<sup>1</sup> See Plate XXIX.



asleep again, but was awoke at 6½ by a cracked dinner bell in hysterics, when the farming men go to their work. Got up and the small boy afore-mentioned brought me a pair of shoes [sketch] with nails at the bottom like the teeth of the cog wheel attached to the fly of a 10-horse steam engine; this I found was truly necessary to Somersetshire walking. I am in a great hurry, will finish to-morrow—but must say that Rassy and Delly were most kind. I enjoyed my visit greatly. Rassy works hard at his farm and evidently takes the greatest interest in it. I went to Bath to call upon my earliest flame Douglas Hunter<sup>1</sup>. I have no time to write more. How is Charlotte?

FRAS. GALTON.

Another letter of nearly the same date describes the lamp and lock attempts:

MY DEAR FATHER,

Lamp and lock both dished but have come off honorably in both. Capt. Basil Hall, aided by Wheatstone had hit upon the same idea a short time since, and has since been making experiments. The light appears not advantageous as regards illuminating rooms, though it is useful for lighthouses. As regards my lock, Bramah complimented it and spoke very sensibly about it, he said it was certainly much more difficult to pick than any one of the same size and of a different construction, but the chances were quite great enough for security against a *chance* key in either the Bramah or Chub, the only thing to be feared was a model being taken of the original key when accidentally left about. Now mine being merely a piece of bent wire could be imitated from the impression left on almost any substance, or traced on paper—whilst his (here he grew coxy) required a very careful modeller and much time to imitate—my lock would also be expensive. This was very true, and I quite agree with him; but as regards the security of his lock when the key had been left in the hands of a pickpocket, I offered to make a false key in 5 minutes, if he would leave the original key in my hands for 5 seconds. He of course stood up in defence of his own key, so I got 10 knitting pins 5 large and 5 small and one wooden one which was central, the others surrounding it. On passing the central one down the bore of the key, the other ones were variously depressed according to the teeth in the key, as in the drawing, the other end *B* of course exactly represents the key (*A*); the ward (*C*) is always the same distance from the end and could therefore be fixed to one of the pins. Knitting pins are of course clumsy, but with a little contrivance a perfect picklock can be made (the breadth of the slits is of no consequence only the depth). Bramah was very fierce, I told him that I had some intention of patenting the picklock, and advertising “Important to Thieves, Housebreakers and others.” I enclose a model of one of his show locks by five pins. Bramah who was called down to see my knitting pins looked angry.

FRAS. GALTON.

On Jan. 31 Galton is back at Trinity and writes home as follows:

MY DEAR FATHER,

Thanks for letter. Lectures begin tomorrow (Monday) Poor H—!, Charlotte’s cousin, was unable to stand the examination more than 3 days on account of

<sup>1</sup> Another letter describes this visit with Galton’s usual flow of satirical humour, but concludes with the P.S. “Douglas is a very nice girl.”

health and so got an honour aegrotat. I was very much vexed about my lamp, but am now trying other things. I have I think a neat plan of making *any* balance weigh (by double weighing) to the greatest accuracy. I do it by fixing the balance near its centre to a bar of steel (magnetic) perpendicularly. The upper end of this carries a steel point which works against an iron plate, which plate can be screwed up against one of the poles of a fixed magnet, downwards, through a small space.....

Galton's sketches show more clearly what he means—the main idea was a pivot or knife edge with very little friction because gravity was largely balanced by magnetic pull. Any very rough balance might be used as he proposed double weighing, and a fairly crude bearing, “a steel point against an iron plate,” as there was a minimum of pressure. He probably did not intend to deal with any but very light weights and balances, otherwise the magnet would need to be very powerful.

...I think that in this way a very accurate balance might be constructed for 10 shillings, which would be a desideration. I will make one.

I am having a Bramah picklock made. I smoke my Turkish or German pipe nightly with somebody else, and give Theodore *eau sucrée* to drink with it—bless his innocence—it comes uncommon cheap—no man can drink more than three tumblers full, or it would make him sick.

O'Brien begins on Thursday.

FRAS. GALTON.

The fourth page of the letter has a rough sketch of Galton's room—“recent improvements”—“sofa drawn out before the fire.” Above the fireplace is a long low glass, and above this hang two pistols—clearly those purchased in Smyrna (p. 138),—crossed foils,—those purchased for practice at Angelo's (p. 109)—and what has the appearance of a lance, which might well have been used in the famous wild boar hunt at Sydnopé in 1837—when the last boar was killed, Darwin Galton despatching it<sup>1</sup>: see Plate LI.

Francis Galton's rooms were on the right-hand side of the ground floor of staircase B of New Court, that is the staircase to the left of the archway leading to the Avenue. The sitting-room looks east into the

<sup>1</sup> Sir Francis S. Darwin led the chase riding “a coal black steed, of mettle high and noble breed,” others present were Miss Emma Darwin his daughter, his nephew Darwin Galton and Frank Jessopp, who celebrated the hunt in a poem (see *Derby Mercury*, April 8, 1874):

“Then yelped the dogs, halloed the men,  
Till Sydnopé's echoes rang again.  
The beast is roused with wrathful eye  
Surveys his foes, yet scorns to fly.”  
etc.            etc.            etc.

court, and the bedroom looks west towards the river bank, the willow tree and the lime trees of the Avenue; there is a small slip of a gyp-room next the bedroom. The rooms were small, and, being on the ground floor and not far from the river, may have contributed to Galton's bad health in Cambridge. Of their internal appearance we have the rough sketch just referred to, and also a picture of the last meeting of the "Caseo-Tostic," 1843; apparently it was drawn when the New Year, 1844, was five minutes old. (See Plate LIV.) Dalyell is in the chair, before what appears to be a punch bowl, Stewart and Clark are on the sofa in front of the fire and Galton's feet only are visible—he is sitting facing Dalyell<sup>1</sup>. It is a New Year's Eve celebration. The whole is drawn hastily upon a sheet of scribbling paper which had been used on the reverse for studying geometrical optics. The picture we get of Galton throughout his college career is of a man who cared about many things, who enjoyed equally work and social life, and had not yet learnt that human powers are limited.

Three days later than the date of the "balance" letter—on February 3, Galton writes:

*Wednesday [Feb. 3, 1841].*

TRIN. COLL.

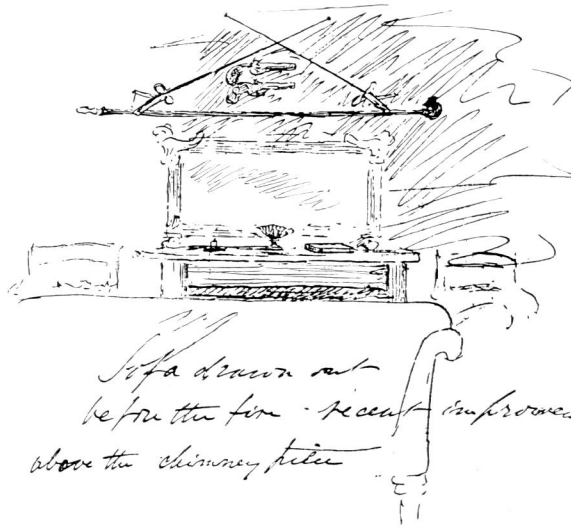
MY DEAR FATHER,

Atwood<sup>2</sup> came down this morning and breakfasted with me and I have left him in the hands of Boulton to lionise, as I am invalided from a relapse of my old illness which came on on Saturday without any cause to which I can assign it. I am all but well, it has not confined me to my bed, but only to my room. Thanks for lecture per post. I am rather mad about a rotatory steam engine which I have been contriving. Boulton thinks it will do. Advantages being: 1<sup>st</sup> The whole power being available cranks being absent. 2<sup>nd</sup> The momentum of the piston increasing the effect and ∴ the rapidity of working being unlimited, 3<sup>rd</sup> consequently very small cylinder, 4<sup>th</sup> no fly-wheel, 5<sup>th</sup> exceedingly light.....

The principle involved is similar to that of pumps now used for air and water; the direct action of steam on a vane causes rotation of the shaft to which the vane is attached. There is an ingenious mechanism for admitting the steam first to one half and then to the other of the pressure chamber, and there are numerous sketches. Galton's claims for his rotatory engine are possibly unsound, but very little as to rotatory engines could have been done before 1840 and that little could hardly be known to Galton. The letter is evidence of Galton's

<sup>1</sup> For reference to Dalyell see *Memories*, p. 78.

<sup>2</sup> His old schoolmaster: see p. 77.



The fire-place with the foils, Smyrna pistols, and native lance.



The living-room before the removal of the sofa to the fire-place.

Galton's Rooms in Trinity College.

Sketches from Galton's Cambridge Letters.

mechanical originality and his general interest at an early age in mechanical problems.

But teeming as young Galton was at this time with ideas, he was still equally eager for and markedly impressed by new experiences. His mind was rapidly developing, and each new conquest, as it is made, is at once reported to his home circle. The readiness with which he communicates everything which occurs to his father—absolutely confident of sympathy and suggestion—suffices to demonstrate a very rare and perfect relationship between parent and child<sup>1</sup>.

[*March?* 1841.]

DEAR EMMA,

I send 17 shillings worth of etchings etc. some of them by C. Schub are exceedingly good. I was unable to get some *outlines* by Rembrandt, which I was anxious to have done.

I am very sorry that my Father is so unwell; perhaps this attack will do for asthma and all.

Yesterday I made my appearance before the eyes of wondering Cantabs, where do you think? Why right in the midst of a den containing 1 Lion, 1 Lioness, 1 huge Bengal Tiger and 4 Leopards in Wombwell's menagerie. The Lion snarled awfully. I was a wee frightened for the Brute crouched so. The keeper told me that I was only the fourth that had entered that den. Nothing like making oneself a "Lion" at Cambridge. My Turkish tour and medical education does wonders and my late van Amburg performance promises to crown my reputation.

F. G.

P.S. I send a view I had of a street in Smyrna—thinking that it would make a very good picture à la Prout.

A few days later Francis writes to his father in a hand showing much sign of emotion:

*Sunday* [21 *March* 1841].

TRIN. COLL.

MY DEAR FATHER,

Thanks for your letter. Tomorrow I will see if Mortlock has received the £20. I will send my accounts. Thanks greatly about Aberystwith.

I am rather cut up by the sudden death of a College friend of mine. Poor fellow he wined with me last Tuesday, walked with me next day, complaining only of a slight headache. I heard that he was ill yesterday Saturday morning, and going to see him after hall at 5 p.m. found him dying, with what I took to be typhus; called again at 9, he was much worse and evidently could not hold out 6 hours. An eruption of scarlet

<sup>1</sup> It must have existed in earlier generations of the Galton family, for it is evidenced in the story of Samuel Galton's appeal to one of his *sons*: "Tell your friend, Sammie, all about it, and he will take good care your father does not hear a word of it."

fever had broken out. He died at 12. He was one of the most kind-hearted fellows I ever met with; he had just taken his degree and was going into orders and had begun hospital attendance that he might be of use in his parish. He thus caught the scarlet fever and is dead. He was a very great friend of Hughes'.

It is curious that I have as yet lost only 7 schoolfellows or fellow-collegiates that I really care for and every one of these have died of scarlet fever or typhus, and all except one within three days warning. How fearfully death intrudes in the midst of enjoyment like the skeleton at the Egyptian's feast. It is remarked by D'Israeli (I think) that the shock from the sudden loss of a friend is the only feeling which the mind cannot become callous to. The frequent sight of death seems in no way to diminish it. Patients in a hospital one looks upon as doomed men and their death takes place as in the natural order of things. A friend appears part of oneself, and when he dies, one contemplates the grave where he is laid in as ready to receive oneself; we then know that we are mortal. However this kind of language is out of place to you at home in the midst of marriage festivities, etc. I received no cake with your letter!

Good bye, Yours truly,

FRAS. GALTON.

During the Easter vacation, Francis Galton consulted both with Hodgson and Booth in Birmingham, who appear to have given diametrically opposite advice, but the nature of their proposals is not clear. They most probably concerned Francis's prolonged study of mathematics and his neglect for the time being of medicine. He writes to his father, April 8th, 1841:

"I have on reconsidering, reconsulting, etc., etc., determined to abide the Trinity Examination, as I should be sure not to get the Caius prize as they have two very superior men there, and as they take up slightly different subjects—but to do my best for a Trinity first class and to migrate afterwards....."

It is impossible now to say, but probable that the "Caius prize" referred to may have been a Tancred studentship. There is a good deal of discussion later about the position in the May examination, but no further reference to this migration proposal, it probably arose from Galton's Birmingham medical sponsors urging concentration on medical studies.

Later in the same month, with the Darwin omission of exact dating, comes a characteristic letter:

TRIN. COLL. *April*, 1841.

MY DEAR FATHER,

No letter of yours, whether received at school, announcing that I might come home a week before my time, or whether containing a cheque on Barclay, Bevan, Tritton and Co., ever came more gratefully than the one I have just received to say that

my Mathematical M.S.S. were at Claverdon. I have been latterly in despair owing to their loss. I had hunted for them before leaving Claverdon, but found them not. I looked everywhere in Cambridge and was equally disappointed. They are invaluable; all the talent of Perry, O'Brien and Mathison<sup>1</sup> are condensed into those papers. Therefore please take the greatest care of them. Burn the Duddeston titledeeds if you will, but preserve these manuscripts. If you have even the compassion that glimmers in a butcher's breast whilst he sticks a pig, or in Majendic whilst he runs needles into the brain of a living dog, send them *immediately*. Till I receive them I am desperate. I am very glad to hear Holland's report of Bessy; please tell me all you hear about her.

DON'T FORGET THE M.S.S. PAPERS; if you do, may the spirit of gout tweak your remembrance!!!

P.S. Please remember the Manuscripts—send them immediately.

Good bye, Yours truly,

FRAS. GALTON.

*Saturday, May 1 [1841].*

MY DEAR FATHER,

I received 2 or 3 days since your letter with good news about Bessy and bad news about yourself, for which thanks (I don't mean specially the latter part). I have also received 1 dozen of port marked "very old."

O'Brien told me the day before yesterday that I must certainly read with Hopkins next October, and on my saying that I would rather remain with him he strongly recommended me not. I own this has made me very bumptious; it does great credit to O'Brien for his openness, as of course tutors prefer to keep the better men. As he stays in Cambridge during the Long Vacation (poor man, he is married), which is very dull and hot during summer, I go with Mathison our Mathematical Lecturer to Keswick in Cumberland with a party to read. The terms are £30 for about 3 months, and the life we lead a very pleasant and inexpensive one, certainly much cheaper than in College. By the bye we are turned out of our rooms during the Long Vacation. I have been obliged to take a half-classical coach for the approaching College examination (in about  $4\frac{1}{2}$  weeks).

Now you must not expect me to be first Mathematic in Trinity<sup>2</sup>. I do not expect it myself, as amongst other very good men, there are some who have already read

<sup>1</sup> Perry was senior in 1828, Mathison fifth Wrangler in 1839, both were ultimately tutors of Trinity and Perry Bishop of Melbourne.

<sup>2</sup> Galton's year (1844) was not a very strong one in mathematics; there was no one who has left a name in that field; and in particular it was not strong at Trinity; that College got 6th, 7th and 8th Wranglers only, with men who did not take Trinity fellowships. Of Galton's friends, Hughes was 22nd Wrangler, Stewart and Maine were low Senior Optimes, but first classes in the Classical Tripos; Dalyell, very nearly "wooden spoon"; Clark was 18th Senior Optime and second Classic to Maine's Senior Classic. Dalyell also took the Classical Tripos. On the whole Galton's friends were on the literary side. With what we know of his mathematical powers, he might easily have led the Trinity contingent.

exceedingly high and who know their early subjects very well. I hope to do better in each succeeding examination, but ill health, for I severely overstrained myself my first term,—and I feel convinced that to have read during the X<sup>mas</sup> Vacation would have been madness,—has necessarily kept me back. But with no more excuses, as there is much in what Dr Jeune used to say. Good bye, Your affectionate son,

FRAS. GALTON.

Galton appears to have taken only a third class in the Trinity May examinations, but apparently the class was determined not only by mathematics but also by classics :

*Friday, OLD HUMMUMS [11 June 1841].*

COVENT GARDEN.

Left Cambridge on Tuesday,—the classes are just out.

MY DEAR FATHER,

I am not yet aware what my place is in all the math. subjects. I was fourth in Trigonometry (Mathison told me) and as I did comparatively better in Geometry and Algebra, I probably am higher in those two. Having done but little classics and that badly I am in the third class.....I care scarcely at all about being where I am as I am as high in maths. as I expected. You must not forget that, as regards Classics more especially, I have to compete with men who have spent that time on them which I have employed in medicine, and it is therefore improbable that I should take a good place amongst them.

The Math. papers were exceedingly easy this year so that everybody, who knows anything about them, must of necessity do three fourths, hence there was little room for a man to distinguish himself in them.

In the Algebraical paper there were absolutely only 3 questions not bookwork, that is problems. This is too bad, it is also unusual.

I am moving about town, doing one thing or another, dined with the Huberts and Horners. I stay here till Tuesday morning to hear Madame Rachel on Monday. I expect to be in Leamington Tuesday afternoon.....

I have had to invest in a frock coat and two pair of trousers.....

[P.S.] Hence as you observe I have not paid my Classical Tutor £7, who had left Cambridge without an address. I have not paid for my Frock Coat which will be about £5. I should be obliged for £5—£10 as my bill at the Old Hummums will be for a week and I take one meal daily. My stock in hand is £6. 19., there being a mistake somewhere of 3 shillings in my account.

Somewhere about the October of this year Tertius Galton sent his son Francis an "Essay on Book Keeping." It is a very simple description of how to keep accounts in an orderly manner, but it is of interest as showing us that from July 1st Francis was given a regular allowance, payable in advance quarterly, and thus the minute details of expenditure hitherto transmitted to his father cease. The allowance



was a generous one, £300 per annum and apparently an extra sum for private tuition. Tertius Galton was no doubt right in impressing upon his son the necessity for accurate record of expenditure—even to mistakes of three shillings. But the almost weekly rendering of accounts without a definite allowance does not provide a young man with the same training in monetary affairs as a definite income with freedom to spend within its limits. We cannot help considering that this statement: "Francis Galton, Esq. in account with his Treasurer," must have been a considerable relief to the undergraduate mind.

The summer vacation spent at Keswick was a very happy one; Francis Galton was in a most merry frame of mind. The final part of the vacation was overcast by the illness of Tertius Galton, who came down to join his son, and caught a severe cold, which caused his first bad illness, lasting four or five weeks. The tutors were Mathison of Trinity, and Eddis, first Chancellor's medallist and fourth classic in 1839, and well-known later as a Queen's Counsel. The members of the reading party besides Galton included Blomefield, Atkinson, Strickland, Young and Cooper<sup>1</sup>. The house Galton stayed at was Browtop, which stands well upon the Thirlmere road before the old turnpike at the junction with the steep road down to the church is reached. Galton had visited at the end of June the Hodgsons and Booths in Birmingham, and he had made a flying visit with his Aunt Booth to his sister, Lucy Moilliet, at Selby Hall. On July 1 he writes to announce his safe arrival at Keswick to his father:

"I set off [from Birmingham] by the  $\frac{1}{4}$  2 o'clock train in the night and slept without once awaking until we were near Preston, we got to Lancaster at  $7\frac{1}{2}$ ..... I set off at 8 by mail to Kendal. The town was in a bustle owing to the nomination, flags, trumpets and so forth. I had a very entertaining fellow-traveller; he had a hooked nose, gold spectacles, was a member of the Reform Club, and a ne-plus-ultra radical; he had travelled, and had also been a rowing Cantab. We had a red hot argument on politics, which I firmly believe neither of us knew anything about, but he would talk about them, and as I must answer yes or no, even Bessy will excuse my not assenting to a radical's ideas; he knew the lakes very well and told me many legends about them. Windermere is said to be a beautiful lake. Wordsworth asserts that it is superior to anything abroad, but I humbly conceive that he thereby shews his patriotism

<sup>1</sup> Blomefield was about the middle of the Junior Optimes in 1843, Atkinson 27th Wrangler in the same year and afterwards Director of Public Instruction, Calcutta, Young was Third Class, Classical Tripos and Junior Optime also in 1843; Cooper was a Senior Optime in 1844; Strickland was one of the well-known Yorkshire family of Howsham Hall, his tragic end is described in the *Memories*, p. 64.

rather than his taste. It is certainly pretty but very narrow in comparison with its length, and the high mountains on each side apparently reduce this width still more, so that it looks like a river, and not a particularly broad one. [Then follows an account of the well-known road from Windermere to Keswick with slight sketches.].....To-day is horribly misty; Skiddaw is covered with clouds that reach low down as a Quakeress's dress, but those on the chain opposite are more à la Taglioni. I had intended walking up Skiddaw last night to see the sun rise but it began to rain.....Browtop is a very nice house, the habitable part is quite separate from the kitchen and outhouses; it is one story high and the passage down the middle with 4 bedrooms on one side, and 4 sitting-rooms on the other side; thus the whole house is £5 per week, so I pay 25 shillings. I have a beautiful view; I should have sketched it for you, but there is nothing but clouds this morning. I am the first of the party that has come; the rest are expected tomorrow.

Good bye, Your affectionate son,

FRAS. GALTON.

*Thursday, July 8 [1841].*

BROWTOP.

MY DEAR FATHER, Being upon my own allowance you must excuse letter paper. In answer to your question: The Apothecaries' bill I owe, though differing some shillings from the one sent to Blakesley. The Hosier's Bill is *not* mine probably's Theodore's. I do not want the boots at Keswick, certainly not at present, as I always walk in thick shoes. I am very glad to hear about your asthma's want of punctuality this year; should you have an opportunity I wish you would enquire whether the other asthmatic Leamingtonians, I think 3 in number, have got off equally well, as it would be interesting to find out whether some years are more favourable than others as is apparently the case in typhus and influenza.

I never enjoyed myself so thoroughly as at present—Mathison and Eddis are thoroughly goodnatured. When it is fine we walk out in a body from 2 to 5; when wet play at battledore and shuttlecock or at fives in a most unstudious manner. Eddis you know is a senior medallist. Blomefield is the other undergraduate staying at Browtop. The St Quintins are very kind and their son (Charles) very agreeable, he rattles off about the Himalaya Passes and the scenery of Thibet, and totally condemns Howqua's Mixture. They introduced me to the Parson, a Mr M.— who again introduced me to a Count O..... (I purposely write the word illegibly and that for an obvious reason, it consists of "three sneezes and a ski"), who is the lion of these parts, being Chemist, Botanist, Zoologist, etc., etc., and last not least a top-sawyer Animal Magnetiser. I need scarcely say that we got the greatest allies immediately, he is a very gentlemanly man, he shewed me through laboratories, hot-houses and monkey cages.....He has moreover got me patients to magnetise, lent me books and in short we are the greatest possible allies. He married a rich heiress.....who is a very pretty girl 18 years old, he is about 40.....I ought to say that as I walked with the Count through his laboratory he introduced me to a Dr Schmidt who was staying with him and working there. I thought I knew both the face and name, and found out that he was one of Liebig's class at Giessen, and we had great amusement in talking over the wine-parties, etc. after

the table d'hôte. He was a great phrenologist and I got him to paw my head, he gave me I think a very true character (self-esteem was remarkably full). I have not now the bump of constructiveness very large though he says it is large. Mary's bump is firmness, I described her character and he immediately said that he had observed equally well developed cases<sup>1</sup>. I have just descended from Skiddaw, it is a very seedy mountain to go up, there being no difficulty whatever, the view is very extensive including the Isle of Man and Ben Lomond. It was very hot and we pitched into much whisky, and on the strength of it cheered 3 times 3 for God save the Queen, Trinity, etc. Whatever Father Mathew may say there is nothing like vast quantities of whisky on a mountain top, it would be a splendid way to subject a convert to temptation.—Please address in future Browtop as an oblique-eyed intimate of our skullion having nothing else to do brings up the letters. Love to all and each; may the critical spirit of Bessy smile on this epistle.

Good Bye, Your affectionate son,

FRAS. GALTON.

The Keswick letters show such joy in life, such healthy vigour and a nature bubbling over with such fun that those who read them must feel at once on terms of intimacy with Galton's genial personality. I have allowed his criticisms of Whewell to remain, for they are only the opinions of a boyish undergraduate on the Master of his college<sup>2</sup>—and most of us remember what fair game the Master must ever be to the world of junior members of his college!

BROW TOP, KESWICK.

July 18, *Sunday*, 1841.

MY DEAR FATHER,

Thank you for your letter. I am very glad that you talk of coming towards the lakes, as they are well worth seeing, and as a long course of fine weather almost

<sup>1</sup> Galton's interest in phrenology was a precursor of his later system of head-measurements. While Francis was a boy at King Edward School, Birmingham, a Cambridge examiner fond of phrenology asked to be allowed to inspect the boys' heads to test his phrenological opinion against the results actually found in the following day's examination. He went into the school-room and was much struck with Francis' head and sent for him for a second inspection. He then said to Dr Jeune, "This boy has the largest organ of causality I ever saw in any head but one, and that is the bust of Dr Erasmus Darwin." "Why," said Dr Jeune, "this boy is Dr Darwin's grandson." Owen, the Lanark Utopian, also noted Galton's head when an infant and predicted from its peculiarity that he would not be a common character. The large organs of causality, *i.e.* a good temporal development in ordinary parlance were noted by the professional phrenologist, Donovan, who gave in 1849 an amusing estimate of Francis Galton's character as wonderfully correct in some respects as it was absurdly incorrect in others. I shall cite some part of it later.

<sup>2</sup> Whewell was made Master this very autumn.

invariably sets in about this time. I do not know of any house in Keswick which you could take (*bona fide*) as they are all small and mostly dark and dirty. The inn is very good, good bedrooms etc., and has been honoured by Queen Adelaide's sleeping in it, if that be any inducement to you, but Ambleside has many good lodging houses. I received the enclosed letter from Christian the day before yesterday. We have had beautiful weather the last 4 days, and have already been making several excursions, to Buttermere, where the celebrated beauty whom Hatfield the robber eloped with some 20 years since, lived, and where several uncommonly pretty girls keep up the character of the place still. We have also been up Helvellyn. They said it would take us 3 hours to reach the top, but it occupied only  $2\frac{3}{4}$  to get up, stay 25 minutes at the top, and be at the bottom on the other side. The country people are exceptionally hospitable, they give us no end of milk, oatcakes, home-made cheese etc., and it is difficult to make them take anything in return, so our plan is to ask if they have any children and pick out one of the curly headed young scrubs, and visibly slip a shilling or two, according to the probable extent of our united appetites, into his hand. Yesterday after taking a stroll up Skiddaw we went to the perfection of a farm house. A very pretty Creole niece of the farmer chatted, smiled, gave us milk etc. and set off a musical snuff-box playing, then brought a nosegay, and lastly sat down with us to grub. She asked if we were any of the Cambridge gentlemen, and on our saying that we were she told us that 2 or 3 years ago there was a large party at Keswick who were a "sad set of scamps." So you see what a reputation Cambridge has got. Whewell, wonderful to say, has fallen in love with an Ullswater beauty, Miss Marshall, and is going to marry her. She is very rich and of very good family, hence our continual conversation at Browtop is in surmises as to how Whewell would set to work to make love, he is nearly 50, she a little more than 20.....

We like Browtop excessively, the only fault in the situation of Keswick being that it is in a wide valley, so that there are but few walks within a short distance. The hills are all quite green so that we can run down them at a capital pace. Mathison tried sliding down one of them, but he reached the bottom a complete cherub having scarcely whereon to sit, owing to the friction.....

We hear that a party of Cantabs at Ambleside think of migrating to Keswick, it will be a great bore if they come as we are enough already. Armitage the to-be senior wrangler of the February after next is one of them.

Dear Bessy I know that this letter is a stupid one but I really have nothing to say for myself. Write soon and tell me about Scarborough.

Good-bye and believe me ever your affectionate  $\left. \begin{array}{l} \text{Son} \\ \text{Brother} \end{array} \right\}$ ,

FRAS. GALTON.

BROWTOP.

*Sunday, Aug. 1st, 1841.*

MY DEAR FATHER,

I received this morning £15 all correct enclosed in an envelope stamped "too late"; for which thanks. The letter before this one was dated from "N.g. cliff."

Do they ticket the houses as cabinet curiosities? It is certainly novel and decidedly *literary*. I suppose that Lucy and James have already arrived, what with them and my two uncles, the Galton family will inundate the place, and if the ordinary appetite that accompanies the several branches of the family be present at Scarboro' it will give a very satisfactory interpretation of the N.g. ticketing. Whewell is undoubtedly under the guardianship of Hymen, though an oyster may be affected by love, a Whewell can't, for he has (I understand) been so involved in the metaphysical line that he looks on the approaching event with the most philosophical indifference. In 3 weeks Keswick is to be turned topsy-turvy with amusements. Inprimis a 4-oared race in which your humble servant is to pull, as we get up a boat for the honour of Cambridge. (The names of the crew are Atkinson, Strickland, Young, Galton and Cooper steersman) £12 prize. We really shall have a very fair chance, for though the Keswick boatmen are trained to pulling from their sash and petticoat age yet they are more in the cart horse line, whilst the description that I heard given of our crew was that they are "intensely plucky." We have great amusement here in scrambling about. Mathison is a capital walker but not a dab at climbing, consequently he occasionally sticks amongst the rocks like a saint in a niche and immovable without a miracle. We get on capitally at Browtop. The order of the day is—Breakfast finished as the clock strikes 9. Reading till 1 or 1½. Lunch, walk till 5, dine and chat till 8, Read till 10, tea to 10½, Read to 11 or 12.

When a long walk is taken we eschew dinner put our leathern whisky flasks in our pockets, which I am convinced is the true interpretation of "seven leagued boots," and walk from 1 to 8 or 9. We certainly do great things in the walking line instead of "managé-ing nos forces" after the Swiss régime. We scamper up the hills and somehow or other don't get tired. To-day I ascended more than  $\frac{2}{3}$ ds of the height of Skiddaw (driven back by mist) in 35 minutes, about 2200 feet, this was in Sunday costume and without puggyfying to any extent.

DEAR BESSY. How's the bathing? and how are Emma's freckles? The amount of sunshine here is by no means dangerous to beauty as the sun has generally a mass of mist rather thicker than Skiddaw is high to shine through. It has been miserably cold so that I read with a pea-coat on and with my feet on the fire hob. In your letter in a quotation from Aunt Hubert a word occurred "odm...ts." I have looked in Johnson's Dictionary but can find nothing corresponding to it, so I presume that it must have been coined since his time.

Again, there was a passage in your letter ending with 4 notes of admiration combined. This is an excess.

Thirdly, I should recommend a more refined choice of phrases than such as the "weather taking up" and others of a similar nature. You state "The air is delightful, and a beautiful walk along the cliff." I am not aetherial enough to enter into your delights—(I must bully you). How has Lucy's bazaar gone off? Please write oftener. Tell me what you had for dinner if you can think of nothing else, but do write.

Good-bye,

your affect. Brother,

FRAS. GALTON.

KESWICK BROWTOP,

August [13] 1841.

MY DEAR FATHER,

.....You talk of "fear of annoying me with a formal visit" etc. I can assure you that I should enjoy nothing so much as Atwoodizing you over the country. We can give you dinner occasionally at Browtop. You will find Eddis and Mathison very agreeable, and I really think that the very best thing that you can do is to settle in Keswick for a fortnight or 3 weeks. If you will give me a commission for lodgings, I will make every enquiry. Our boat-racing scheme has been given up for on enquiry we find that the competitors must pull on pins, not in rollocks [sketches]. To pull in that manner we unanimously decreed was below the dignity of a Cambridge "oar" as all the beauty of and skill of rowing consists in correct feathering which of course is impracticable with pins. It is altogether a ridiculous piece of business. There actually is no practising on the lake and consequently the pulling at the race must be wretched.....

Poor Chance my old schoolfellow and chum is dead. He was my chief friend at Dr Jeune's and also at King's College, where he read classics. He was one of the best fellows that I have met with; he was expected to have distinguished himself. Poor fellow—he died of consumption.....

Yesterday morning I walked up Skiddaw to see the sunrise. I got to the top of the eastern peak which is not 150 feet lower than the highest one in 40 minutes. Of course saw nothing but mist. I shall, however, try it again tonight—We have got some sails to our boat at Keswick, it is curious how frightened all the boatmen here are of them, they never use them. Even the attendant "cad" upon the party, a man ready to poach, knock down, do anything on an emergency, refused to go into the boat on the ground of having a "wife and 5 small children<sup>1</sup>."

The postscript to sister Bessie propounds on this occasion a problem in etiquette. Galton and others had dined with the Russian Count, and the Countess had not received them in very friendly fashion. Meanwhile "the Count (a very punctilious man) had left the town, leaving the Countess behind." Galton had not called since the dinner, ought he to do so? The final story of the "Count" is told in the *Memories*, p. 63.

BROWTOP, August 19th, 1841.

MY DEAR FATHER,

Thank you for your letter which I have received this evening. I hope that you will not give up your plans as regards the lakes, for if your only fear is about rainy weather, I do not think you will suffer more in travelling through Westmoreland than elsewhere, since on comparing the state of the weather here with that which a Cambridge

<sup>1</sup> The danger to sailing boats on Derwentwater from sudden gusts of wind coming down between the mountains is well known to the inhabitants: I remember a fatal accident to a sailing boat occurring during a stay near Keswick.

party has had in Devonshire we find that we have had the fewer rainy days. This of course does not include misty days. I have been deluded enough lately to climb mountains to see the sunrise, it is certainly the best regime that I know to cure romance. I for my part never felt less spiritual or more corporeal than I did when I got to the bottom of them. I had a long walk in that manner the day before yesterday. Happening to look out of the window about 12 after reading, I found that it was the most beautiful night that we had yet had. So pocketing my whisky flask and putting on my pea-coat and plaid, I walked to the town and got up a party to go, slept under a table for 35 minutes, drank some whisky punch, and then walked up Blencathra, ignominiously called "Saddleback," stayed on the top about an hour and then got back by 7 a.m., it was about 16 miles. As the morning was splendid I then got up another party for Ennerdale. Then slept 25 minutes and walked off, and we walked the whole day, up two high mountains. I got back by 8½ p.m. and after all I really was not so very tired. Keswick is at the present moment all wrestling and dancing. The champion in the former has been declared, having thrown some 10 opponents, but even he is now taken off his legs under the influence of brandy and water.

In the dancing department of course I assisted, and had for my partner a damsel whom I had observed in the morning employed in the unpoetical position of all fours, scrubbing stone steps with great diligence.—I have today committed a most dreadful offence in the eye of the law. I happened to be walking in a field when I saw a bull looking intensely ferocious, so I picked up a stone of a size corresponding to my fears which was therefore very large. Thus armed I ran to the nearest gate for escape; when up jumped a hare. All thoughts of the Game Laws vanished, as also of the bull. I threw the stone with a most lucky aim, and knocked the gentleman over and then I soon got over the gate and gave him the coup-de-grace with my shillelah. I shall eat him tomorrow or the next day. We are getting very dull; we read the *Times* through, advertisements and all everyday, and often ask for the catalogue of the circulating library. Under these circumstances, Good bye and believe me ever

Your affectionate son, FRAS. GALTON.

The letters to Tertius from Keswick cease with this date. The Galtons were staying at No. 9 on the Cliff [N.g. cliff of Francis's letter: see p. 158], Scarborough, and Emma Galton states in her diary that on Sept. 3 she rode from Castle Howard Park to the Lakes. Tertius Galton was fond of riding expeditions with his daughters, and he probably took a chill on this occasion. But we have no details of the illness at Keswick. The party got home to Leamington on Sept. 21, and on Sept. 26, Miss Galton records in her diary "Papa very ill indeed." Francis Galton, in the "annual register" of his life, speaks of his father's first serious illness occurring at Keswick. Doubtless much help was given by the Gurneys at Keswick, for we find from this time the intimacy between Gurneys and Galtons extended and visits are paid to Keswick as well as to St James's Square.

The next letter is dated, or should be, October 20, 1841 :

Wednesday 20th, 1841.

MY DEAR FATHER,

TRIN. COLL.

I left Leamington the only Cantab on the coach by the side of a jolly old Coachman who had been a horsedealer at Northampton and had sold horses to Uncle Hubert; he made sundry enquiries after you. On arriving at Weedon a complete shoal of Cambridge men poured out from one of the trains amongst whom was Theodore and three or four other allies of mine; how they all were to find places was a problem too deep for the minds of anybody there except the coachman's to surmount. However they hung on the coach like crows on carrion, and a jolly drive we had recounting our adventures to each other. The coach top was unpolluted by a freshman.—I called on Mathison this morning, who skipped about through excess of animal spirits in talking over Keswick, and was as jolly as ever. I then called on Hopkins who takes me, and I begin with him on Monday. My Keswick friends are all up, two of them full of gratitude for wonderful effects produced by prescriptions which I had left them and I have got a new patient. I cannot express the bumptious state I am in, looking at poor bashful unsophisticated "cubs" so carefully pulling their gown to make it sit well and fidgety at finding how uncomfortable their cap is which they have unconsciously put on the wrong way; all over as "fresh" as paint—bless their innocencies.—So Whewell is Master; I suppose he will soon come into residence.

In haste for chapel,

Your affectionate son, FRAS. GALTON.

Francis was in all the glory of the Junior Soph. Energetic beyond measure, but hastening, alas! towards a catastrophe.

Excuse my blots as I am  
in a great hurry.

Tuesday [Nov. 10, 1841].

MY DEAR FATHER,

I am very sorry that from having been either too lazy or too much occupied, I have not written sooner, though I consider you too little of an invalid to be further anxious about your health. Emma has probably given you a full account of her proceedings in Cambridge<sup>1</sup> and I trust rescued me from Mr Hodgson's malicious charge. She was most active and tired down both Theodore and myself. Thank you very much for your statement of my accounts; they were certainly most beautifully written out and quite a model. In one point, however, they were not *quite* as useful as otherwise they

<sup>1</sup> According to her diary Miss Galton went on Nov. 4 "via Cambridge to Keswick" and returned on Nov. 28 to St James's Square with the Gurneys. Emma Galton shared many of the characteristics of her brother Francis; she was restlessly energetic and rushed not only about England but the Continent. She had a strong business instinct and recorded almost to shillings and pence the amounts received by all members of her family by inheritance, settlements and gifts. She published a noteworthy little book which has run through many editions, *A Guide to the Unprotected*; it gives directions for single women in business matters, and is still of value.



might have been for after reading them through carefully 5 times I abandoned all hope of making out the meaning of any one single line in utter despair. The words appear all bewitched for I can't make out which is substantive and which is nominative case etc. etc. As a specimen "Debtor to balance agreed £. ."—Should you have spare time, would you be so kind as to write two or three lines in account book style with their interpretation in popular English and then I have no doubt but that I shall make out the rest of the paper, which you so kindly sent me.

My box arrived safely and the books inside in good preservation, with the exception of one book right through which, like Sisera's temples, a hobnail was driven—however it was only some *temperance* tracts bound up and therefore it is quite immaterial. Emma was not sure whether my D'Israeli's *Curiosities of Literature* was packed up—it is.

I like Hopkins more and more every day, and I never enjoyed Cambridge so thoroughly. Love to all.

Goodbye, Your affectionate Son, FRAS. GALTON.

The following letter gives a vivid picture of a famous mathematical coach and enables us still better to realise the Cambridge life of those days :

TRINITY,

*Thursday Evening,*

*Nov. [11] 1841.*

MY DEAR FATHER,

Thanks for the second edition of my accounts which I received this morning, and still greater thanks for the explanatory notes by Bessy thereunto attached<sup>1</sup>.

Hopkins progresses capitally. I had forgotten to tell you that I find that his charges are only £72 per annum instead of £100 as currently reported: this will make a jolly difference to my finances. Hopkins to use a Cantab expression is a regular brick; tells funny stories connected with different problems and is no way Donnish; he rattles us on at a splendid pace and makes mathematics anything but a dry subject by entering thoroughly into its metaphysics. I never enjoyed anything so much before. I made my first acquaintance with Laplace today, in one of his theorems, greatly to my satisfaction.

H— has not returned to Cambridge. He is an utter Puseyite, he dances much and instructs his partners in the "Fathers" and in their controversies. Eddis and Mathison both bloom. I wined with the former last night, who decidedly has not recovered from tender impressions received at Keswick. He spoke on walking in the cloisters by moonlight, and quoted Byron. He is therefore hopeless.

I am going to become a member of the Camden Antiquarian Society as being a gentlemanly thing and really very amusing. The subscription is 7 shillings a term until £3 has been paid when the subscriber becomes an honorary member, and is released from further subscription retaining the same privileges. Whewell is expected next week in Cambridge. He is not Vice-Chancellor this year as Dr Archdall of Emmanuel has been elected to that office.

<sup>1</sup> "Lord Torment and Tease," as he had been called at an earlier date, neither deserved that second edition nor the commentary; the accounts were beautifully simple and clear, and we may shrewdly suspect he understood them.

My cake has long since gone. As it disappeared it looked like a girl dying of consumption, pining away and retaining its sweetness to the last; it was very good. I ingratiated myself much with Mrs Hoppit by sending for her sevenfold offspring and arranging them round the table, when I made an equable division of the remains of the cake between myself and them, and afterwards sent them away laughing, eating and digesting like steam. Twelve out of the fourteen jampots still remain free from the encroachments of the enemy, but decidedly in a state of predestination thereunto.

How is my Mother's foot? and Mary? Love to all and good-bye and believe me ever your affectionate son,

FRAS. GALTON.

P.S. I suppose you all know that the meaning of the F. G. on the outside of my letters is that they are family letters to be opened by anybody and merely addressed to some particular person for the satisfaction of the postmaster.

I do not know how or where the Christmas vacation was spent, presumably at Leamington, yet on Jan. 21, Francis is up at Trinity and from there a few days afterwards joins his sister Emma, who had gone down from London to Keswick with the Gurneys on Dec. 31st. He probably only stayed a few days there, as the results for his "Little-Go" were sent to his father on March 9th from Cambridge, and that examination must have taken place some weeks earlier:

"Hurrah—I'm through.

FRAS. GALTON, *Wed.* 1842."

[*March* 9].

The list shows him to have taken a second class; J. Kay and another of Hopkins's pupils were also in the second class, seven of them, including Buxton, were in the first. Maine, Clark, Cooper, Dalyell, Stewart and others of Galton's friends appear in the same list.

The earlier letter of Jan. 21 is of some historical interest:

*Jan.* 21, 1842.

MY DEAR FATHER,

TRIN. COLL.

Thank you for your letter which I received this morning. The Math. Examination for degrees is just over and as you will see by the accompanying paper Cayley is 1st and Simpson 2nd wrangler; these were very far superior to the rest. Hopkins told me today that Simpson was 1000 marks ahead of the 3rd wrangler and the getting of 500 marks only entitles a man to be a wrangler. The 1st and 2nd wranglers are considered to be the most superior men, for at least many years that Cambridge has produced<sup>1</sup>. The rest of the Tripos as usual. The examination papers this year are much easier than usual.

<sup>1</sup> How difficult it is to see at close quarters! Stokes had been Senior in 1841, Adams was Senior in 1843, and Thomson (Lord Kelvin) second in 1845. They were the most brilliant years of Cambridge mathematical productivity and 1842 did not stand alone.

The Glaciarium is composed of a mixture of carbonate and sulphate of potass which deliquesces in their water of crystallisation and afterwards hardens. This Miller told me, who himself had heard it from Faraday. I have not seen the specification. I shall be quite dissipated next week. Monday I dine with Dr Fisher and go to an evening party at Hopkins; Tuesday, Bachelors' Ball; Wednesday, I go to Keswick etc. Good bye, your affectionate Son,

FRANCIS GALTON.

In this letter Galton returns to his original and later usual form of signature, but it took a long time to re-establish it.

The letter of March 19th tells us more details of the Little-Go and Galton's work at mathematics:

TRINITY, CAMBRIDGE,

March 19, 1842.

MY DEAR FATHER,

I enclose you the Little Go list. I ought to have sent it yesterday, but was not in my rooms till after post-time. I have I consider had 3 grand escapes in my life-time: 1<sup>st</sup> walking into a Lion's den and coming out undigested, 2<sup>ndly</sup> bathing in a frosty stream at moonlight and not remaining at its bottom in an apoplexy, 3<sup>rdly</sup> going into the Little Go when I had not read over half my subjects and coming out unplucked, not, however, that the pluck would be of any consequence. I have never the less been the gainer by this examination for calculating the advantage of being in the first class to be estimated at sixpence, I went to a man yesterday and bet a shilling I would be in the 2<sup>nd</sup>, thus leaving 2 sixpenny pieces to luck, which as you see I have won. I am much obliged to Bessy for the melancholy news about Miss H. I was, however, aware of my misfortune the same week that the engagement took place, but had not been informed who M<sup>r</sup> E. was; there is one thing that acts as a poultice to my wounded feelings which is that that small chimpanzee M<sup>r</sup> S. is not the happy man. Time has done wonders for me in soothing etc., but, oh Bessy!! Miss D. has done much more; she is without exception the most beautiful etc., etc., etc. I have ever seen. I was at a hop at her Ma's house the other night (I know most of the families in Cambridge now), I was dancing with her (the daughter not the mama) in a quadrille with one of my Little Go-Examiners for a *vis-a-vis*. Today as the sun was shining beautifully I decked myself out in resplendent summer apparel, light trowsers, light waistcoat (those that I had last year) to make a call upon this fair creature, but as I was fast finishing my toilette, and was "throwing a perfume over the violet" in the way of arranging my cravat ties, the wind blew and the rain fell horribly, and the streets were one mass of mud. I was in despair, but reflecting that if Leander swam the Hellespont for Hero, I was duty-bound to *wade* as far as the Fitzwilliam for Miss D., off I set. When, however, I arrived at their door, I wisely reflected on the splashed state of my trowsers before I knocked, and then retreated crest-fallen. Tonight I hang out (otherwise give a spread) in oysters; I have been all anxiety to get a dish of frogs as an adjunct and yesterday I made tremendous efforts to catch some with the annexed apparatus [sketch of triple hook attached to a line pendent to a walking stick]

but quite unsuccessfully. I could not see one although with another man I patrolled every imaginable ditch within reach. I firmly believe St Patrick had got the start of me, for Cambridge without frogs is quite an anomaly. Hopkins gave up for the term on Wednesday; before he left he called me to him and complimented me no end on my mechanics, which has made me quite jolly. I wish though that I were a better analyst. Buxton and Kay are going to leave his class as their health won't stand it. I shall certainly stay with him during the Long Vacation, and if the Dons won't let me stay in Cambridge I propose quietly taking lodgings in Grancester [*sic!*] ( $1\frac{1}{4}$  miles off) and coming over to him every morning. For want of room Good bye and believe me ever

Your affectionate Son,

FRAS. GALTON.

(It's vacation time now.)

But how was Francis Galton's own health standing the strain is the question which arises in our minds as we read this letter? A letter written a few days later shows that the strain was beginning to tell:

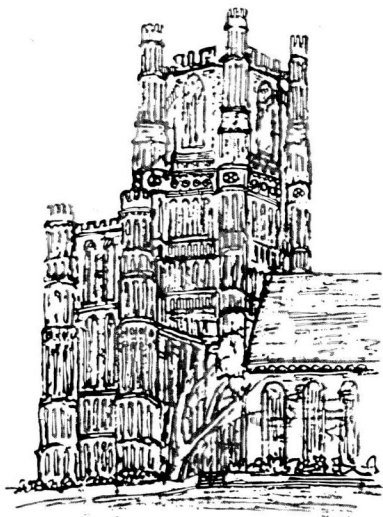
TRINITY, *Tuesday* [March 22, 1842].

MY DEAR FATHER,

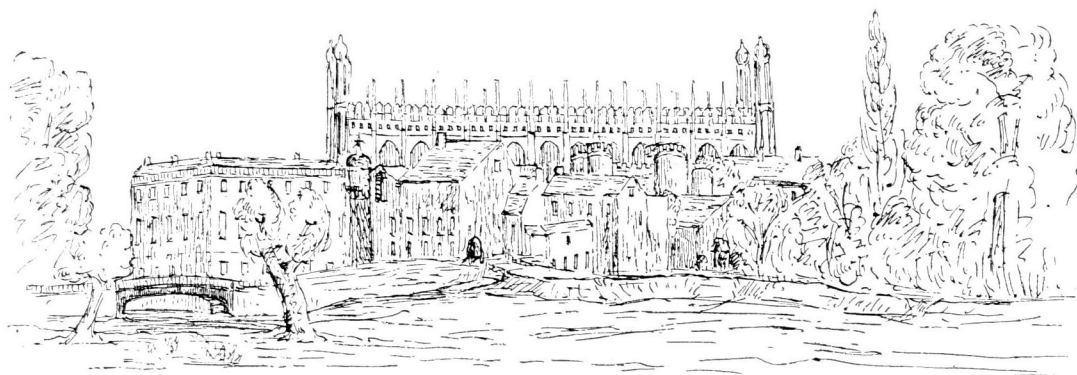
On thinking over about the approaching Scholarship Examination, I so plainly see that I have no chance whatever of getting one this year that I really think it quite useless to compete. The mere going into an examination for a few days is a thing of no great labour, but I am of course anxious that if examined I should do the mathematical part as well as I am qualified to, and not place myself below my level for want of preparation as would be the case with me now. I have at present read 14 different mathematical subjects<sup>1</sup>; now to get up all these sufficiently well to undergo a good examination in them would necessarily require very considerable application, which would be better bestowed on the subject (Mechanics) that I have now in hand, inasmuch as the fact of having them now well prepared would in no way assist me in any future examination, after a year's interval for instance. I spoke to Hopkins about it a fortnight ago; he strongly recommends me not to put myself out of the way for the examination, should I be inclined to go in for it. I find that it is impossible to get up my subjects without doing so and therefore think it preferable not to go in at all. I would, however, have possibly tried my best, but my head is already rather bad from having overworked myself in attempting to get up these subjects as well as doing what Hopkins has set us for this vacation, so that in the short time that is left I could do but very little. There is one other reason remaining namely that I should not know my standing in Maths. in the College from the result of this examination any better than

<sup>1</sup> In a postscript Galton says: "The subjects I have read are: (1) Algebra Parts I and III (2) Algebra Part II (3) Euclid (4) Trigonometry, Plane (5) Spherical (6) Conic Sections (7) Theory of Equations (8) Newton (9) Differential Calculus (10) Integral Calculus (11) Differential Equations (12) Statics (13) Dynamics (not finished) (14) Geometry of 3 Dimensions."—Astronomy and Optics (of which he had certainly read some) were needed to complete the old two years' course, leaving the physical subjects for the third year.

*Ely Cathedral Fr. Galton  
Nov. 20. 1842*



Pen and ink sketch of Ely Cathedral from a letter  
of Francis Galton to his Father. 1842.



Pen and ink sketch of King's College Chapel from the field by the Mill, 1843.

Sketches from Galton's Cambridge Letters.

I do now as those with whom I have to compete read with Hopkins,—viz. Walker, Hotham and Bowring<sup>1</sup> (Kay, and Buxton and Edwards have been obliged to leave off). I should therefore much prefer not to go in at all, subject however, of course to your wishes. I can easily get off on the plea of ill health which will be in a considerable degree a true one and can leave Cambridge for 5 or 6 days during the time of the examination. Should you agree with me will you let me know your plans for certain, that I may make mine accordingly. I have no news to tell you at present, so I remain,

Your affectionate Son, FRAS. GALTON.

This letter indicates much to those that read between the lines. In the first place Galton was staying up during the Easter vacation; in the next there is little doubt that he was or had been seriously overworking. Galton could not work under pressure, he had to do his work leisurely, and this he was to learn by sad experience before it became the practice of his later life. He was so keenly excited by many things that he could not repress his instinct to carry on numerous pursuits at once. Of the relics of this Easter vacation I note a visit to Ely Cathedral and a careful sketch of its western tower (see Plate LII), sent to his father; there is also a long poem on the birth of the Prince of Wales (Nov. 9, 1841), with the motto *Tu Marcellus eris*; it is dated March 31, 1842, and was probably composed for the Chancellor's medal. The Chancellor's English medal is for a subject given out at the end of the Michaelmas Term, and exercises are to be sent in on or before March 31st following. The subject for 1842 was actually Galton's theme, and the medal was obtained by H. S. Maine, of Pembroke, one of Galton's friends and afterwards the distinguished Master of Trinity Hall.

Galton's poem has rather the roll of Erasmus Darwin's poetry and its theme the infant prince considering the deeds of his ancestors, some of whom—Edward I, and Edward II, first Prince of Wales—were as much Galton's ancestors as King Edward VII's :

“How different is thy lot to Edward's son,  
Born in the land his sire had scarcely won,  
'Midst warriors rude within that turret tall  
That beetles o'er Carnarvon's massive wall,  
Coldly through grated loopholes streamed the day  
Lighting the couch where Eleanora lay.”

<sup>1</sup> Walker was 8th Wrangler, Bowring 23rd Wrangler in 1844. Hotham graduated in the same year, but, I think, must have taken a poll degree.

From April and May of this year no letters have survived ; we do not know whether Galton went on reading with Hopkins or went in for his College May. We lose also all account of how he came to join a reading party under Cayley and Venables<sup>1</sup> which went in June to Aberfeldy, in Perthshire.

On June 15 he is staying with the Kays at Terrace House, Battersea, and writes to his father that he is leaving by boat for Dundee in an hour and a half. He describes his journey to town, how he has dined with Partridge, seen the Missourian (which he holds to be falsely articulated in order to increase the apparent height), and heard *Robert le Diable*—all told with the usual quaint humour. The first letter from Aberfeldy is five days later and some of it may be given here :

ABERFELDY, *June 19, 1842.*

MY DEAR FATHER,

My proceedings have gone on splendidly but the voyage from London to Dundee was all that could be horrible; instead of taking 36 we were 50 hours, a swell of a most abominable description inclined slightly to our course so that the rolling was dreadful. Everybody (104 in all, 30 was the usual number) was wretchedly sick. I as usual dreadfully so.—Otherwise we had a jolly voyage; most of our party on board and the two tutors. Cayley is unanimously voted a *brick* and a most gentlemanly-minded man. Some of the passengers too had seen much life. One was a traveller in the interior of Africa, shot elephants, lions, etc. etc.....Perth is beautiful to a degree, ditto the lady inhabitants.....I hear Sir Neil Menzies is a most hospitable person, but I have not yet sent my letter of introduction. In haste

Your affectionate son, FRAS. GALTON.

The reading party on this occasion consisted of the two Kays, Fowell and Charles Buxton, Galton and Yeoman<sup>2</sup>. We may reasonably expect that play rather predominated over work. The reading party gave a ball :

The Cambridge party requests the honour of —— company on Wednesday the 31st instant. Dancing will commence at 8 o'clock.

BREADALBANE ARMS, ABERFELDIE.

There were 29 "Dancing Ladies" and only 22 "Dancing Gentlemen," but as "7 Cantabs" are included in the latter we may safely

<sup>1</sup> Venables, afterwards Canon of Lincoln, was 33rd Wrangler and in the second class, Classical Tripos.

<sup>2</sup> Yeoman was 27th Wrangler, and third class, Classical Tripos in 1845, I think the Buxtons and Kays took poll degrees.

conclude that Cayley did his duty on the occasion. A draft programme prepared on a rough piece of paper by Francis Galton, giving the names of the guests, the dances and music, the supper menu (somewhat substantial), the flower decorations, the directions—"many candles," "polish the coffee pot," "pins, needle and thread, and looking glass," etc., showing how completely and carefully he provided for all contingencies, has survived to the present day. It was wrapped round some fishing hooks and flies, and enclosed with a piece of ribbon worn at the Highland wedding of Margaret Carmichael, described in the letter below.

ABERFELDY, *Monday* [Aug. 1, 1842].

MY DEAR FATHER,

We are enjoying ourselves very much at Aberfeldy, there is unfortunately much monotony in the walks, as the village is situated on the side of a broad strath through which runs the Tay, and itself formed by high barren moorlands. We have just witnessed a true Highland wedding, and absolutely danced with only  $1\frac{1}{4}$  hours *altogether* intermission from 3 in the afternoon till 4 the next morning. I myself was pretty considerably knocked up, but several of the villagers did not go to bed at all and really did not seem much the worse for it the next day. The Scotch reels are great fun, for after every one is ready and before the reel is played, a particular squeak is given on the fiddle and every one kisses his partner, and if they are obstreperous there is a fine chase and scramble. We are really very much liked at Aberfeldy, and have been huzza'ed more than once as we walked up the town. When we were invited to the wedding, we each subscribed 2 shillings and so bought the bride a very good looking tea tray, 2 jolly brass candlesticks and snuffers, which overwhelmed the lady. The Scotch air has done wonders for my general health, but my head scarcely improves. I have been able to do but little reading since I have been here and altogether am very low about myself. . . . . Lady Menzies has been most kind to me and other neighbouring residents have been exceedingly hospitable to the party. Will Bessy thank Mrs Cameron for the note of introduction when next she sees her. Goodbye, Your affectionate son,

FRAS. GALTON.

The next letter is from Edinburgh after the reading party had broken up:

EDINBURGH, THE QUEEN'S HOTEL

[Sept. 14, 1842].

MY DEAR FATHER,

I left Aberfeldy very early yesterday morning with Eben Kay<sup>1</sup> and went thro' Crieff and Stirling to Edinbro', really quite sorry to part with the Highlands. We left in high feather, knowing every family well in the Strath, some of them intimately and altogether have, I really think, left a very good name for Cambridge. Our ball went off superbly. I wrote a description of it to Emma who has possibly forwarded it on to

<sup>1</sup> Afterwards Justice of Appeal; Joseph Kay was the "Travelling Bachelor" who wrote on education and challenged Whewell. He was later a Q.C.



you. We went to the Queen's reception at Taymouth<sup>1</sup>. Major and Mrs Menzies took me with them in their carriage. The Highlanders looked very well, drawn up in files round a large quadrangle in 4 bodies dressed in the Campbell and Menzies dress and hunting tartans respectively. The Queen and Prince Albert looked most gracious, but were not cheered half enough. I am sure we Cantabs did all we could, but everybody else did nothing but gape with astonishment. The evening illuminations were most perfect, everything in such perfect taste.....I saw Mr Dalrymple in a splendid highland dress among the lookers on; he did not recognise me and as I scarcely knew him, I did not address him. We "hung out" fireworks the other night and had several persons to come and see them; they went off very well. We subscribed 10 shillings each and got about 30 rockets, a dozen and a half Roman candles, many wheels, etc., etc.

I will write to you again from Inch Dairnie (where Aytoun of Trinity lives), he has written to ask me to stay as long as I possibly can, and I am thinking of spending a few days there; it is near Kirkcaldy to which place there are steamers every 2 hours from Edinburgh. Goodbye, Your affectionate son,

FRANCIS GALTON.

For those who have carefully read these Aberfeldy letters, there will I think be little doubt that Galton was nearing a breakdown; the uncontrollable joyousness of the Keswick correspondence has gone; there is little about work or long expeditions, there is a sub-tone indeed of depression. This finds its full utterance in the first letter that has been preserved from Galton's third Cambridge year. It seems to me as powerful an indictment of the competitive examination system as Galton's earlier attack on a classical school education. Before studying these Cambridge letters, I had imagined Galton's breakdown to be individual and due to his own constitution, but these letters directly show it to be the outcome of a pernicious examination system (superposed on great social and mental activities), which ruined the College career of men who distinguished themselves in later life, and whose University work ought to have been not only a delight to them, but of real service as a training for the future.

TRIN. COLL., Nov. 2, 1842.

MY DEAR FATHER,

I forgot in my last note to go into proper raptures about Stultz; he really is a wonderful man. I had no idea that it was in human power to make such extraordinary improvements in my personal attire as the combined geniuses of Stultz and Gobby have effected. Consultations of course had to be frequent during the course of the Friday and Saturday that I was in Town, but I at length emerged from my chrysalis crust of Cartwright and James' manufacture to the butterfly adornments of Messrs Stultz.

My head is very uncertain so that I can scarcely read at all; however I find that I am not at all solitary in that respect. Of the year above me the *first 3 men* in their College examinations are all going out in the poll, the first 2 from bad health and the

<sup>1</sup> The seat of Lord Breadalbane.

third, Boulton, from finding that he could not continue reading as he used to do without risking it. Fowell Buxton is quite knocked up and goes out in the poll, so does Bristed one of the first classics in our year, in fact the whole of Trinity is crank. Two other men Hotham and Edwards who read with Hopkins and at the same time were very superior classics (Hotham was Newcastle scholar at Eton, which is the highest classical honour they can get there) have both given up classics finding their two subjects are too much for them. It is quite melancholy too to see the men who stood high in the College, but did not get scholarships this year in May; they seem most of them quite broken spirited. Our man Stokes who was considered sure of being Senior Classic of his year, who used to be the merriest fellow going, lost his scholarship from not doing his Mathematics, he scarcely ever perpetrates a laugh and so also with the other men. Johnson also (Adèle knows Mrs Johnson) is quite cut up. Joe Kay has left from illness produced by reading and won't come back till next term. I feel more convinced every day that if there is a thing more to be repressed than another it is certainly the system of competition for the satisfaction enjoyed by the gainers is very far from counterbalancing the pain it produces among the others<sup>1</sup>.

I have not after all entered a boat club but patronise hockey and made my first debut yesterday at it. Montague Boulton is a very nice fellow and uncommonly sharp, I do not know what his chance is considered to be in Honours. Charley Buxton's and my debating club gets on famously. We have just enrolled Hallam<sup>2</sup> (the youngest and

<sup>1</sup> To go out in the Poll was according to Bristed (*Five Years in an English University* (1840—5), 3rd ed. p. 216) the course which many a man took at that date out of pride when from early idleness, ill health or other cause his degree would not be equal to what he thought his abilities deserved. Of the men mentioned Hotham must have finally taken a poll degree, but he was elected to a Trinity fellowship in 1845; Edwards was a very low wrangler; Stokes did not graduate at all or took a poll; Charles Astor Bristed was an American, he is referred to in the *Memories*, p. 77, and was a great friend of Henry Hallam. He gave an obituary notice of Hallam in the *New York Literary World*, which is cited by Maine and Lushington and carries us back into the circle of the "Historical."—"He was the neatest extempore speaker I ever heard; his unprepared remarks were more precisely and elegantly worded than most men's elaborate written compositions. He had too a foresight and power of anticipation uncommon in such a youth, which enabled him to leave no salient points of attack and made his arguments very difficult to answer. He was always most liberal in his concessions to the other side and never committed the fault of claiming too much or proving too much. His was not a passionate oratory that carried his hearers away in a whirlwind, but a winning voice that stole away their hearts, the *ars celare artem*, the perfection of persuasiveness."—These lines are a striking testimonial to the powers of Hallam, but also indicate the nature of Galton's personal circle. Bristed was next but one to "wooden spoon" in the mathematical and second in the second class of the Classical Tripos in 1845. I have already referred to Fowell Buxton and the Kays.

<sup>2</sup> This is the "Historical Society," and we may fairly assume it was founded by Galton and Buxton. In the *Memoir of Henry Fitzmaurice Hallam* by Henry Sumner Maine and Franklin Lushington, which is published in the *Remains in Verse and Prose of Arthur Henry Hallam* (new ed. 1862, p. lii), it is said of Henry Hallam: "In the first year of his College-life he became the virtual founder of the 'Historical' debating

only surviving son of "Middle Ages") among our members and spout away most learnedly once a week on subjects in the ethical line. There are 9 of us altogether and I shall be president next week and shall array myself in Stultz for the occasion. We keep it very secret and meet in each others' rooms in rotation under the pretext of a wine party; then the man who gives the spread is president and at  $\frac{1}{4}$  before 5 sports his door and the debate begins. The president of one meeting has to propose a subject and open the debate on it in the meeting a week after. Mr Hodgson sent me my certificate for degrading the day before yesterday. I will let you know how the proceedings about it progress in my next letter. I have invested in such a jolly second-hand arm chair. I really believe it is the most comfortable in Cambridge, it cost £3. 10s.; the seat is only 10 inches from the ground so it is thoroughly luxurious. [Sketch of said chair.] How is Capt. B—, wedded or single? By the way one can imagine the following scene:

Scene. Interior of a church, marriage procession, bridesmaids, etc., rather an elderly bride and bridegroom.

*Priest.* Wilt thou have this man to be thy wedded husband?

*Bride.* Not a doubt about it.

How are the various family ailments? Does Mater find bannocks lie very lightly on the stomach? Thank you for taking care of the papers; there were some books also that I left, Guizot's *Civilisation*, etc., and there are some at Claverdon. Now if Mater had such a redundancy of preserves and jams from the garden that she was really obliged to manage with them as she used to with the cats of old, viz. give sixpence to whomsoever would take them, then the strength of my filial affection would rejoice at the opportunity of being useful and of taking 2 or 3 pots out of her way. And should all this be the case it would be worth while to put them with the books in a box and send them at once to Cambridge, where they would be severally eaten and read.

I am learning singing after the Hullah fashion, but alas notwithstanding maternal prophesies I find the Galton ear is as slightly developed inside my skull as it is largely on the outside, and although I keep up the credit of the family failing, yet I am afraid I shall not at the same time qualify for the professorship of music.

I read with no tutor at all at present, as I question the advantages of doing so, but shall attend the University lectures on mechanics by Willis, which begin on the 10th.

Theodore is reading hard for his degree which comes off in about 10 weeks. Goodbye and believe me, Your affectionate son,

FRAS. GALTON.

The next letter does not tell us whether Galton has given up the idea of degrading, but it shows that there was little hope of any immediate improvement in his health.

[circa *November 28, 1842.*]

MY DEAR FATHER,

Thank you much for your and Bessy's letter which last I received yesterday. I am quite ashamed at not having written oftener but my head generally is not as well

club, established to encourage a more philosophical habit in style, argument, and choice of subjects, than was in vogue in the somewhat promiscuous theatre of the Union." Galton's letter of Nov. 2 and that of Feb. 17 of the following year seem to indicate that Hallam, although possibly an early member, was not the virtual founder of the "Historical."

as might be at the orthodox letter writing time, namely about 7 a.m. I find myself quite unable to do anything in reading for by really deep attention to Maths. I can bring on my usual dizziness etc. almost immediately though generally I feel much better than I used to do. Palpitations of the heart have lately come on when I read more than I ought to do which I am rather glad of than otherwise, as it saves my head. What annoys me most is that my powers of reading vary so much on consecutive days, at one time being able to read some hours, at another not half one, and the dizziness etc. when it does come on, comes on so rapidly that I have no fore-warning symptom to tell me when to stop, except occasionally the palpitations. I have been rather diffuse à la Leamington about my health so by way of change do thank Hiner particularly for the cake and tell her that if the quickness of its disappearance be any sign of excellence that it decidedly must rank among the very best that culinary science has produced. It was capital and at least 20 individuals concurred in that remark.....

The breakdown in Galton's health must have been so complete that he determined to give up reading for mathematical honours (not to degrade) and to enter for a poll degree only. He now spent much of his time in literary and social pursuits, and towards the end of his stay at Cambridge resumed there his medical studies. That he was a popular man at Cambridge appears from the societies he founded or assisted to found; he was also active in various undergraduate movements as the following letters will indicate.

*Sunday [17 Feb. 1843].*

MY DEAR FATHER,

Thank you very much for all three of your letters, which were certainly very amusing. All my time has lately been taken up by canvassing and afterwards by a most unfortunate collision between two of my friends with one of whom I was much interested and in some degree involved. P— and C— are the two men. The first you have heard me mention before. The last is a son I believe of Sir Thos C— and was a fellow commoner. P— is a man whose whole object was to make a very extended acquaintance, in which he certainly succeeded, but at the same time was very unpopular from being a pushing sort of man and often mixed in quarrels, and a very noisy arguer at the Union. He was a great friend of Theodore's at one time, who afterwards was rather offended at him. To proceed, on Monday night the candidates for the Union Officers were proposed. P— proposed one and C— seconded<sup>1</sup>. In some private business

<sup>1</sup> Galton, Mr Harold Wright informs me, was elected a member of the Library Committee by 152 votes. Mr Wright has most kindly extracted from the minute-books for me the references to Francis Galton; they show that he was a frequent speaker—thus on March 15, 1842, he opened a debate on the negative side of the question: "Would the method of voting by Ballot in returning members to Parliament be an improvement upon the present system?" The negative was carried by 26 to 4. He was less fortunate on April 12th when he opened a debate against Sir Robert Peel's financial proposals and the voting in favour of them was 32 to 9. When on Dec. 7 of the previous year he had spoken in favour of a repeal of the Corn Laws, however, only 7 voted for repeal with 23 against.

that followed P—— made a great disturbance—calling out, groaning, etc., etc. in which he urged on 4 or 5 Magdalene men to support him. I on meeting him that evening assured him that had I been president I should have fined or expelled him, but he seemed to look upon the whole matter as a joke, and assured me that with 4 or 5 supporters he would break the Union lamps and upset anything like order. The reason of his anger was that a different man was elected President from the one he supported. The next day he apologised for the disturbance he had made. When that very evening on Gibbs, the new President taking the chair he was so shamefully uproarious that nothing could go on. At one time I heard him cry out three groans for the President, which he and his men gave. I then went to the President and requested him to censure or expel him for the whole Union was in an uproar. The President shortly after seeing one of his supporters X—— crying out fined him a sovereign. P—— rushed across the room crying out “infamous,” and was neither fined nor expelled as he ought to have been. I then spoke to some other members of the Historical about his immediate expulsion out of that society, which they cordially agreed to, but we determined to talk it over next day, Wednesday. On Wednesday morning I met P——, who told me he was highly vexed at his conduct the night before; when by all that is shameful that very night at a lecture which was given in the Union and [at which] Mr Thorp the tutor of Trinity kindly took the chair (he had been when an undergraduate a President), P—— was more uproarious than ever—urging on several Magdalene men, who stood behind the furthest benches and kept up continually stamping so that nothing could go on. Thorp threatened twice to leave the chair and was going to do so, when C—— jumped up and rushed into the midst of them, confronted P—— and told him that his conduct was disgraceful and blackguardly as it had been the night before, he then turned round and said his observations applied to all who had assisted in the row. When turned C—— felt a push on the shoulder of which he took no heed, but turning again repeated his observations to P——. He then spoke to all the men who had left their seats (about 200) and were crowding round, and said is it your wish these men should be turned out; they all cried Turn them out, turn them out. Cries of Chair, Chair recalled the men to their places, and P—— and his associates left the room.—I immediately drew up a requisition to P—— to leave the Historical<sup>1</sup>, which was signed by all who saw it about 17, and then began to take steps for expelling him the Union<sup>2</sup>. When going to C——’s room I found him half-mad hearing that P—— had spread a report that he had struck C—— in the Union, who was too cowardly to return it. C—— then put a horsewhip in his pocket and went everywhere in search of P——, but could not find him. Late in the evening he returned to his rooms with his two friends where he found P—— with X—— and Y—— of Magdalene, who said I have heard that you have been looking for me all day, here I am. C—— said he wished to speak with him by himself. On his demurring he gave his word that he need be under no

<sup>1</sup> Galton has misplaced the foundation of the Historical in the *Memories*, p. 76. No doubt the violent behaviour at the Union strengthened the Historical.

<sup>2</sup> On Feb. 20 a motion to expel Mr P—— was brought forward at a special meeting, and on its being carried a poll was demanded; this resulted, next day, in 246 for expulsion and 76 against. On the report stage another poll was demanded with the result of 236 for expulsion and 103 against, so that the motion was lost, a three-fourths majority being apparently needful.

bodily fear. So they went down into the cloisters. On arriving there C— asked him if it was true that he had spread the above report. P— replied that he had struck him in the Union. C— drew out his horsewhip and held it over him and said: Consider yourself horsewhipped. P— said: You have not struck me. C— dropped the whip on his shoulders. P— drew out a life-preserver and struck C— ferociously over the temples which quite confused him; he however closed in when X— and Y— actually pinioned C— and whilst C—'s two friends were trying to tear them off, P— deliberately hit C— several times on the head. P— trotted away and said I have witnesses that you first struck me. He since owned that the whole affair was prearranged. All C—'s friends were of course almost mad. It was beneath his dignity to challenge him<sup>1</sup>. To skip over all the different plans that were proposed and laid aside it has ended in laying the matter before the College authorities who have rusticated P— "sine die," which is the same as expelling him, for they take his name off the boards and they have not allowed C— to reside this term which is almost a nominal punishment as he is a bachelor scholar, and in no way to be injured by such sentence. I need not add that P— is universally cut and I understand that he has threatened being revenged on me.

C— was a good deal hurt. A large committee of whom I am one are always together either at C—'s or some others' rooms. He breakfasts with me tomorrow before going down and the whole of Trinity will probably see him off. The motion for P—'s expulsion comes on tomorrow evening. Denman, son of Lord Denman, and senior classic takes the chair. A printed statement will be published as soon as the Magdalene men have been punished and I will send you one.

The tests for arsenic are very easily applied and quite cheaply, but the 4 pounds is I believe the Chemist's fee. Your affectionate son,

FRAS. GALTON.

I fear the shortness of the above statement will not give you a very clear notion of the way matters stand.

There are no further letters relating to this remarkable episode in the life of the Union<sup>2</sup>, but a few verses—apparently by Galton—among his papers show that he saw the humorous as well as the serious side of the matter. They run:

*Horsewhip and Life-preserver.*

P— I'll face it out and 'stead of dawdling  
Go and see my friends at Magdalene  
\* \* \* \* \*

<sup>1</sup> On the proposal to challenge: see the *Memories*, p. 75.

<sup>2</sup> Among Mr Harold Wright's gleanings from the minutes we find a motion by Galton "That the restriction by which the Library Committee are prevented from purchasing novels be done away with" (October 29, 1843). The motion was lost. His name also appears (March 28, 1843) at the end of a report of a committee appointed to consider the question of the Union giving a ball. The Committee strongly opposed the suggestion. Galton was proposed on Jan. 31, 1842, by Housman of St John's for the office of President, but was defeated on a poll by Crawshay of Trinity. Some account of this disturbance at the Union will be found in *Bristed*, *loc. cit.* p. 169.

My friends I've told you once that really  
 I *did* hit C—— most severely  
 Who answered nothing when I whacked him,  
 But now some plucky friend has backed him,  
 And made him threaten me a dipping  
 Or a sanguinary whipping.

X—— and Y—— together

D—n it if he don't deserve a  
 Licking with a Life-preserver,  
 Up! and, when your coat is put on,  
 Buy the instrument at Mutton.

Versification was indeed very much in Galton's mind at this time and on April 5, 1843, he writes to his father :

TRIN. COLL.

MY DEAR FATHER,

I am having the greatest fun imaginable in getting up an "English Epigram Society"<sup>1</sup> which is to meet 3 times a term, the members are to send in their epigrams anonymously and they are to be read by some one chosen by lot. The subject is to be chosen out of those proposed by a majority. I have got the first in the University among the rising men to join it, two young Fellows of Trinity and bachelors, etc., so I expect that some of the Epigrams will be first rate. The society consists of 12. All the men I have spoken to have jumped at the idea, and I have great hopes of its working exceedingly well.

I think I shall be able to come down this week, when I would coach it to Hatton and then walk on. I send you a poem, I have just sent it for the Camden medal and fear it will not interest you much as it is all relative to the present great controversy as to whether man has a conscience (innate I mean) or not. Paley and Locke and many Greek philosophers as you know against it, Plato and Bishop Butler and some German metaphysicians and Whewell on the other side. Stewart seems to be for it, but does not give a decided opinion one way or the other. The mottoes I have chosen explain the point of the whole; I take the paraphrase of the one from Plato to be: "They have ever in their soul a specimen of the Divine nature, lasting and bright as silver or gold." I was obliged to print it before sending it in. I leave it on the honor of the Family that it be not shown to any besides themselves I mean my Father and Mother, Bessy, Adèle, Emma, nor in any way to be spoken of to others.

Your affectionate son, FRAS. GALTON.

The poem is of deep interest—not as a poem, it gained no prize<sup>2</sup>—but as evidence of Galton's faith and view of life at this period of his

<sup>1</sup> See Bristed, *loc. cit.* p. 214.

<sup>2</sup> The prize was won by Galton's friend, W. Johnson of King's. As Mrs Browning puts it:

Many fervent souls  
 Strike rhyme on rhyme, who would strike steel on steel  
 If steel had offered, in a restless heat  
 Of doing something.

*Aurora Leigh*, 22nd ed. p. 34.

career. He had not yet realised that the social virtues were the products of a long evolution, he considered that mercy, justice and truth were absolute ideals, and that a knowledge of what they consist in was divinely planted in every human breast. The world for him was a degenerate world :

“The heart of man is intellectualized,  
“And the high souls of other days are gone.”

Its salvation depended not on a forward progress, but on a return to some earlier ill-defined state, where conscience had held more complete sway, and Divine rule had been more fully recognised.

“Well may we loathe this world of sin, and strain  
“As an imprisoned dove to flee away;  
“Well may we burn to be as citizens  
“Of some state, modelled after Plato’s scheme,  
“And overruled by Christianity,  
“Where justice, love, and truth, and holiness  
“Should be the moving principle of all,  
“And God acknowledged as its prop and stay.  
“I am no ingrate foster son to thee,  
“Granta, revered mother, in thy lap  
“Have good men grown to their maturity,  
“Nourished and strengthened by thy wholesome lore,  
“And thence have proudly walked before the world  
“As statesmen, poets and philosophers.  
“Still thou art but a corner of the earth,  
“Wherein a penitent may weep and pray,  
“While all abroad is rough disquietude.”

There is no doubt that Galton was at this time in a depressed frame of mind, and therefore too much stress must not be laid on such opinions as those conveyed above or in the words :

“How foolish and how wicked seems the world,  
“With all its energies bent to amass  
“Wealth, fame or knowledge.”

But the poem does form an index to his standpoint at that time, and enables us the better to appreciate those fetters from which, he tells us, Darwin’s *Origin of Species* emancipated him (see p. 6). The time was yet distant when he too would hold that to increase the bounds of knowledge was, perhaps, the “most respectable task” a man could set himself in life, or when he would settle down to



ascertain how the social virtues arose from the evolution of the herd or endeavour to inquire statistically into the efficacy of prayer.

The following letter must have been written shortly before the Long Vacation, which Francis was planning to pass in Germany with his sister Emma.

TRINITY [Date ?].

MY DEAR FATHER,

I do not think I can get any Weimar introduction from my London medical friends though they may have some acquaintances in Jena. Jena is I find a stage from Weimar. I am making all enquiries I can, and from all I can gather Weimar is decidedly the place for us. The Historical Society flourishes. I speechified there the last meeting. The Epigram Society appears most prosperous, we had its first meeting last night. A great many were sent in, and 5 chosen out of them by ballot. Then we have subscribed for a superb manuscript book with AMOENITATES CANTABRIGIENSES on it, in which such epigrams as are chosen are inserted. I have not time to write out for you the five in question, but they were very fair. I ought to say that we take the word *epigram* in its most general sense, that is any poem of any character on a given subject with or without point. The subject was *Via trita, via tuta* (the worn way is the safe way) the Duke of Norfolk's motto. The verses I sent in, they were one of the five, were:

“A plucky lad was he,  
 “Who fastened quills together,  
 “And tried to cross the sea,  
 “In spite of wind and weather.  
 “Though better to have wept  
 “In silence Minos' ire,  
 “Facts only prove he leapt,  
 “From frying pan to fire.  
 “Shareholders save your load,  
 “Save money, save material,  
 “So keep the turnpike road  
 “And sell your steam aerial.”

Your affectionate son, FRAS. GALTON.

The last letter from Cambridge this term is undated but it must have been written in the first few days of June :

*Wednesday Evening* [Date ?].

MY DEAR FATHER,

Thank you very much for your kind present to me which will be very acceptable as I do not doubt but that my journey will be somewhat expensive. I will be with you on Monday Evening, as I propose to leave Cambridge for Claverdon by the Eagle on that day. Then I was thinking of staying with you there until Wednesday or Thursday and then joining Emma in London and starting off with her on Monday.

I cannot write a longer letter now as we are being plagued with an Examination, in which, however, I am not trying to do much, as I am quite indifferent as to my place

in the Classes and only want to avoid being posted which is a bore because the name is published in the newspapers as such and relations are generally ignorant of the nature and character of these examinations. I have prepared literally nothing but trusted to the light of nature which has been very useful so far, and I think I have already avoided a post<sup>1</sup>. If it had not been so, I should only have had to cram for any one of the later papers over night and that would have done perfectly.

Henslow the botanical lecturer has been very good-natured to me about Saxe Weimar; he says he would have given me introductions, but he has never himself been abroad, but he advises me to ask at once if there be any resident botanist, to go to him and to state my case, and to ask him what are the valuable flowers in the neighbourhood, etc. He says there is a kind of freemasonry among naturalists, that it is very little trouble for a professor to open his herbarium and to shew a few leaves of it, and it may be of great service and therefore they never hesitate a moment about doing so. I shall certainly follow his advice.

Goodbye, my dear Father and with many thanks for your kind letter, I remain

Your affectionate son, FRAS. GALTON.

The next letter finds Galton in London (June 10, 1843) preparing to go to Dresden with his sister. He has seen "the farce of Fortunio at Drury Lane, which is certainly most absurd and contains more puns than it has hitherto fallen to my lot to listen to even from yourself [S. T. G.]" There are a few days of seeing friends—Partridge, Kays, Horners, and relations Hubert Galtons, Charles Barclays, Gurneys—and a new acquaintance, Denham Cookes, is made. "He has the funniest head I ever saw, is exceedingly agreeable, and at his ease; nobody except his lawyer knows where he lives, under cover to whom all communications are addressed. His hair is yellowish red; his face something like this [sketch of a face with bizygomatic much greater than minimum temporal breadth]. He told us a great deal." Then brother and sister are off *via* Hamburg to Dresden. In Dresden they appeared to have stayed till August 16, but only one joint letter of Francis and Emma to "Father, Mother, Bessy and Delly" has survived. Emma writes: "We enjoy ourselves much, it is most kind of you allowing me this journey, I feel most obliged to you for it. Francis has been busy with his Doctors lately. He asked Dr Todd of London and his brother to tea; Fras. makes a capital host, and we hang out tea, bread and butter and cherries. We leave on Thursday for Tetschen to stay till Saturday at Mr Noel's.....The Hallams and ourselves are prodigious friends. They leave on Monday." Henry

<sup>1</sup> Galton got a fourth class in the May Examination, 1843.

Hallam and his sister had also gone to Dresden. Francis himself writes in something of his old light style on people and customs :

“We are in full preparation for leaving Dresden early the day after tomorrow. We go by steamer to Tetschen to the house of Mr Noel, Mr Woodness’s friend; he called upon me the other day whilst I was snoozing in bed at 9, and was very good-natured to Pem and asked us to stay in his house on our way to Prague. Accordingly we go to him on Thursday and stay until Saturday, which time he wrote to say would suit him. Coombe, the phrenologist, is I believe staying at Tetschen; at least Mr Noel came to Dresden to meet him and afterwards returned with him in the steamer home. Mrs Noel is a Bohemian lady of very good birth and sister to Count Thun, who is a great man in these parts. His face is plain, but the bumps on her head are undeniably good, Mr Noel himself being an authority on that subject<sup>1</sup>. Emma suggested that Lecky who was second in the late duel might be my old schoolfellow at Boulogne; have you any means of ascertaining whether such be the case? I do not remember him personally, though I remember passing a Sunday at Colonel Lecky’s. The Hallams go on Monday but we have made arrangements for meeting them two or three times on our way southwards and then they will stay 10 days at Munich.”

There exists only Emma Galton’s diary, which tells us that the party went to Prague (August 22), Carlsbad, Regensburg, Munich (September 2), Augsburg, Constance, Höllenthal, Cologne, Ostend and so to London (September 31). Miss Galton notes that there was a fearful storm; Francis Galton records that he was nearly drowned off the Goodwin Sands, but I can find no details. Galton was back in Cambridge on October 20 begging his father and Emma to come down there for the visit of Queen Victoria. “Mrs Hoppet is all anxiety to see you.” Miss Galton’s diary does not refer to the visit so that probably it did not come off. The following letter indicates that Tertius at least was not present.

TRIN. COLL. [31 Oct. 1843].

MY DEAR FATHER,

I have been talking with Dr Haviland about the lectures I have to attend. He tells me that if I put a “spurt” on and go to 4 lectures a day, that I shall be able to finish with Cambridge by the end of next term; he absolves me from hospital practice in Cambridge and accordingly I shall be able to practice (if I like) next June 2 years. I have without hesitation adopted his plan. I must pass an examination by each of the Professors *separately* and the examination takes place at the close of their lectures. Whether I shall feel myself strong enough to go in for all four or any of them at the end of the course I attend I do not know; if not I shall do so next year. I am working

<sup>1</sup> Mr Noel formed a fine collection of casts from living heads—taking those of men noteworthy for either ability or crime. This collection has recently been presented to the Galton Eugenics Laboratory by Lady Lovelace.



Emma Galton and Julia Hallam.



"Sister Emma."

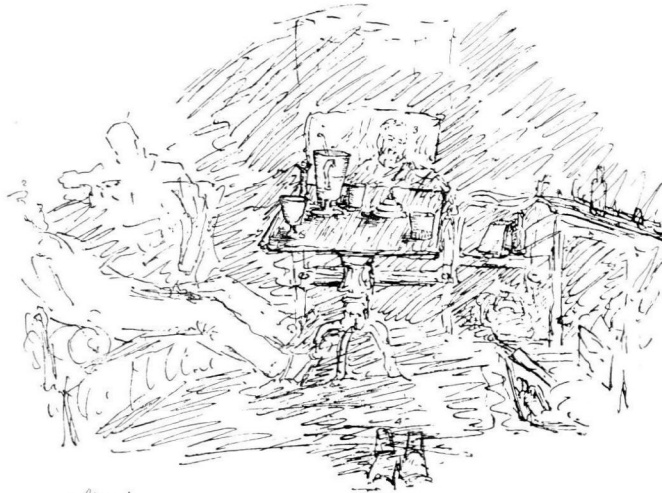
From Francis Galton's sketchbook of the German tour in 1843.

My dear Father

Your affectionate son is  
 B.A. the ceremony having taken  
 place this morning and I now  
 wear a flowing gown with ~~ribbons~~  
 hang in front over ~~the~~ arm  
 I send you a list I am ~~the~~  
 at which I highly pride  
 myself the Classics being  
 below par & medicine ~~not~~  
 allowed me to mention to get my  
 subjects up. I was third in

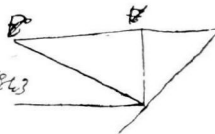


Letter of Francis Galton to Tertius Galton announcing his graduation.



- 1 Stewart
- 2 Clark
- 3 Dalyell
- 4 Galton

Shown in Paper of The Galton R.A. O.T.L. <sup>on the left</sup>  
 Printed in report by J.F.S. Clark  
 The last meeting of the Caseo-Tostie Club  
 Xmas. 12. 1843



The last meeting of the Caseo-Tostie Club, 1843. Present: Stewart, Clark, Dalyell and Galton.

Last Days in Cambridge. Sketches found in letters.

ferociously at present. First for my degree and secondly on the 4 different subjects, Anatomy, Practice of Medicine, Chemistry and Forensic Medicine. I did at one time know these same subjects well enough, but they slip in an extraordinary degree out of the mind. I am writing in the Union and waiting for some motions to come on that I was pledged last term to open. I wrote you a note by this morning's post. My gown was *not* among the number thrown down for the Queen to walk upon and caught up before the maids of honor (bless their pretty feet) could do so, as I had no inclination to assimilate my loyalty to that of the Aldermen of Southampton.

Goodbye, Your affectionate son,

FRAS. GALTON.

The postscript of this letter contains a long description with sketches of "the jolliest dodge imaginable to supersede the old plan of bolting the left door into which the right door locks" of any two-door cupboard. The contrivance is one in which the shutting of the right door automatically fastens the left.

In November Galton found that he would have to stay in Cambridge till June to complete his medical work. He proposes to go to St George's Hospital to complete his medical education. He considers that London would be the best place after leaving Cambridge and before the winter medical session begins he could learn Botany and Materia Medica, together with some degree of hospital practice. "If not, I could dissect in Paris, though, after all, minute anatomy is really useless to a practitioner who does not operate, and I think I know quite enough of general anatomy." He thinks of taking rooms in King's College as more suited to a medical student than lodgings. A letter without date of January 1844 contains on the first page a sketch of a handsome young bachelor.

MY DEAR FATHER,

Your affectionate son is B.A., the ceremony having taken place this morning and I now wear a flowing gown with ribbons hung in front over either arm. I send you a list. I am 44<sup>th</sup> at which I highly pride myself, the Classics being below par and Medicine etc. only allowed me a month to get my subjects up. I was third in Mathematics but would have been first only for a misunderstanding in one question which lost me fifteen marks. The place however in the Poll signifies nothing.

I see Hopkins occasionally who often asks me out; he has asked me to dinner tonight and again on Tuesday night.

Thank you very much about the carriage to the Stratford ball. It will be most convenient and capital for me. Please tell Emma that I fear my Schiller will not do for her on account of the type, besides I think that I had rather keep it. Tell her I was much obliged for her remembering my offer of selling it.

Your affectionate son,

FRAS. GALTON.

Apparently shortly before taking his degree Galton drew up a petition concerning the badness of dinner "at Hall." The fate it met with—if ever presented—I do not find recorded<sup>1</sup>.

*To the Master and Seniors of Trinity College.*

We being the whole of the undergraduate pensioners of Trinity College who are now in residence, beg to call your attention to the very uncomfortable character of the dinners at Hall. It had been intended last year that a memorial to this effect should have been sent. But it was understood that the Steward of the College expressed his wish that such a measure should not be resorted to, as he was then preparing a report in his official capacity, one which we hoped could not fail of meeting with attention as the evil arose not from the smallness of the sum we pay for our dinner, but from the mismanagement of it. On this account the memorial of last year was not proceeded with, but the Steward's report having failed in producing any improvement we take these means of calling your serious attention to the subject as strongly as is consistent with the respect we owe you. We complain of the dirtiness of the waiters, the bad state of the cutlery, and the pewter dishes, which with the character of the meat give the tables an appearance far from gentlemanly and very inferior to that of most of the Cambridge smaller colleges and all of the Oxford ones. And this appearance has created a very general feeling among visitors to the prejudice of Trinity, which for the honour of our College we would gladly see removed. We make no petition for unnecessary luxury at Hall, but only desire that our meal there should not be inferior to what is usual in society at the present day and to which therefore as gentlemen we feel ourselves entitled, and more especially so when it is acknowledged that the sum we now pay for it could by management fully satisfy our requirement.

Possibly a hunt in the Trinity minute books might provide the reply of the Master and Seniors to this petition. Such a body has generally a ready answer, as when at the beginning of the century the undergraduates of another large Cambridge College petitioned for dinner at 1 o'clock instead of 12, stating, for one reason, that it would give an hour longer for the morning's work, and the Master and Seniors replied that they thoroughly approved of their reason and that to meet their views in future chapel would be at 6 a.m. instead of 7 !

<sup>1</sup> Bristed writes: "The tables of the Undergraduates, arranged according to their respective years, are supplied with abundance of plain joints and vegetables, and beer and ale *ad libitum*, besides which, soup, pastry, and cheese can be 'sized for,' that is, brought in portions to individuals at an extra charge; so that on the whole a very comfortable meal might be effected but for the crowd and confusion, in which respect the hall dinner much resembles our steamboat meals. The attendance also is very deficient and of the roughest sort." *Five Years in an English University* (1840—5), 3rd ed. p. 35.

A whole series of epigrams and verses touch on the fun and frolic of this last year of Galton's College career. The first, I quote, refers to the Historical Debating Society founded by Galton and his friend Charles Buxton.

*On the cursed Gift of Oratory.*

Within the Black Bear's ancient walls,  
Sit the young Historicals.  
Sambo Sutton once fought there,  
Once a meeting met for prayer,  
Once a Tory there did try  
Election bribes successfully.  
But now worthier than all  
Sits the Sage Historical.

Look at him that now is pleading,  
Gravely, earnestly,  
His hands against his lips applied,  
Swaying about from side to side,  
Ever with uneven motion,  
Like a barrel on the ocean.  
The while some one idea he lays  
Before the club in many ways.

Or, there was satire of some well-known member of the circle :

Nature when she built you Taffy,  
Made a lion too,  
For whom she found a soul so gruff  
And one so meek for you.  
She had in the live-coal  
Far too many irons,  
So the beast got Taffy's soul  
And Taffy got the lion's.  
Taffy's heart of steel  
Knows not fear at all,  
But the lion he must feel  
Particularly small.

Towards the end of his Cambridge time Galton became for a short while a teetotaller, and possibly the following lines commemorate the episode :

*Ode to Milk Punch.*

When first I met thee warm and young  
There shone such truth about thee,  
Such fragrance o'er thy surface hung  
I did not dare to doubt thee.



I sipt and next a bumper tried,  
 My friends' prediction scorning,  
 Then reeled and told them all they lied,  
 But ah! the following morning.  
     Then go, Deceiver go,  
     Those tongues whose lust could make them  
     Trust one so false, so low  
     Deserve salines to slake them.

Away, thy charms their bloom have shed,  
 Now failing to adorn thee,  
 While men who loved thee once have fled  
 And teach the world to scorn thee.

Milk Punch, bland hypocrite be gone  
 And my worst wishes to ye  
 You ne'er do good to any one,  
 But screw the hands that brew ye.  
     Then go, Deceiver go,  
     etc.      etc.

Some of these points are again illustrated in Galton's six months as a bachelor at Cambridge. He returned there on Feb. 13, 1844, and reports to his father that he is working hard at medicine and that Dr Bond has offered him a clinical clerkship on the next vacancy. He encloses the following *Bulletin* :

Case of Francis Galton.

Year. 1844.

Trade. Cantab.

Month. Feb.

Disease. Extreme appetite.

The patient states that he left Leamington by the coach on Feb. 3<sup>rd</sup>: the day was cold and rainy. At Southran he purchased some captain's biscuits which he continued eating till Northampton, at which place he invested in a pork pie. His appetite continued extreme even more so than natural. Present state. Face flushed, which he accounts for by a violent walk, appetite remarkable.

[March 6, 1844.]

MY DEAR FATHER,

Will you tell Bessy that I received her letter just after I had put my last into the post and thank her much for it. I see young Barclay occasionally we have breakfasted at each other's rooms and are good friends when we meet, but I have now so little spare time at my disposal being the whole morning in attendance on medical lectures etc., that I have been unable to go out much lately and consequently have rarely met him. I get more and more fond of medicine every day. I am trying some new ways of taking cases, or rather the outlines of cases by lines drawn under each particular symptom and varying according to its severity, every day or every

second day as the case may be. In fact like the ordinary plan of statistical charts<sup>1</sup>. It seems of great use for noting cases quickly, since you can do all you want by the bedside of the patient and when going round with the physician which w<sup>d</sup> be quite out of the question in the ordinary way of proceeding, and then many cases are noted which would otherwise be neglected.

Do you remember my mother and myself talking about the connection of gout and asthma? I asked several medical men whether they had ever observed any and they all said no, when curiously enough yesterday Dr Haviland stated in his lectures that "from a wide observation he c<sup>d</sup> not help thinking that gout and asthma had certain connections which have not yet been investigated." I shall certainly look out for cases that way, for it would be very curious if such apparently unlike diseases were after all related. Dr Haviland spoke much of very strong coffee as often being of very great service in asthma;—that or tea, which is much the same, for their active principles are identical, I know you have found good only you don't take the former strong enough.

Does my mother still adhere to her intention of accompanying me to Shrewsbury next Easter, will you ask her to write about it? I shall have I hope nearly a fortnight altogether, but must spend a week at home to talk over our future plans and Bob Sawyer dodges, for getting into practice and so on, with you<sup>2</sup>.

You will probably have heard from Emma, who found it out through the Hallams, that I am a tea-totaller of about a month's standing. It suits with my constitution gloriously—but warm advocate as I am of the cause, whatever *you* do, my dear Father, don't lower yourself, as wine is a most necessary medicine for you. I am very glad I have taken the pledge. I told Delly my reasons, who will tell them you. It was not done without a term's previous consideration.

Your affectionate son, F. G.

Tertius Galton was slowly failing in health during these years and very tender and playful are the letters of his medical son. On March 9, 1844, he writes:

*Saturday morning.*

MY DEAR FATHER,

As I was not able myself to enter into learned consultation with Pritchard and Dr Jephson I cannot altogether give up my privilege of "family doctor," and so will write this letter full of prescriptions. But first I must truly congratulate you on your convalescence which Delly tells me is in capital progress; and as I presume

<sup>1</sup> The suggestion becomes clear when one has seen the elaborate statistical charts of the grandfather—Samuel Galton—covering most complete records of his household economy.

<sup>2</sup> From about this date have survived two plans, one an elaborate arrangement of the inside of a doctor's carriage with sleeping things, escritoire, pots and pans of all sorts; the other a description of a physician's waiting room with a number of devices to impress the patients with the scientific character of the consultant and some humorous items as "folio works of various authors, too large to be abstracted."

only wanting a little hospital patient discipline to make it perfect. Now my prescriptions are :

- 1st. That the Hospital Patient do on no occasion feel his pulse.
- 2nd. That the H. P. do never look in the glass to see whether his eyes are red.
- 3rd. That the H. P. do never examine his own health with a view to self-doctoring.
- 4th. That the H. P. do make improvements at Claverdon, and commit prisoners at Leamington when so inclined, but that he never attend canal-meetings, nor put himself to inconvenience or anxiety.
- 5th. That the H. P. do henceforth enjoy an "otium cum dignitate" and leave hard work to younger heads for whom it is a duty.

And now my dear Father I have finished doctoring for the present, but shall go on writing doctor's letters until I hear that you obey my rules, and that you treat your own constitution with the respect it deserves for having brought you through asthma, hard work at banking and anxieties of all sorts for so long. Indeed it is a highly meritorious constitution and fairly deserves rest.—I hope to be with you in about a fortnight but the exact time is not yet fixed, however I shall know before another three days, when I will write. At present I still continue full work at medicine. I am reading Hippocrates and Aretaeus in which we are examined for the M.B. degree. It is now my lecture time, and so not to lose a post I send my letter unfinished but will write again on Monday.

Your very affectionate Son,

FRAS. GALTON.

During the Easter Vacation following Francis Galton went to visit his uncle Dr Robert Darwin and there is a letter dated Shrewsbury, Wednesday, and endorsed by Tertius Galton, April 10, 1844<sup>1</sup>.

At 3 p.m. yesterday I arrived at my Uncle's gates; the palms of my hands were decidedly moist—the courage was oozing. The fly drove up to the door and I was heartily welcomed by my cousin Susan. I made many apologies which were directly stopped short as everything was made up and excused. And then I was taken into the dining room to eat luncheon and then in came my uncle who welcomed me if possible 5 times more heartily and who also stopped short all apologies, having, however, first shewn me the delinquent letter, which was wonderful free from all dates. Not a word have I heard of my iniquities since then up to the present time. And they have all been as goodnatured and as warm-hearted as possible. They wanted me much to stay, but I thought I had better not, lest my uncle should feel the excitement too much<sup>2</sup>, and also because they wanted me to have some amusements all day, and Shrewsbury does not afford any, and so I fear they may be afraid that they are

<sup>1</sup> There is a letter from Violetta Galton to her son Francis from about March of this year, saying how the health of both Tertius and herself has failed: "I dare not make any positive engagement to take you to Shrewsbury, but if I cannot do so, I propose, as soon as you come home, to write to my Brother and say how anxious I am to introduce my youngest son to him."

<sup>2</sup> Dr Darwin was then 78 years of age; he died four years later.

not as hospitable as they might be which is far from the case, but still they might think it. My uncle is very much better and stronger than I expected, and I have enjoyed my visit extremely. Your affectionate son,

F. GALTON.

At the beginning of May, Galton was back in Cambridge full of his medical studies and pointing out the value of a Cambridge degree for a medical man.

“Robert Frere who was my senior at Partridge’s, and who has indeed taken a surgeon’s degree has had this fact so much urged upon him by different London Doctors that he intends coming to Cambridge as a freshman next term. So I was right after all, notwithstanding Hodgson’s forebodings, in wishing for a Cantab. education..... Tell Delly that as soon as I came up, and through the medium of Tooke I served a writ for total abstinence on Selwyn. He professes himself not quite decided as yet, though undoubtedly in favour of the cause. Tooke introduced me to him the day after. The Epigram Society flourishes in great vigour, we meet next time to write epitaphs on the various dons now in authority. Selwyn I hear desires to join us. The Kays come up next week to take degrees in Freemasonry<sup>1</sup>, and then they are to tell me about any lodgings near them they have found out for me in town.” [May 1, 1844.]

Only two more letters of the Cambridge period have been preserved—indeed we shall soon reach the end of our material of this kind; for with the death of Tertius there was no other member of the family who preserved Francis’ letters with the same tender care. At the risk of wearying the reader, I give them both.

*Monday Morning* [May 6, 1844].

MY DEAR FATHER,

Thank you very much for your two letters and I have just received Emma’s also with the account of Miss E. I should think Mr T. was not a person of very sanguine temperament. What is the correct thing for a lady to do under those circumstances? I always thought that the bridegroom was made to breakfast with the bridal party before the ceremony, and never lost sight of till after it was over, lest he might bolt. It seems so odd to make an *appointment* to meet and be married at a given hour at a church. Had Mr T. only been a disciple of my Father’s, he would have been shivering at least half an hour before his time waiting for the church-door to open, and not be so grievously late. I am glad Mrs Onslow is getting better, did you say the ball went right through her? My old friend, Joe Kay, is in Cambridge and he tells me of several lodgings about where I should like to be in London. I have not actually

<sup>1</sup> Francis Galton himself was initiated on February 5, 1844, into Scientific Lodge No. 105 of the Ancient, Free and Accepted Masons, held at the Red Lion Hotel, Cambridge, and on March 12, 1845, he was registered on the books of the Grand Lodge, London.

fixed upon the street but certainly should prefer one of those running out of Park Lane, for then I shall be near St George's Hospital and the Park, and close by the Kays, Campbells, C. Buxton and not far from Mr Hallam, and indeed some others. I fancy that I shall get from Kay's description quite as good rooms as I shall want for 20 shillings a week.....We had such a glorious May day here. I determined to improve upon my last year's one and together with two other men raised a shilling or sixpenny subscription to £3. With this we got 80 buns, 240 oranges, 600 small biscuit cakes and materials for 8 gallons of tea (to be made ready sugared etc. in cans); then we got a maypole 9 feet above the ground [picture], with a great wreath on the top and two flags one on either side fastened to sticks and held by boys. Then an arch through which only 2 could pass at a time, receiving each of them a bun or 2 or three biscuits and an orange (in transitu). Then we chose a Queen of the May, the prettiest little girl I ever remember to have seen [portrait] and Mrs Hoppit took her in charge and washed her and attired her in a royal diadem and then the undergraduates present, about 60 shoved their way in to the maypole and took hands and spread out leaving a large vacant ring, in the centre of which was the maypole and the Queen of the May. She choose her partner and with five other girls and their partners danced the College hornpipe. Then we let in a number of other smaller girls who took hands and danced in a wide ring round them and the maypole, and after that another ring concentric that danced the opposite way round, so all three were going at once. We had one of those street hurdy-gurdy things for the music. So the plan of the proceedings was thus: [Diagram of the dancing circles, the outermost sketched below in elevation consisting of undergraduates in caps and gowns with stretched linked hands and outstretched legs—outside these a crowd of undergraduate onlookers]. There were more than 200 children and the undergraduate arms were at full stretch. The maypole was put up in the college green.

*Riddle.* If a man wants to obtain a vegetable time piece at what hour should he rise?

*Answer.* He must get "up at eight o'clock" (must get a potato clock).

Goodbye. Your affectionate son,

FRAS. GALTON.

P.S. I will always write on Mondays as on this and last week.

TRIN. COLL. [May 13, 1844].

*Tuesday* (instead of *Monday*).

MY DEAR FATHER,

Pray excuse this small sheet of paper, for I have so much of it on hand that I can find no way for its disposal. A number of my old college friends have come up during the past week, and most of them gone down again. Mathew Boulton just appeared for two days and a night to take his degree. He asked me much to come to Tew, and I have accepted his invite gladly for some far future time as I am afraid that I shall have no time for holidays in London. Everybody is making up long vacation parties and I have had earnest entreaties to travel with different allies to St Petersburg, to Madrid and I don't know where else, but after all it is satisfactory to have something better to do than to join them. Fowell Buxton has also been here,

he is working at the brewery in London but unfortunately keeps a long way off from where I shall. The 2 Kays came up, one to be made a Freemason, the other to be passed to the 2<sup>nd</sup> degree and I was raised to the third on the same night. Frederick Bristowe has been in Cambridge the last week to see his brother, who takes his degree next year. At the Epigram meeting last time we had the most amusing collection that as yet we have been favoured with. One short one was on Griffin, a Johnian Senior Wrangler, who has written the most stale, abstract and uninteresting books on optics it is possible to conceive and quite spoilt the beauty of the science. I ought to say the subject given was "An Epitaph." It was:

"Who'll weep for Griffin?  
 "Not I said the eye,  
 "He has made me so dry,  
 "I cannot weep for Griffin<sup>1</sup>."

Bessy wrote to me the other day, it was principally on good advice.

The Kays tell me that they are going to build a splendid street in London longer than any at present existing and closed at either end with large metal doors and archways; it is to be by Kensington Gardens. Westmacott has nearly finished his bas-reliefs for the basement of the new Royal Exchange; they are said to be splendidly executed. I do not know how the figures are grouped, but they form an allegory relating to Commerce, and the figures are in modern not ancient dress and I believe not unlike those on the old penny postage envelope. The British and Foreign Institute is going to build extensively; there are now 1250 members, the prices for dining are the same as those of the Athenaeum, which are high. A very fair library has suddenly sprung up by all the principal publishers giving very handsome presents of books to Buckingham as a return for his exertions in that part of the copyright bill by which the number of copies of each publication that must be sent to different libraries has been diminished, and these books he has made over to the Institute. Are Lucy's kinchins still with you? Give my love to them, if they are and also to Lucy. Your very affectionate son,

FRANCIS GALTON.

How is my mother's health? and do you still teach Adèle's school-children? Your chess-board is invaluable; we lie lazily on the banks of the river in the sun playing chess after hall, which is luxurious to a degree. I didn't read the speech of Sir Robert you mentioned but should have been very glad to have been able to have cheered him for the passage in question.

<sup>1</sup> N. W. Griffin: *A Treatise on Optics*, Cambridge, 1842. The last information as to the Epigram Club I can find is in a letter of Nov. 10, 1844, received by Francis Galton on Dec. 16th. It is from Charles Evans who hopes Galton has not lost all interest in his old *protégée*, which is flourishing satisfactorily. The subjects for the next meeting were "Much cry and little wool," "Fools enter in where angels fear to tread" together with the "current epitaphs." Evans states that they miss Galton very much in the colony, for though his old rooms are occupied by a man known to both of them, he being a fellow-commoner and rather antique did not associate much with them. In the postscript comes the query, "Is the pledge still inviolate?"

The following dateless letter is written soon after Galton had settled in London again :

MONDAY.

MY DEAR FATHER,

I am afraid that I have two unanswered letters on the score against me, and thank you much for the letter of introduction to Mr Walker contained in the last. I will tell you the result after I have taken it. I meet with numbers of my Cambridge friends so that I am pretty sure of a call every day and this with working till about 4 at medicine, and again before going to bed makes my existence about as jolly and as cozy as I ever expect to aspire to. Mr Hallam gave me a ticket for the private view of the fresco-paintings now in Westminster Hall (on Saturday). They are said to be decidedly inferior to what was expected, and nearly half of them were rejected as unworthy of exhibition. The two best (and I had come to the same conclusion without hearing it before) are considered to be "Rachel and Jacob" by Cope and a study by Armitage, a female figure looking something like Britannia<sup>1</sup>. Armitage and Cope were two of the three that got £300 prizes for their cartoons last year.

Dr Todd is very good natured to me. He has invited me to spend next Sunday with him at a country cottage of his near Streatham Common.

I enclose you two scrawls on one piece of paper intended respectively to represent different views of my room. Tell Bessy that since she was in it, my landlord has allowed me a glorious damask green little bit of a sofa which fits as snugly as possible into the room. [Picture of a most uncomfortable-looking, philistine piece of furniture.]

Sir Arthur Brooke said he would take me to see Alexis the mesmeriser about whom so much has been written in the *Times*, *Chronicle* and *Herald* by and in reply to Colonel Gurwood. I thought I had better go as he is said to be by far the most successful clairvoyant; he won't exhibit publicly and this time Mr Ramsay Clarke had him in his room. It was entirely a failure, he certainly played at cards with his eyes blindfolded but that is not conclusive; but in not one instance could he read words written aside, and put into boxes, which he professed to be able to do.

Will you be so kind as to let me know on what days Warwick Castle is visible as Mr Hallam spends a day next week over Warwick, Coventry and Kenilworth, not Leamington. If you have any thin guide book to those places which might be sent easily by post I should be much obliged if you would send it to me, as I want to do everything obliging for the "Antik Vogel." Emma will explain.

Your affectionate son,

F. G.

[P.S.] Dear Emma, *She* is sweeter than ever. F. G.

We know that Francis was in Cambridge on May 13, probably June, July and August were the extent of his stay in London and the limit of his medical studies at St George's. His address seems to have

<sup>1</sup> It may comfort some of my readers to know that Francis Galton thrice wrote this name and crossed it out, before he reached the above spelling.

been 16 King's Street, Covent Garden<sup>1</sup>. Francis Galton had many friends about him in London; the friendship with the Hallams had strengthened since the German visit. Emma Galton was staying with the Gurneys in St James Square in February, and had visited the British Museum with Mr and Miss Hallam, meeting there Miss Edgeworth, Samuel Rogers and Macintosh, and in July of 1845, she was staying at Nailsea with the Hallams. Tertius and Violetta Galton were in London in February and calling on the Hallams. But the friendship of Francis Galton and Henry Hallam seems to have ripened most in the latter part of 1844 and in 1846, from which years several very affectionate letters from Hallam to Galton have survived, to which some reference will be made in the following chapter.

Very tender are the letters from Tertius to his son Francis during the last nine months of his life. He was clearly very anxious that Francis should concentrate himself on medicine and should follow a definite profession in life. Nor does he fail to remind him of family claims.

"I hope you will go to Shrewsbury at Easter as you *ought* to see Uncle Bob before he dies"—is the prompting that comes from home before the Easter visit (see p. 186), which had doubtless been several times postponed.

On Feb. 4th, 1844, Tertius writes :

"As Bessy has no doubt given you much salutary advice as to exclusive attention to medicine, I forbear repeating to you all that Horner said to me on the importance of it to success in London practice as founded upon his own observation and the remarks of many leading medical men of his acquaintance."

And again on March 9th :

"I am extremely glad that you take so fondly to your profession upon every account, as an occupation useful to yourself and to others, and as a source of pecuniary independence, which, after all, it is among the number of our duties to promote.....I admire your courage in taking the pledge, and your motives for it, and am glad that the plan agrees with you. Adèle tells me that in *your* case unlike that of the gin-drinking lady, resolution was rewarded beforehand."

Emma Galton, writing on March 4 of the failing health of her father, Tertius, says, "My father has said over and over again 'Give

<sup>1</sup> A letter from Tertius Galton to Francis, dated June 30, 1844, and enclosing the last Cambridge College bill is thus addressed. Tertius speaks of himself as still weak and restless.



my affectionate love to my dear Francis'.<sup>1</sup>” There can be little doubt that Francis was his Benjamin, and when on September 9 Tertius goes to St Leonards in the hope that a change of air may effect some good, Francis was chosen as his companion and nurse. The picture of father and son together in the last few weeks of the former's life has been preserved for us in the letters of Tertius to his home circle. They went by way of Tunbridge Wells, whence Tertius writes to his daughter Emma of a drive round the rocks with Francis. From St Leonards we hear :

Francis has sketched a little. He is an excellent travelling Physician and does not buckle on the muzzle too tightly as he used to do. You know my detestation of being valetted, so when John comes in the morning for orders, I tell him to make himself scarce ; he employs much of his time in fossil-hunting and for ought I know the rest of it in taking private lessons in the Polka to qualify him for dancing with Buswell and the rest of the maids on his return.

I have not heard from Claverdon or of Mrs Cameron. I hope tomorrow's post will bring me a letter. I am getting wonderfully stronger and can climb hills à la chamois. If it were not for the dread of Hodgson blowing me up, I should plunge into the sea—but Prudence and gout dictate that I should remain altogether a terrestrial animal. Francis sends his love.

Your affectionate Father,

S. TERTIUS GALTON.

Give my kind regards to Mr and Mrs Gurney [Emma was at St James Square]. . . . . We are just returned from the aforesaid Meliboeus [Fairlight Glen trip], but could not quite distinguish Louis Philippe on the other side of the Channel.

A few days later Tertius writes cheerfully again :

“The sea air has done wonders with me and tells every day—so do not be surprised if you see my name in the papers as having gained a prize at a cricket match. Francis and myself have an occasional game at chess, but have not yet put the pack of cards into requisition.”

These last weeks of affectionate intercourse remained a life-long memory to the son. When 65 years later he received the Copley Medal of the Royal Society, his first thought was how the news would have delighted his father. It seemed a justification for deserting a profession his father had chosen for him.

From the date of these letters onwards Tertius' health failed rapidly. On September 30 Emma Galton joined her father and

<sup>1</sup> Emma Galton writes again: “It would please him *very much*, if in a day or two . . . you would write him an affectionate letter . . . a letter from you is as good as a dozen draughts.”

brother. On October 9 the party moved to 57 Marina, where Mrs Galton and her daughter Bessy joined them. A fortnight afterwards (October 23) Tertius Galton died, and to Francis Galton fell the melancholy task of accompanying his father's coffin to Claverdon, where the funeral took place on October 31. Bessy, writing to her aunt Hubert Galton soon after her father's death, says :

"Yet none but his children can know what a daily, what an hourly loss he is to them. All our occupations and pleasures were so connected with him, that everything now seems a blank and it will be a very long time before we shall cease to be constantly reminded of him in everything we do."

Such losses leave always a deep impress on our feelings, and often a still deeper impress on our careers, but as in the case of the death of Samuel Galton the loss meant a shifting of responsibilities and the members of the younger generation stood free to follow their individual bents. Some changes bearing on Francis Galton's future life must here be noted. The home at No. 29 Lansdowne Place was given up; Mrs Galton went in the May of the following year to live at Claverdon.

On May 13 Adèle Galton, "Sister Delly," was married to the Rev. Robert Shirley Bunbury, only to be left a widow in the following year with one child, Millicent, afterwards Mrs Lethbridge, Francis Galton's much loved niece. On December 31, Elizabeth Galton, "Sister Bessy," was married to Mr Edward Wheler, and on November 13, 1845, Emma Galton started on extensive French, Italian and German travels which lasted till June 5, 1846. She was again abroad from May to November of 1847, thus illustrating the hereditary Galton *Wanderlust*. The independence that had come to each member of the family with the death of Tertius influenced not less the life of Francis. There can be little doubt that had Tertius lived Francis would have followed the strong desire of his father and would have had a profession in life<sup>1</sup>. To those at that time viewing his actions, there must have been some hesitation in judgment; the next five or six years were to be spent without definite object, apparently in the pursuit of rather idle pleasures,

<sup>1</sup> Bessy Galton writes emphasizing the gravity of her father's illness in 1844. "He regrets not hearing from you so *do*, dearest Francis, write *immediately* a nice *steady* letter telling him what you are studying etc., and talk of your profession with pleasure, it would do him more good than anything, and make a point of writing at least once a fortnight." The home letters to Francis Galton show how keen Tertius Galton was that his son should follow a definite profession, and how anxious the family circle had become about his roving tendencies—both in space and in mind.

and those who loved the open-hearted joyous youth best must have felt, if they did not give expression to the feeling, that the loss of his father was an irreparable loss, which had spoilt Galton's career. Knowing what we now do of Galton's later work, we can see that this period of freedom may not have been wholly without value. Yet we may wonder whether had his medical education been completed and the freedom come later, Galton might not have entered on his life-work with somewhat more knowledge and with even greater insight into its scope and the possibilities of his mission to his fellow-men.

It would be difficult to sum up the balance of good and ill which flowed to Galton from his Cambridge career. He went to Cambridge keen to observe and measure, full of the creative, inventive, contriving spirit. In these directions Cambridge gave him little or nothing. The mathematical tripos was the only door to an honours degree, and he never passed fully through the analysis, which should have led him to the physical branches, where he would have profited most highly. Even there he would have met theory alone—no observation and no experiment. Hopkins and Cayley were not the teachers for a man like Galton—such a man would have developed rapidly under a Franz Neumann, a Helmholtz, or a Kelvin. As it was his thoughts turned largely into other channels than the routine work of mathematical honours. He became a centre of much social life, of literary ambitions and of varied and somewhat scattered purposes. I do not think that we can fairly say that the competitive work for the mathematical tripos was the sole source of Francis Galton's breakdown at Cambridge. It had largely to do with his mathematical studies, but it was the impossible attempt to combine those studies with a very wide range of other interests and occupations, which finally led to his academic failure. The men with whom Galton associated, the Kays, Buxton, Johnson, Hallam, and Maine were not men of one interest or a single idea. Galton, as well as his friends, strived to cram too much into the brief years of undergraduateship—hard work, hard play, late hours and conviviality all told:—the renunciation of honours, the eager return to medical studies, the pledge in the last year of college life, were not isolated factors, but symptoms of a growing restlessness,—not one thing alone accounted for his breakdown. He tried too much and he failed. Cambridge had not given him the training he needed, it did not bring him in touch with the helpful older mind, that it

provided for his cousin Charles Darwin, but it stirred an already too active mind intensely, and brought it into touch with many young, keen and sympathetic spirits. The long period of fallow years which followed Galton's Cambridge career, was partly due to a mind recovering from overstrain, partly natural in a youth to whom pleasure was possible, but who had not yet measured its insufficiency. We have so little evidence bearing on Galton's mental evolution during the next six years of his life, that we can but speculate on what those years did for him, and what might have been, had school and college training been individualised. The "Sturm- und Drang Periode" of our lives are claimed by *Alma Mater*, and she ever afterwards is glorified in our minds by their enchantments, but it is possible that the child gives more than the mother, and that the more brilliant her children, the less she regards their individual needs. Why should she make so little attempt to chart the course, which would lead the adventurous mind to those fragrant isles, whose enticing scents ever summon it, luring but illusive, across a barren sea? Why is the personal influence of the older on the younger mind, the unwritten experience, which lies so far above all regular tutelage, and which the sympathetic master-mariner alone can give to the apprentice hand, so rare an item in the debt her more famous children bear to *Alma Mater*? Is it due to the want of a thought-out system of education, to the want of the right men, or to an inherent principle in human nature which asserts that real 'education' is only attained during the solitary cruise "by chartless reef and channel"?



Visiting Card of Dr Erasmus Darwin.