

PHRENOLOGY - CONFRONTATION BETWEEN SPURZHEIM AND GORDON - 1816

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This paper attempts to re-evaluate the relationship that existed between Dr Spurzheim* and the senior members of the medical community in Edinburgh during his visit to the city in 1816-17 to confront his detractors and defend in debate the principles of phrenology†. Recent access to letters from Spurzheim to his future wife covering this period strongly suggests that the most senior members of the medical establishment, the members of the Faculty of Medicine, recognised and appreciated the quality of his neuroanatomical expertise.

Access to this personal correspondence between Spurzheim (Figures 1 and 2) and Mme Honorine (Perier) Pothier, his future wife (Figure 3), over the period 1814-17 (Figure 4),¹ has been extremely instructive; they provide insight into his activities while in Edinburgh from July 1816 until early 1817. Here, he had been provided with sufficient specimens of human brains by both Professor Alexander Monro *tertius*, Professor of Anatomy and Surgery at the University of Edinburgh,^{2,3} and by Dr John Barclay, the most respected of the extra-mural teachers of Anatomy,^{4,5} that he was now able to demonstrate his skill as a dissector of the brain. He also lectured on the principles of phrenology in front of audiences containing both anatomists and clinicians, as well as other professional individuals. During this period he also had the opportunity of confronting those that attacked the doctrines of phrenology, principally Dr John Gordon,^{6,7} a lecturer on anatomy and physiology at the extra-academical school in Surgeons' Square, and one of the rising stars of the Edinburgh anatomical school, on a one-to-one basis.

His letters from this period indicate that he was well satisfied with his activities in Edinburgh. Spurzheim had a particularly high regard for the clinical and scientific expertise of those Scottish individuals he met in the capital. What is surprising, however, is that in none of these letters is there any reference made to George Combe who subsequently became phrenology's principal exponent in that city.^{8,9} It can only be speculated that either Combe did not introduce himself to Spurzheim, or if he did, he made no particular impression on him.¹⁰ Combe was initially sceptical of phrenology, having read Gordon's article in the *Edinburgh Review*‡ of the previous year (Figure 5), but after attending these lecture-demonstrations, he was struck by Spurzheim's superior method of dissecting the brain, and heard much that answered his own questions regarding philosophy, social institutions and man's social framework.⁹

It is unclear whether the correspondence from Spurzheim to Mme Pothier is complete over this period.

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*Dr Johann Gaspar Spurzheim (1776-1832) was born in Longuich, near Trèves (Trier), on the Moselle, Germany, on 31 December 1776, and studied medicine in Vienna in 1800, where he encountered Dr Franz Joseph Gall (1758-1828), the founder of phrenology. He was Gall's first disciple, and from 1804, when he graduated in medicine, he became initially his junior partner and later his co-worker. Because of philosophical differences as to how the subject should develop, their pathways diverged in 1813, and Spurzheim undertook an extensive European lecture tour. After a crash course in English, he visited London in 1814 in order to create a following in the British Isles for his conception of phrenology. Over the next 16 years, he lived principally in London, visiting and lecturing in numerous British and European cities. Between lecturing, he published a considerable number of important books on various aspects of phrenology, the earliest ones co-authored with Gall, and the later volumes in his own name, some of which are cited in this article.

†Phrenology as a 'science' in its own right arose from the confluence of psychology and anatomical research, being an attempt to marry the ancient science of physiognomy with cerebral localization. Gall believed that he had discovered a complete and true physiology of the brain. The basic tenets of his scheme were that the brain is the organ of the mind, and made up of many individual 'organs', and that there are as many of these as there are abilities or characteristics in man. The size of each 'organ' depends on the degree of development of these abilities or characteristics. Finally, since the skull exactly replicates the upper surface of the brain, this allows the size of the various 'organs' to be 'visible' on the outside of the skull. The term 'phrenology' was believed to have been first used by the American psychiatrist Benjamin Rush (1745-1813), but with a different meaning to that it eventually acquired, as Gall's preferred terms to describe his science were 'organology', 'craniology' or 'craniognomy'.

‡To this author's knowledge, no modern authoritative work exists on phrenology, so any student of the subject is obliged to consult the early works of Gall, Spurzheim, and George and Andrew Combe, for contemporary accounts of its origin, how the subject evolved, and how its early adherents used their expertise. While many works were published on phrenology during the second half of the nineteenth and first half of the twentieth centuries, they do not meet modern standards of rigorous and objective scholarship, and accordingly cannot be recommended as serious sources of unbiased information on this topic.

*The *Edinburgh Review, or Critical Journal*, was founded in 1802 by Francis Jeffrey (later Lord Jeffrey, 1773-1850), an Edinburgh lawyer, admitted to the Scottish Bar in 1794. The first issues appeared in 1802, and roughly quarterly from then on. By 1814 the circulation was considerable, with over 13,000 copies printed per issue; the journal was published in both Edinburgh and London. Although Jeffrey and his associates were Whigs, the journal took a neutral political line. The very wide range of topics published were directed towards a cultured and intellectual audience, and mostly consisted of book reviews. Examples in early issues included Southey's *Thalaba: A Metrical Romance*; Playfair's *Illustrations of the Huttonian Theory*; Dr Haygarth, *On the Prevention of Infectious Diseases*; and, Pratt's *Bread or The Poor - A Poem*.

The absence of the complementary letters from Mme Pothier makes it extremely difficult to establish whether this is the case or otherwise. This is of lesser importance in that it is the first-hand account of Spurzheim that is critical in providing *his* impressions of his interactions with his friends and antagonists during this period.

He arrived in Edinburgh some considerable time after Gordon's article had been published anonymously in the June issue of the *Edinburgh Review*¹¹ and, as a result, the majority of the citizens of Edinburgh were already hostile to the principles underlying his system, a view also clearly held by Spurzheim himself (see below). Gordon (Figure 6) was very popular in the Edinburgh medical community, both because of his pleasant personality and his almost unique neuroanatomical knowledge. The *Edinburgh Review* was also very authoritative, and thus Spurzheim's task of trying to convince the sceptical Edinburgh populace, but particularly the leading members of the medical profession in that city that he particularly hoped to impress, was likely to be an extremely difficult one.

SPURZHEIM'S LETTERS

Plans to visit Edinburgh

In a letter from Dublin, dated 26 November 1815, he indicates that he leaves for Scotland in three weeks:

I intend to go to Scotland to attack my adversaries at their [—]* place. One of the medical men there is suspected as the author of the article in the Edinburgh [sic] Review against us and our doctrine. I shall take a letter of introduction to him, for perhaps he will [—] attend, then at least I have [the] opportunity of seeing him and his cerebral organization.

*Used where it is not possible to read the text.

In a letter from Dublin dated 18 February 1816, he indicates that because he had been invited by many of his friends (*particularly ladies*) to repeat his course of lectures in Cork, he had remained there rather longer than he had intended.

As my expenses were nearly the same, I stopped a fortnight longer, for which I got no more than forty [sic] guineas....I begin tomorrow another course of lectures, and as far as I can foresee, I shall have a good class....I lecture every day and shall finish in a fortnight and then immediately cross the Channel. If my luggage can arrive in March in Edinbourg [sic], I set off for that town, if not I go from here to Liverpool.

As the next letter in the series is from Liverpool (dated 17 April 1816), it is clear that his original intention of travelling to Scotland had been thwarted.

I give a course of lectures to a small number of medical men; it is indeed only in the intention to gain what I spend meanwhile. For, the students leave now Edinburgh, and I cannot lecture there before next autumn. I shall therefore, during the summer write a book on Insanity¹² make some excursions around the lakes of Cumberland and in the mountains of Scotland to see the highlanders, a peculiar race of men, in order to lecture in the autumn at Edinburgh and to return in the winter to London. I am disgusted to lecture in any town of England without being invited and knowing a certain number of subscribers. I wish to know Edinburgh, its professors and whole scientific trade, and the character of the scotch

nation, because they have the reputation as the first in the united Kingdoms of Great Britain. And I must meet my adversaries personally. I have letters of introduction to them. Among two persons, the writer of the scandalous article against me, is one. I have letters of introduction to both.¹³ I must see their cerebral organization. A friend of mine is now in Edinburgh; he thinks that I shall find a large class there; that many professors are very anxious to attend my lectures."

The next letter in the series is from Lancaster, and is dated 12 May 1816. In this letter he writes:

...I left my trunk with him [a Mr Brandreth, a surgeon], and I shall write to him when I wish them to be sent to Glasgow by a trade's ship and thence to Edinburgh on the canal. The carriage by water is much cheaper than on land....

Arrival in Edinburgh; the confrontation with Gordon

An appendix to this letter was written from Edinburgh, and dated 'the 10th of July 1816', and must have been written very shortly after his arrival in that city. He continues:

I am no more quite a stranger here. I know already several families, but at the end of this month every one of some character leaves town till late in autumn. At the end of this month all lectures cease, there are several going on, but not so many as in winter. I attend those of my profession, and of Geology. - I have reason to believe that I shall make converts here, but no money. I shall invite whoever will attend my lectures in Nov. in order to form the public opinion here in my favor [sic]. The English depend much on the scientific people here. London will pay what Edinburgh praises. - Meanwhile I am much occupied with insanity.

His next letter from Edinburgh is dated 15 July - 2 August 1816.

...I shall now give you a report of my gradual progress in the intellectual city. I had some letters of introduction. I was politely but reservedly received. *The general prejudice against me was very perceptible. Some did not even answer the introductions and took no notice of me.* I quietly attended the lectures of those professors who had not yet finished their courses. I provoked the teachers of anatomy and medical men to try to procure me brains to dissect that I could show what the Reviewer had denied.

I soon found an opportunity to dissect a brain to several medical men among them a Professor of Anatomy in a private case [? class]. They were pleased and spoke favorably to their friends.¹⁴ A short time after the partner of the professor procured a brain. I dissected it in the presence of the Reviewer, his partner, Dr Barclay, Dr Duncan Jun, Dr Irvine, several surgeons of the staff and many pupils.^{15,16} The Reviewer did not at all look at the preparations; but his partner seemed to be pleased, and professed to see the things as I maintained. All the others were highly gratified. - - - I got another brain from the same source. Now the Reviewer endeavoured to object before the class. The audience was very numerous and the greatest number of the professors present. Being aware that the Reviewer intended to object, I had taken the article in my pocket, and began with attacking him. He then lost his temper, denied the most evident points by those who had confidence in their own eyes. Every one,

except his satellites, felt that he quibbled only about words and tried to carry my attention from the object in view and to dispute about secondary considerations. He has done harm to himself. All blame him for his behaviour, which was not that of a gentleman. He is the more blamed for it, as it was in his own house / Lecture-room /.¹⁷ Several of the professors were so disgusted that they went away in the midst of the demonstration manifesting distinctly their indignation at my adversary's conduct. I remained calm and did not forget a single moment to respect the audience and to maintain my proportions. The Reviewer betrayed himself in a pleasing manner. When I read the second passage which is very severe and attacks my moral character, where he maintains that we must have known it better, and have published against our conscience, it made such an impression on his mind that when in reading, I stopt a moment before pronouncing one word, he gave it in my mouth in presence of the class. Since that moment I speak of Gordon as my Reviewer, for none but the Reviewer himself could do so. Before that moment I knew who was the candid man, but merely from hearing say [hearsay], since that time I speak openly of him and name him always.

The Reviewer suggested several assertions which we never have published. I provoked him to show me the passages where he has found his suggestions. When he read the passages, his meaning could not be found; it resulted that he had misrepresented our ideas. In short, we disputed about 5 hours in that way; the result was, that far the greatest number was on my side.¹⁸

A few days after I received a testimony that shewed evidently that the professors of the university had a better opinion of me than the Reviewer wished to communicate. It was the graduation day, where 75 doctors were stamped, that I was curious to see the proceeding. The degrees are given in the College Library, an apartment of considerable extent, the professors sit at one end with a large table before them, the new doctors round within an enclosure, and the spectators without the enclosure at some distance. I was among the latter body, but being seen by some of the professors, they sent a message to me, to invite me to come up to their tribune. All rose and bowed when I came up and offered me one of their chairs. You may imagine that this was soon known and well calculated to make me looked at as worth [worthy] of being noticed.¹⁹

There are parties here as every where. Those who are against the party of the Reviewer, who is a private lecturer on Anatomy, are very glad to find such a powerful assistance as I can afford them, and I have the advantage of their support. I shall do what depends on me to defend my cause.

In his next letter from Edinburgh, dated 20 August 1816, he describes in considerable detail the technical component of his confrontation with Gordon. It seems unlikely, however, that his non-medical reader would have followed much of the progression of the argument. Accordingly, when re-reading these letters, one gets the strong impression that he was attempting to present an accurate contemporary record of the events, so that at a future date, an *objective* reader might be in a better position to re-evaluate the rights and wrongs of Gordon's criticisms of the material published in the two books that he had reviewed (anonymously) in the *Edinburgh Review*.

Now I can assure you that I have made rapid progress in this city, *considering particularly the general prejudice which existed among the inhabitants*. Lately I had opportunity of giving a very detailed demonstration in the physical Society who invited me to do so; I gave two lectures in presence of a numerous audience of several professors and the first surgeons. They were generally satisfied, and make their opinions known through the town, which, however, in this season is very thinly inhabited, because the classes are interrupted, almost all students are gone, and the better families in the country. Meanwhile I made the best use of my time I can in writing my book on insanity.¹² Besides I intend to give a short course of 6 lectures to those who are in town and have pleasure and time to attend them. They will be gratis and not publicly announced but intimated to and through my friends. I wish to remove the prejudice, and erroneous suggestions and to show what our object is. They have not the least notion of it. Since my disputation with Dr Gordon, the Reviewer, I have published a prospectus of our anatomical views in comparison with the *Review*, and Dr Gordon's book on the brain.²⁰

Dr Gordon, for instance, denied the expression *fibres* of the brain, and in his book he makes use of the same expression. I distribute this prospectus and it had an excellent effect. In a short appendix, I compare a few passages of the *Review* with the statements of my book, and show, that he does not deserve the best confidence on account of his misrepresentations. I accuse him of his illiberality, provoke him not to speak of motives and consequences, but to show plain facts, and as the Reviewer has the Org. of Self esteem in a high degree, I have shown that example as a Counterproof. The passage of my prospectus is [as] following: 'He who will refute our assertions, founded on facts, ought not to be satisfied with speaking merely of absurd theories, incredible and disgraceful nonsense, trash and despicable trumpery, he ought not to write a libel of 41 pages,¹¹ full of personal invectives, calumnies and abuse; he ought not to speak of motives and consequences of these investigations; ought not to invent suggestions and combat them; ought not to have recourse to ridicule & sophistry, but show plain facts. If, for instance, we speak of a sign of self esteem, let us see that a man, the most prominent feature of whose character is composed of self conceit, does not offer the sign on his head. One fact to the contrary, well observed, will be to me more decisive than all metaphysical reasoning of the schools or a thousand captions or ludicrous opinions'. You may see by this that I do no longer spare him. The Editor of the Journal, I have been told, has declared that Dr Gordon must answer and sign his name. This is what I wish. I have him provoked sufficiently.

I am very curious to see his answer, and I shall make the English proverb applicable to him: the higher the ape goes up, the more he shows his tail.

In an appendix to this letter, dated 30 August 1816, he continues:

Meanwhile I have delivered six Lectures. In the first I dissected another brain, which was excellent and exhibited every part quite distinctly. There were many auditors from the beginning, but this number increased every day, because one told it to the other, so that in the last lecture the room was scarcely large enough. They stood close till to the staircase. They were quite enthusiastic. I have spoken only of six organs which are certain and easily

discovered, in order to make them convinced by their own observations that we speak from experience.

The greatest interest is excited, and every one seems to be anxious to understand something of the doctrine. There is all probability that I shall have a large class in Nov. I intend to lecture every day, to distribute the audience into classes. Ladies and idle people prefer the day, for them I shall lecture at two o'clock, for professional and scientific gentlemen I lecture at 8 o'clock in the evening. In this way everyone who wishes to attend will be accommodated.

In the united kingdoms I have not lectured to any audience who were so interested about the philosophical part of our doctrine as they generally were in the little course here. I did not expect to gain so much in so short a time; particularly as I have not given a regular course: I now hope to produce the greatest enthusiasm in this intellectual city. I feel now very easy during the rest of my stay here, and have the pleasure of being treated with distinction, instead of being looked at as [a] quack.

In a second appendix to this letter dated 15 September 1816, he describes in considerable detail a visit to New Lanark, noting that he did not succeed in meeting Mr Robert Owen, the early socialist pioneer, who was away at the time.

In a letter dated Edinburgh, 30 December, he starts by apologising for not writing earlier, but goes on to explain that the reason for this relates to the fact that he felt obliged to respond to the publication of a new pamphlet from Dr Gordon in which his and Gall's work was again criticised. The text of the letter runs as follows:

...I was still going on with the first course of lectures, when Dr Gordon, the same man who has written the article against our doctrines in the *Edinb. Review*, published a brochure to prove that our ideas are not original, but were known before; his attack again is bold and determinate, but very inconsistent. First he has given up the assertions of the Review, that the whole is fiction, trumpery, trash, no! now it is no longer new. I immediately set to work to give an answer to all our British antagonists. This is done, and I am actually printing. There will be 87 sheets.²¹ Gordon by his pamphlet has rendered me great service.

... formerly wrong not to answer the Reviewers; now I thought I was [section missing], but as he has renewed the attack, since he was obliged [section missing] since the Editor of the *Edinb. Review* desired it. But he [—] brought himself in a still deeper —crape. The wrong of the Reviewer is the more evident, if our ideas are old. I flatter myself, that my answer is successful. Poor Gordon has shown too much papion [?] from the beginning, and by changing the ground, has given me an immense advantage. I treat him severely, but with contempt as a mere mechanical dissenter and ignorant historian. My phrases are always polite, but contain [—] the just mentioned ideas. It is astonishing how I have gained in the public opinion since my lecturing in Edinburgh. Everyone is now anxious to know some thing of our doctrine; it is no longer quackery, but an important science. My audience of the first course was numerous, because I had on purpose invited the pupils of the first anatomical lecturer here. My second course is also pretty well attended, more usefully to me, though

the number of auditors is not so considerable. The opposition is driven from the field, that is much for my future plans. I shall be here still three weeks, then I return to London and try to become Licentiate of the college of physicians, that is to get the permission to practice. After that I intend to begin my establishment for insane. My work on insanity is finished and will be published in London. My auditors are much pleased here as every where. I have some of the most dashing ladies from among the audience, and a number of Gentlemen of weight. I leave warm friends and defenders of the doctrine in this intellectual city. As proof I enclose a letter which was inserted in a newspaper, the *Edinb. Star* on the 20th of the current month. It made a great sensation and was generally spoken of.²² I can assure you that I stood firm and gain every day a stronger position. I am very curious what the *Edinb. Review* will do, he will be obliged to take notice of my answer, because the opinion is too public and I attack him with boldness and great determination. *I declare him ignorant or a dispiser of truth.*

He was still in Edinburgh during the early part of 1817, and in a letter dated 15 January 1817 he writes:

...I leave this place in 6 days, and in a fortnight I hope to be in London....I leave this city with great satisfaction; I have completely triumphed over the Antagonists; and nowhere I have left warmer defenders of our doctrines. The scotch are slow, but possess a great deal of firmness and self-esteem, hence where they have decided, they will not easily change.

I have published an examination of the objections made in Britain against our doctrines.¹⁶ My friends are much pleased with my answer; it is severe in polite language.

Return to London

His personal life was also getting complicated, and it seems that he frequently received proposals of marriage from his many female admirers – and may even have had difficulties in keeping them at a distance. What is surprising, is that he felt compelled to discuss these problems in detail with his wife-to-be, unless his ulterior motive was to make her jealous, and thus shorten the duration of their engagement.

It is unclear exactly when he returned to the metropolis, but the first of his letters from London is dated 10 February 1817. In this letter and in the following letter (dated 8 March 1817) most of the text, excluding the personal matters discussed, concerns his activities in London, such as organizing and fitting out a house and preparing for the various parts of the Licentiate examination of the Royal College of Physicians of London, the fee for which was then 100 guineas.²³

His letter dated 22 April 1817 is particularly relevant in that he draws attention to the fact that as a direct consequence of the publication of Gordon's critical article in the *Edinburgh Review*. He writes:

On account of the unfavourable report in the *Edinb. Review* for some time no copy of my second edition was sold.²⁴ Since I have been in Edinb, a considerable number is gone to Scotland. I do not know how many copies are sold and how many remain. I have desired the bookseller to make the account....

In July 1817, he returned to Paris, and remained there until 1825; he delivered two courses of lectures each year,

on the Anatomy, Physiology, and Pathology of the Brain and of the External Senses.²⁵ At the request of friends in London, he returned there later that year, giving two courses of 18 lectures on Phrenology and several courses on dissection of the brain at St. Thomas' and St. Bartholomew's Hospitals and in some of the other medical schools. After briefly returning to Paris, he was again invited back to London in 1826. Towards the end of that year, he was invited to Cambridge University where he lectured before an audience of over 100 distinguished men, as well as giving a series of lecture-demonstrations in the lecture-room of the professor of anatomy. He was feasted in the college halls every day he was there, and made a most favourable impression on the anatomical and medical professors. His lectures in April 1827 in the London Institution were attended by an audience of over 700.²⁶

DISCUSSION

The phrenology debate in Edinburgh

The new information that has emerged from this correspondence strongly suggests that Spurzheim *suspected* that Gordon had written the anonymous review, but was not *certain* of his identity until their second public confrontation, at a meeting described in detail in his letter to Mme Pothier dated 15 July - 2 August 1816. In their first meeting (this took place during Spurzheim's second lecture-demonstration in Edinburgh), Gordon apparently ignored Spurzheim's dissection; on the second occasion, however, Spurzheim decided to confront Gordon in his own Lecture Theatre, and in front of his students. The fact that Gordon appears to have been able to recall, and indeed recite, all of the text of one of the most critically damning parts of his review *without prompting* was considered sufficient evidence to damn him in Spurzheim's eyes. Gordon was neither prepared to accept Spurzheim's invitation to a public debate, nor even to discuss his differences with him privately. The defence put forward by Gordon's many supporters, that the criticisms published in his 1815 (anonymous) *Edinburgh Review* paper were based on the issue of priority of publication of certain material in these two books, that all of the neuroanatomical information put forward as original had previously been published by Reil and others, certainly appears to be an oversimplification of the contents of the review and the subsequent events that took place in July 1816.²⁷⁻²⁹

It is now clear that a considerable proportion of Gordon's original criticisms was of a personal nature and borders on the defamatory even under the more tolerant constraints acting at that time. The fact that Gordon felt it necessary to expand his criticisms in the form of a monograph,³⁰ strongly suggests that he was only barely able to contain his criticism of the published work of these two authors. In this second work he confined his attention to a detailed criticism of the 22-page article published by Gall and Spurzheim entitled 'Anatomie du Cerveau' that appeared in the *Dictionnaire des Sciences Médicales* in 1813.^{31,32}

What is also of particular interest in the present context is that when Spurzheim arrived in Edinburgh in July 1816, despite the coolness of his reception as noted in several of his letters, he was apparently so sympathetically received by the leaders of the anatomical community there - represented by the University's professor of Anatomy, Alexander Monro *tertius*, and Dr John Barclay, the most senior and respected of the extra-mural teachers, that both

thought it acceptable to supply him with human brains for his public and private lecture-demonstrations.

As Spurzheim's correspondence clearly indicates, and *despite his justified agitation*, he was extremely warmly received in Edinburgh, particularly by the Edinburgh anatomists (see above) and additionally by the most senior members of the Medical Faculty. This is exemplified by the incident at the medical graduation when he was welcomed into their ranks as a distinguished clinician and guest. While it has not been possible to confirm Spurzheim's account of the events at the medical graduation, the description of the events in the contemporary *Senatus Minutes*, which also list the members of the Medical Faculty present, and the account in the *Edinburgh Evening Courant* several days later, suggest that the additional details supplied by Spurzheim have a ring of truth about them.

Despite their obvious, and at the time *apparently genuine*, overtures of welcome to Spurzheim in 1816, not many years later both Barclay and Monro *tertius*, had publicly declared their position vis-à-vis the phrenology debate. In Barclay's monograph published in 1822,³³ and in his course of lectures on comparative anatomy, his hostility towards phrenology was made perfectly clear, and he engaged in several public debates with both Andrew Combe³⁴ and George Combe³⁵ on this topic.

This was also clearly the case in 1823, when Andrew Combe was to defend his dissertation: 'Does phrenology afford a satisfactory explanation of the moral and intellectual faculties of man?' before the Royal Medical Society.³⁶ The Editor of the *Phrenological Journal* stated that the members of the Royal Medical Society were largely opposed to phrenology.³⁷ The Editor continued:

The gentlemen who spoke in opposition were not young men attending the medical classes, as has been represented, but gentlemen of mature years, decorated with literary, scientific, or professional titles. The greater number held diplomas of doctors in medicine, or of surgeons. Nor did they, on this occasion, ruffle for the first time unfledged pinions; for many of them were gentlemen extensively travelled, and known, moreover, as debaters in different societies for a period of several years. Nevertheless, we are constrained to say, that they manifested throughout a profound ignorance of phrenology,...in the whole discussion no opponent once ventured to attack the *principles* stated and elucidated in Mr Combe's essay....³⁷

In the mid-1820s, Monro *tertius*, and Sir William Hamilton,* had undertaken a series of collaborative studies, involving physical interference with the living brain of a number of species of domestic animals and birds, to establish whether this resulted in observable distortions of behaviour; these experiments were undertaken in order to refute the subject on strictly anatomical grounds.^{38,39} In later years, they undertook studies on the proportionate weight of various components of the brain in man and in various

*Hamilton was Professor of Civil History at Edinburgh at the time these experiments were carried out, and in 1836 was elected to the Chair of Logic at the University of Edinburgh. While not an anatomist, he later published a series of articles on the importance of the frontal sinuses in countering the tenets of phrenology.⁴⁰⁻⁴³



FIGURE 1

Pencil drawing of Spurzheim's head, 'the exact size of life', made by Constantine Varley, who was attending one of his lectures and employed a telescope to better see him. (Reproduced with permission, Boston Medical Library).

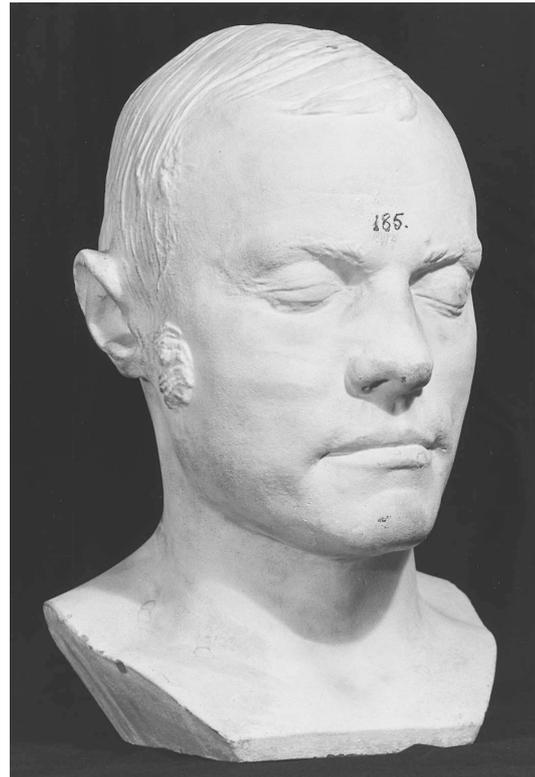


FIGURE 2

An excellent quality plaster of Paris life mask of Spurzheim inscribed on the neck region 'Pub Sept 1824 by J De Ville 367 Strand'. This probably represents a copy of a life mask made some years earlier, as the subject appears to be less than 47 years of age as Spurzheim would have been had the mask been prepared in 1824. (Henderson Trust Collection, Reference Number HT 185).

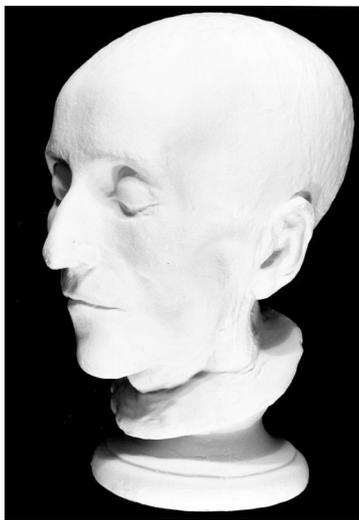


FIGURE 3

Death mask of Mme Honorine Spurzheim. Honorine married Spurzheim early in 1818 after a lengthy courtship. She was a widow with three daughters when he married her. They had no children. She is said to have had an 'uncommon skill in drawing' - a number of her portraits being used by him to illustrate his lectures.⁶⁴ She lived in a 'hospitable mansion' in the Rue de Richelieu, in Paris,⁶⁵ and occasionally travelled abroad with him on his lecture tours. She died in 1829, and predeceased him by about three years. 'Mad^m Spurzheim', is inscribed on the base of this bust. (Henderson Trust Collection, Reference Number SpC HT 251).

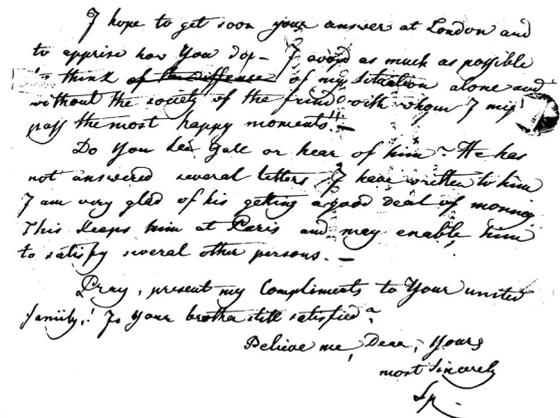


FIGURE 4

Sample of Spurzheim's handwriting, showing a section from a letter to his future wife, from Bath written in February 1815, in which he asks after the health of Dr Gall, who at that time was living in Paris, and from whom he had not heard for some considerable time. (Reproduced with permission, Boston Medical Library).

The Doctrines of GALL and SPURZHEIM. Juno

‘determined. Thus, with respect to the subject of our inquiries, I believe I have justified the assertion, that it seems impossible to point out an object more interesting to natural philosophers, anatomists, physiologists, physicians, artists, teachers, moralists, and legislators.’

We must needs indulge ourselves with a summary paragraph too. The writings of DRS GALL and SPURZHEIM, have not added one fact to the stock of our knowledge, respecting either the structure or the functions of man; but consist of such a mixture of gross errors, extravagant absurdities, downright mistatements, and unmeaning quotations from Scripture, as can leave no doubt, we apprehend, in the minds of honest and intelligent men, as to the real ignorance, the real hypocrisy, and the real empiricism of the authors.

FIGURE 5

The final paragraph of Gordon’s review article, published anonymously in the *Edinburgh Review* in 1815,¹¹ in which the doctrines of Gall and Spurzheim were so severely criticised. According to the text: ‘We must needs indulge ourselves with a summary paragraph too. The writings of DRS GALL and SPURZHEIM, have not added one fact to the stock of our knowledge, respecting either the structure or functions of man; but consist of such a mixture of gross errors, extravagant absurdities, downright mistatements, and unmeaning quotations from Scripture, as can leave no doubt, we apprehend, in the minds of honest and intelligent men, as to the real ignorance, the real hypocrisy, and the real empiricism of the authors.’

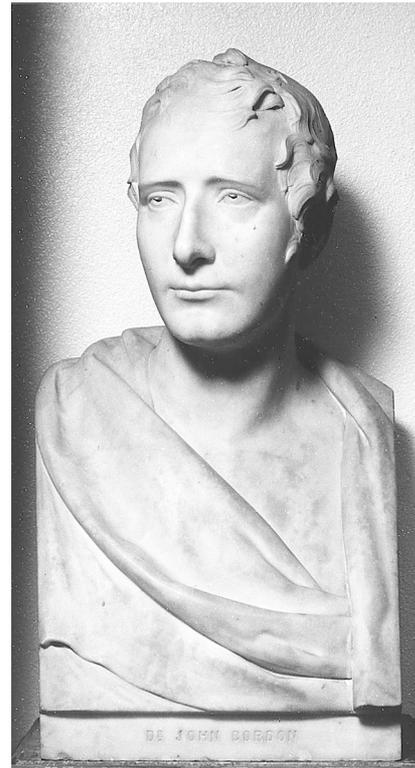


FIGURE 6

Marble bust of Dr John Gordon (1786–1818) prepared at the request of the members of the *Royal Medical Society* within a few days after his sudden death, in June 1818, at the age of 32. The sculptor, Samuel Joseph, was later a Foundation Academician of the *Royal Scottish Academy*.⁶⁶ This bust is in the Library of the *Royal Medical Society*. (Reproduced with permission, *Royal Medical Society*).



FIGURE 7

View of the author beside the obverse side of the Monument to Dr Spurzheim in Mount Auburn Cemetery, near Boston, erected shortly after his death in that city in 1832. He died on 10 November, and the Monument was erected either in December of that year, or during January of the following year.



FIGURE 8

Close-up view of the front of Spurzheim’s Monument, showing the simple inscription ‘SPURZHEIM’, ‘1832’.

animal species³⁸ and, not surprisingly, found no anatomical evidence to support phrenology. Also, during the early 1820s, Sir Charles Bell was an equally vociferous anti-phrenologist,^{44,45} and, like many others, also engaged in public debates with the Combes, although not all of their articles were hostile to his discoveries in relation to the nervous system.⁴⁶

Cooter⁴⁷ has drawn attention to the fact that during the early nineteenth century, it was the *younger* individuals, and this presumably also included members of the medical profession, that tended to be sympathetic towards phrenology; this was certainly not the case with regard to the more senior members of the medical profession, many of whom were extremely vociferous in their antagonistic views about the subject. If the senior members of the medical community were indeed hostile to phrenology, they certainly did not *openly* manifest this view until some years after Spurzheim's departure from Edinburgh in the early part of 1817. His reception in London and Cambridge, in particular, in the mid-1820s also appears to have been more enthusiastic than the situation described by Cooter.⁴⁸

SPURZHEIM'S RECEPTION IN THE UNITED STATES

It is interesting to compare Spurzheim's initially reserved, and later warmly supportive, reception in Edinburgh in 1816, with the events that occurred in Boston in 1832. He had travelled to Edinburgh to face his principal detractors, and his correspondence indicates that he overwhelmingly succeeded in defending his principles against what might have been an extremely hostile audience, being pre-programmed the year before by Gordon's criticisms of Gall's and his work published in the influential *Edinburgh Review*.¹¹ Despite this potentially enormous setback, Spurzheim appears to have charmed them by the force of his personality, and his competence both as a practical neuroanatomist and lecturer. When, after spending about six months in Edinburgh, he eventually returned to London, the contents of his correspondence suggests that the citizens of Edinburgh, with relatively few exceptions, had largely been converted to phrenology.

The background to his visit to the United States, and to Boston in particular, was quite different. Despite the progress that phrenology had made in Europe, but particularly in Great Britain during the 1820s and early 1830s, and even taking into account the hostility of many of the senior members of the medical and scientific establishment during the same period, there appears to have been only a rather gradual increase in interest in the topic in the United States during the late 1820s and early 1830s.^{48,49} After turning down a number of invitations to lecture there during the previous several years, he eventually decided to present a series of lectures in Boston during the autumn of 1832. The lectures that he delivered were extremely well received, the first being before an invited audience of the *American Institute* in the *Representatives' Hall of the State House in Boston*, the topic being (at the request of the Society) his views on education. On September 14, he began his *private* course of lectures on the anatomy of the brain, delivered before the members of the medical faculty of Harvard and other local professional gentlemen. On September 17, he started his *public* course of 18 lectures on a comprehensive range of phrenological subjects, though

there is some confusion as to the exact range of topics covered.^{50,51}

SPURZHEIM'S DEATH

Spurzheim delivered the fourteenth lecture in the public series of lectures, when it was noted by his friends that he looked unusually pale, was perspiring freely and was clearly affected by a severe chill. Despite entreaties from his friends, he only consented to see a doctor on 30 October. After an illness of only about three weeks duration, during which time his condition progressively deteriorated, he died on the evening of 10 November, at the age of 55. A post-mortem examination was carried out a few days later. The cause of his death was unclear, being either typhoid⁵² or typhus.⁵³ Others less certain of the cause of death attributed it to a continuous fever in which nervous symptoms were predominant.^{54,55} Indeed, his death certificate, recorded in the city of Boston, states simply that he died of 'fever'.⁵⁶

His remains (excluding his skull and brain, which had been retained at his specific request to be used to confirm the principles of phrenology)⁵⁷⁻⁵⁹ were transferred from the Boston Medical College to the receiving tomb at the Mount Auburn Cemetery, then located under the Park Street Church. It is said that about 3,000 people attended the ceremony, and many others had to be turned away because of lack of space in the chapel. His coffin, accompanied by a grand procession which included representatives from all of the major institutions of learning and by the most illustrious men of Massachusetts, was then taken to Mount Auburn Cemetery where he was buried. A large and impressive monument now marks this spot (Figures 7 and 8).^{48,50,60} The announcement of his death, with a brief biographical account of the highlights of his career, was subsequently published in the *Phrenological Journal* in 1834.²⁵

The Boston Phrenological Society was founded on the day of Spurzheim's funeral. It survived for ten years, and was disbanded when, according to Capen, 'the subject [of phrenology] had ceased to be a novelty'.⁵⁴ Throughout its existence, the Boston Phrenological Society was dominated by senior members of the medical profession, and five of the nine members of the original board were active physicians. At all times, about one-third of the membership were physicians. Throughout its relatively short existence, the Society had a vigorous research record. During this period they held meetings twice-monthly, owned a substantial collection of phrenological artefacts,^{61,62} and issued a substantial and highly regarded scientific journal - *The Annals of Phrenology*. According to Walsh,⁴⁸ in the 1830s in Boston, both physicians and laymen alike, were of the view that 'it was only when phrenology became associated with individuals of dubious scientific merit in later years that its nature as a "legitimate science" became something much less'.

It is a curious coincidence therefore, and entirely fitting, that this collection of letters written by Spurzheim mainly to his future wife are now housed in the Special Collections Section of the Francis A. Countway Library of Medicine, Boston Medical Library, in the city of his last resting place.

SUMMARY

All the contemporary evidence suggests that Spurzheim was an extremely personable individual. Evidence from his correspondence suggests that his lectures and demonstrations were very popular and well attended, and geared specifically to the level of knowledge and understanding of his audience. He gave afternoon lectures that were popular with 'ladies and idle people', and more serious lectures in the evenings to 'professional and scientific gentlemen'. He was less interested in the neuroanatomical basis of the science, as developed by Gall, being more interested in its general applicability in helping to improve the lot of the people. He gave his audiences what they wanted to hear. The scientific basis of the subject was plausible, and was not readily testable by the scientific methods available at that time.

ACKNOWLEDGEMENTS

I wish to record my indebtedness to Richard J. Wolfe, previously curator of Rare Books and Manuscripts, Boston Medical Library, for drawing my attention to the collection of letters from Spurzheim to Mme Pothier, and to his successor Thomas A. Horrocks and his colleagues for their kindness and consideration during my visit to Boston. Permission of the Boston Medical Library in allowing me access, and to publish, this material, and the Henderson Trust, without whose financial support this study could not have been undertaken, is also gratefully acknowledged, as is the photographic assistance of Joe Rock and David Dirom, and Jean Archibald and the staff of the Special Collections Section of Edinburgh University Library.

NOTES AND REFERENCES

- ¹ These letters are part of a larger collection of about 70 letters spanning the period between 1814 and 1829, which had been purchased at auction more than 20 years ago by the then Curator of Rare Books and Manuscripts, Richard J. Wolfe, and are now located in the Francis A. Countway Library of Medicine, Boston Medical Library. Those covering the period between 1814-17 are all in English, while the later examples are either in French or German. In 1813, Spurzheim spent six months studying the English language, preparatory to his trip to England during the following year: he arrived in London in March 1814. While Spurzheim's first language was German, and Mme Pothier's was French, it was mutually decided that they should correspond in English, in order to improve Spurzheim's command of that language.
- ² Struthers J. Alexander Monro *Tertius*. In: *Historical sketch of the Edinburgh anatomical school* Edinburgh: Maclachlan & Stewart, 1867; 34-7.
- ³ Wright-St Clair RE. *Doctors Monro: a medical saga* London: Wellcome Historical Medical Library, 1964; 96-117.
- ⁴ Ballingall G. *The life of Dr Barclay* Edinburgh: Maclachlan & Stewart, 1827.
- ⁵ Struthers J. Barclay. In: *Historical sketch of the Edinburgh anatomical school* Edinburgh: Maclachlan & Stewart, 1867; 56-70.

- ⁶ Ellis D. *Memoir of the life and writings of John Gordon, M.D., F.R.S.E., late Lecturer on Anatomy and Physiology in Edinburgh* Edinburgh: A. Constable & Company; London: Hurst, Robinson & Company, 1823. (See pp. 37-99 for summary of Gordon's critical analysis of the published work of Gall and Spurzheim. The principal information that emerges from this account is that Gordon in his monograph was meticulous in drawing attention to the fact that all of the findings of these authors had previously been made by others. More particularly, that even their approach to the dissecting of the brain, thought by many to be original, had, in fact, been described by others.

Soon after his [i.e. Spurzheim's] arrival [in Edinburgh] he expressed to Dr Thomson a wish to exhibit a demonstration of the brain, and was soon furnished with the opportunity, and accommodated with the use of Dr Thomson's theatre for the purpose, where he gave two demonstrations of that organ. Dr Gordon, with a great number of persons, both professional and others, were present. The dissection was made with considerable dexterity; and the order pursued in it was so different from that usually followed in this country, that it excited much interest, and impressed many with the belief of great discovery in the anatomy of that organ.

- ⁷ Struthers J. Gordon. In: *Historical sketch of the Edinburgh anatomical school* Edinburgh: Maclachlan & Stewart, 1867; 70-3.
- ⁸ Combe G. Explanation of the physiognomical system of Drs Gall and Spurzheim. *The Scots Magazine and Edinburgh Literary Miscellany: being a General Repository of Literature, History and Politics* 1817; **79**: 243-50 (article unsigned).
- ⁹ Gibbon C. *The life of George Combe, author of 'The Constitution of Man'*. 2 Volumes Volume 1, pp. 335; Volume 2, pp. 404. London: Macmillan & Company, 1878.
- ¹⁰ According to Gibbon (1878, Volume 1, pp. 94-6), Combe did not bother to attend Spurzheim's first course of lectures on phrenology in Edinburgh, but was later invited by a barrister friend to attend a private lecture-demonstration in his home. With the *Edinburgh Review* article on the table in front of him, he then proceeded to dissect a brain. All the company, but particularly Combe, were impressed. He decided that it was imperative that he purchase from London a large collection of casts illustrative of the different organs. During 1817, he initiated an active correspondence with Spurzheim, who was then resident in London, and Combe even sent him the 'proofs' of the article that was shortly to appear in the April number of the *Scots Magazine* (Combe, 1817). Due, however, to the vagaries of the postal service, the article was published before he received Spurzheim's detailed comments on the document.

While Spurzheim was invited to Edinburgh later in 1817 to defend phrenology once more against Gordon's, this time less personal but more substantial, criticisms of his and Gall's work (see Gordon, 1817), his lecturing and clinical commitments in London precluded his travelling to Edinburgh. Accordingly, he indicated that George Combe was now sufficiently familiar with the subject that he was well able to speak on his behalf should this be considered necessary (Gibbon, 1878, Volume 1, p. 99).

- ¹¹ Gordon J. The doctrines of Gall and Spurzheim. Art. X. Anatomie et physiologie du système nerveux en général, et du cerveau en particulier, avec des observations sur la possibilité de reconnaître plusieurs dispositions intellectuelles et morales de l'homme et des animaux, par la configuration de leurs têtes. Par F.J. Gall & G. Spurzheim. Premier vol. 4°. pp. 352. avec dix-sept planches fol. Paris. 1810. Deux vol. prem. part. pp. 212. avec quinze planches fol. Paris, 1812. The Physiognomical System of Drs Gall and Spurzheim, &c. Illustrated with nineteen copper-plates. 2d edit. 8 vo. pp. 581. London, 1815. *Edinburgh Review* 1815a; **25**: 227-68 [unsigned].

The full references to these volumes is as follows:

Gall FJ, Spurzheim G. Anatomie et physiologie du système

nerveux en général, et du cerveau en particulier, avec des observations sur la possibilité de reconnaître plusieurs dispositions intellectuelles et morales de l'homme et des animaux, par la configuration de leurs têtes. Volume 1, pp. 352; Atlas (no page numbers) Paris: F. Schoell, 1810.

Gall FJ, Spurzheim G. Anatomie et physiologie du système nerveux en général, et du cerveau en particulier, avec des observations sur la possibilité de reconnaître plusieurs dispositions intellectuelles et morales de l'homme et des animaux, par la configuration de leurs têtes. Volume 2, pp. 212. Paris: F. Schoell, 1812.

¹² Spurzheim JG. *Observations on the deranged manifestations of the mind or insanity* London: Baldwin, Cradock & Joy, 1817a.

¹³ Apart from Gordon, we have no knowledge of the identity of his second adversary, as no mention is made of this individual in any of the other letters, nor in any of the biographies of Spurzheim.

¹⁴ It is possible that this was Spurzheim's first public lecture demonstration in Edinburgh (see notes 15 and 16, below; see also note 6 where it is suggested that Spurzheim's first lecture demonstration in Edinburgh was given in Dr Thomson's lecture theatre).

¹⁵ It is possible that this refers to Spurzheim's second public lecture-demonstration, and was given before the Physical Society during the early part of July 1816. Unfortunately, the Minutes of this meeting have yet to be located.

¹⁶ Spurzheim JG. *Examination of the objections made in Britain against the doctrines of Gall and Spurzheim* Edinburgh: Baldwin, Cradock & Joy; London: Underwood, 1817b, 87pp.

For reference to these two early lecture-demonstrations, see the Introduction section (pp. 2-3), where the author states: 'As the reader may wish to know who my auditors were, I will mention the names of some gentlemen. At the first demonstration were present, Dr John Thomson, Prof. Regius of Military Surgery; Dr Barclay, Lecturer on Anatomy and Surgery; Dr Duncan, junior, Prof. of Medical Jurisprudence; Drs Emery and Irvin, of the Military Staff. At the second, were Dr Rutherford, Prof. of Botany; Dr Home, Prof. of Materia Medica; Dr Thomas Brown, Prof. of Moral Philosophy; Prof. Jamieson; Drs Farquharson, Dewar, Sanders, Anderson, and a great number of professional gentlemen. At the Physical Society I gave the demonstration in presence of Dr. Monro, junior [i.e. Alexander Monro, tertius], Prof. of Anatomy and Surgery; Drs Rutherford, Barclay, and Sanders; Mr Bryce, President of the College of Surgeons; Mr George Bell, and a numerous audience of medical gentlemen. Since that time, I have often repeated these demonstrations in private parties, always to the satisfaction....' This information would seem to suggest that Barclay and many others attended both of these lecture demonstrations.

¹⁷ Gordon lectured at Number 9 Surgeons' Square from 1808 until his death in 1818.

¹⁸ There were said to be over 500 in the audience during this five hour session when Spurzheim demonstrated the fibrous structure of the brain (See note 27-Spurzheim, 1833, p. 50). There is no indication in the text as to exactly where this demonstration took place.

¹⁹ Reference to the Senatus Minutes covering this period confirmed that the medical graduation took place on Thursday 1 August 1816. Those present at the graduation were listed as follows: Revd. Dr Baird, Principal; Drs Gregory (Dr James Gregory, former Professor, Institutes of Medicine, 1776-1789), Rutherford (Dr Daniel Rutherford, Professor of Botany, 1786-1819), Duncan Senior (Andrew Duncan, Senior, or *primus*), Professor, Institutes of Medicine, 1790-1819), Hope (Dr Charles Hope, Professor of Chemistry, 1795-1844), Home (Dr James Home, Professor of Materia Medica, 1798-1821), Monro junior (Professor of Anatomy and Surgery, 1798-1846), - Professors & Dr Duncan, Junior (Dr Andrew Duncan, junior, or *secundus*, Professor, Institutes of Medicine, 1819-1821, Professor of Materia Medica, 1821-1832). The Minutes continue: 76 candidates for the degree of Dr. of Medicine...who had

previously undergone their private Trials with the approbation of the Medical Faculty, were now Examined publicly by the Professors of Medicine on their presented Ina[un]gural Dissertations, and being found duly qualified, they received the said Degree with the usual solemnities, the following being their names with the titles of their Dissertations [in Latin]:

In the *Edinburgh Evening Courant* of Saturday 3 August 1816, the list of individuals who received the Degree of Doctor of Medicine is given, with the titles of the Dissertations as in the Senatus Minutes. Additional information on the country of origin of the graduands was also provided, as follows: Scotland: 37; England: 13; Wales: 2; Ireland: 16; Jersey: 1; Bombay: 1; Barbadoes: 3; St Kitts: 1; Maryland: 1; Carolina: 1. No mention is made, however, of Spurzheim's invitation to join the members of the Medical Faculty during the graduation ceremonial.

²⁰ Gordon J. *A system of human anatomy. Volume 1* Edinburgh: William Blackwood, John Anderson & Company and T. Cadell and W. Davies; London: Longman, Hurst, Rees, Orme, & Brown, 1815b. (see Book I, Chapter III, Section I. The brain (pp. 78-174); The spinal cord (174-191); Section II. Of the nerves in general (pp. 193-218).

²¹ This must refer to Spurzheim (1817b), which was presumably written in November/December 1816, published during the following year, and indeed contains 87 pages of text.

²² The *Edinburgh Star* of 20 December 1816 was issue number 863. The letter referred to by Spurzheim is of substantial length, running to almost 2,000 words, is signed 'Veridicus', and dated December 16, 1816. It purports to have been written by someone who attended Spurzheim's first two lecture-demonstrations held in the presence of large audiences including Dr Gordon. He indicates that Gordon's behaviour on these occasions was reprehensible, and that despite the assertions of Gordon's supporters, '...attempts have been made to misrepresent the feelings and judgement of the audience, which were unquestionably in favour of Dr Spurzheim, in the proportion of at least twenty to one.' The author felt that it was essential that the unbiased facts be stated 'because of his innate love of justice'.

²³ In present day terms, this is equivalent to about £3,270; information supplied by Bank of England (July 1998). The nearest current equivalent to this qualification is the United Examining Board's triple qualification (LMSSA, LRCP, MRCS), the fee for which is presently £750.

²⁴ Spurzheim JG. *Outlines of the physiognomical system of Drs Gall and Spurzheim: indicating the dispositions and manifestations of the mind* London: Baldwin, Cradock & Joy, (1815). (This refers to the second edition of this book).

The preparation of the first edition of this monograph is referred to in an appendix to a letter from London to Mme Pothier dated 26 July 1814 (the appendix is dated 1 August) he notes: '...that I am preparing a small book containing the principles of our doctrine. It is now almost certain that I shall publish it this autumn.... The book will constitute at the same time a book of reference for my lectures, so that the book will invite auditors and these will buy the book. It will form outlines or an abrégé of our anatomical, physiological and physiognomical inquiries, entitled: *The physiognomical system of Drs Gall and Spurzheim, indicating the faculties of the mind and founded on an anatomical and physiological examination of the brain, by G. Sp., constituting at the same time a book of reference of Dr Sp.'s demonstrative lectures.*' When this slim volume eventually appeared, it carried the slightly less cumbersome title: *Outlines of the Physiognomical System of Drs Gall and Spurzheim: Indicating the Dispositions and Manifestations of the Mind* (Spurzheim, 1815).

His arrangement with his publisher is of considerable interest, and detailed in the same letter: 'I have negotiated with a bookseller.... The ratification alone is wanting. I receive for the manuscript, 150 copies / Exemplars / of the first edition, which will consist of 780 copies. The bookseller will pay the engraver and other expenses for printing and making the book known. There will be 18

- plates; print and plates will be in large 8°. If I can sell besides my 150 copies, I shall get the copies at the trade's price - that is, 25 per cent. In all future editions the bookseller will take care of printing, he will pay all expenses of paper and others, and will receive 25 per cent, consequently the fourth part. Three fourths will be for me without any expense. I shall try to stipulate that I can make use of the plates, if I publish the same book in another language.”
- ²⁵ Anon. Article III. Death of Dr Spurzheim. *Phrenological Journal and Miscellany* 1834; **8**:126-43. (see p. 135).
- ²⁶ Anon (1834). see p. 137.
- ²⁷ Spurzheim JG. Phrenology in connexion with the study of physiognomy: to which is prefixed a biography of the author by Nahum Capen. First American Edition, improved. Boston: Marsh, Capen & Lyon, 1833. (The biographical section runs to 168 pages, but also includes a lengthy biographical section on Dr Gall.)
- ²⁸ Spurzheim (1833). See p. 35. In reply to Gordon's criticism of their claim for priority of description of certain anatomical findings, Spurzheim argues: Cuvier, however, was too well acquainted with the German and European literature, to accuse us of plagiarism. He allowed that our method of dissecting the brain is preferable to that commonly used in the schools; - that we are the first who have shewn the swellings in the spinal cord in a calf; - the proportion between the brown and white substance of the brain; - the true origin of the optic and other nerves: - the certainty of the decussation; - the successive reinforcement through the pons, crura, optic thalami, the corpora striata; - the two sorts of fibres in the brain, and the generality of the commissures. As the report is printed, even translated and inserted in the *Edinburgh Medical and Surgical Journal* for January 1809, the reader, in perusing the report, may satisfy himself. I ask the historian, why he has omitted to tell his readers, that Cuvier, in the Annual Report, published, that our Memoir was by far the most important which had occupied the attention of the class?
- ²⁹ Spurzheim (1833). See p. 44. It is said that Dr Abernethy, after observing Dr Spurzheim dissect a brain at the Medico Chirurgical Society in London and after attending his course of lectures 'fully acknowledged the superiority of Dr Spurzheim's anatomical demonstrations over every previous mode of dissecting the brain', and that he 'directed the attention of his class to Dr Spurzheim's anatomical labors, as most important discoveries'.
- ³⁰ Gordon J. Observations on the structure of the brain, comprising an estimate of the Claims of Drs Gall and Spurzheim to discovery in the anatomy of that organ. Edinburgh: W. Blackwood; London: T. & G. Underwood, 1817.
- ³¹ While it might reasonably be expected that this monograph published in 1817 (see note 24) would be an extended and more detailed version of his anonymous review published in the *Edinburgh Review* (see note 5), this is not in fact the case. The monograph is principally a critical analysis of an article written by Gall and Spurzheim entitled 'Anatomie du Cerveau' (see Appendix to Gordon (1817, pp. 185-207) 'Being the Article "Anatomie du Cerveau," written by Drs. Gall and Spurzheim, for the *Dictionnaire des Sciences Médicales*, Vol. IV. Paris, 1813.', the full text of which was published [in French].
- ³² Comrie JD. *History of Scottish medicine*. 2nd edition Volume 1, pp. 396; Volume 2, pp. 411-828. London: Baillière, Tindall & Cox, 1932. (According to Comrie (1932, see Volume 2, p. 498): 'This attempt to show that the claims of these two men to have localised various faculties in different parts of the brain were inadmissible, went far, in this country, at least, to discredit the science of phrenology').
- ³³ Barclay J. An enquiry into the opinions ancient and modern, concerning life and organization. Edinburgh: Bell & Bradfute, 1822. (See particularly pp. 372-81).
- ³⁴ Combe A. XII. Observations on Dr. Barclay's objections to phrenology. *Transactions of the Edinburgh Phrenological Society* 1824a; **1**:393-429. (Material contained in Barclay's *Life and Organization*. While Combe clearly differed in opinion with Barclay on the anatomical basis of phrenology, the phrenologists nevertheless held Barclay in particularly high regard. According to Combe: 'One acknowledgement the phrenologists owe to Dr Barclay, and I sincerely pay it. He has displayed a truly manly and independent spirit, in fairly committing to the press his objections, and publishing them with his name; instead of resorting to anonymous abuse, which he would be ashamed to acknowledge, as has been the practice of many of our opponents. His objections have been publicly offered to us for consideration, or refutation; and he fairly trusts to the merits of his arguments for their success, and invites his reader to decide according to the preponderance of reason and of fact. Such conduct towards phrenology is as rare as it is honourable.)'
- ³⁵ Combe G. Article III. Correspondence betwixt Mr George Combe and Dr Barclay. *Phrenological Journal and Miscellany* 1824c; **1**:46-55. (Refers to Barclay's references to Gall and Spurzheim in his lectures on comparative anatomy. It is relevant to quote from the lecture notes taken by Mr John Cox (nephew of George Combe) who attended Dr Barclay's course of lectures on comparative anatomy. He noted that Barclay stated as follows: 'We are certainly much indebted to Dr Spurzheim for the reviving of discoveries which were forgotten, and as he has revived ancient discoveries he has also made one or two new and useful ones. This gentlemen, however, has been much abused by the *Edinburgh Review*, which states him to be a quack; but he is far from being a quack intentionally as any gentleman alive, and is an intelligent and learned man. When he was in this country I respected him as a man, and as a man of candour, though I could not agree with his conclusions.... I asked the doctor if my ideas on the anatomy of the brain coincided with his, when he told me that they did so precisely. But when he spoke of the physiology of the brain he and I differed. Both of us had the same facts, upon which we agreed, but we drew different conclusions from them. He said, however, that we would not quarrel upon the subject, and so Dr Spurzheim still remains one of my best friends').
- ³⁶ Kaufman MH. The Edinburgh phrenological debate of 1823 held in the Royal Medical Society. *Journal of Neurolinguistics* 1998; **11**:377-89.
- ³⁷ Anon. Article XV. Phrenology and the Medical Society. *The Phrenological Journal and Miscellany* 1824; **1**:307-16 (see pp. 308-309).
- ³⁸ Monro A. (*tertius*). *The anatomy of the brain, with some observations on its functions To which is prefixed an account of experiments on the weight and relative proportions of the brain, cerebellum, and tuber annulare, in man and animals, under the various circumstances of age, sex, country, &c.* by Sir William Hamilton, Bart. Edinburgh: John Carfrae & Son; London: Longman, Rees, Orme, Brown & Green, 1831.
- ³⁹ Browne J. *Charles Darwin. Voyaging. Volume 1 of a biography* London: Pimlico, 1995; 60.
- ⁴⁰ Combe G. Article III. Controversy with Sir William Hamilton. *Phrenological Journal and Miscellany* 1827; **4**:377-407.
- ⁴¹ Anon. Article I. Sir William Hamilton, Bart., and Phrenology. I. Correspondence published in the *Caledonian Mercury* between Sir William Hamilton and Dr Spurzheim, and between Sir William Hamilton and Mr George Combe. *Phrenological Journal and Miscellany* 1829; **5**:1-69.
- ⁴² Combe G. Article IX. Renewed correspondence between Sir William Hamilton, Bart., and Mr George Combe. *Phrenological Journal and Miscellany* 1829; **5**:153-8.
- ⁴³ Hamilton W. Researches on the frontal sinuses, with observations on their bearings on the dogmas of phrenology. *Medical Times* 1845; **12**:159, 177, 371.
- ⁴⁴ Cooter R. *Phrenology in the British Isles: an annotated, historical bibliography and index* Metuchen, N.J.: The Scarecrow Press, Inc, 1989.

⁴⁵ Bell C. XXI. Second part of the paper on the nerves of the orbit. By C. Bell Esq. Communicated by Sir Humphry Davy, Bart. Pres. R.S. *Philosophical Transactions of the Royal Society of London* 1823; **108**:2, 289–307.

⁴⁶ Bell (1823). (See pp. 306–307. According to Bell: ‘But the most extravagant departure from all the legitimate modes of reasoning, although still under the colour of anatomical investigation, is the system of Dr. Gall. It is sufficient to say, that without comprehending the grand divisions of the nervous system, without a notion of the distinct properties of the individual nerves, or having made any distinction of the columns of the spinal marrow, without even having ascertained the difference of cerebrum and cerebellum, Gall proceeded to describe the brain as composed of many particular and independent organs, and to assign to each the residence of some special faculty.

When the popularity of these doctrines is considered, it may easily be conceived how difficult it has been, during their successive importations, to keep my Pupils to the examples of our own great Countrymen. Surely it is time that the schools of this kingdom should be distinguished from those of France. Let physiologists of that country borrow from us, and follow up our opinions by experiments, but let us continue to build that structure which has been commenced in the labours of the Monros and Hunters’).

⁴⁷ Combe A. Mr Charles Bell on the functions of the nerves. *Phrenological Journal and Miscellany* 1824b; **1**:58–65.

⁴⁸ Cooter R. *The cultural meaning of popular science: phrenology and the organization of consent in nineteenth century Britain* Cambridge: Cambridge University Press, 1984.

⁴⁹ Walsh AA. Phrenology and the Boston Medical community in the 1830s. *Bulletin of the History of Medicine* 1976; **50**:261–73.

⁵⁰ Although John Collins Warren had first learned of Gall’s organology or craniognomy (later termed phrenology) when a student in Paris in 1801–02, he never met either Gall or Spurzheim. The first book in favour of phrenology published in the United States was believed to be the American edition of Combe’s *Essays on Phrenology*, published by Dr John Bell of Philadelphia in 1822. Warren’s own small book on phrenology was published later in 1822. He was said to be Boston’s ‘leading surgeon’, and Spurzheim carried letters of introduction to him when he visited Boston in 1832. The term ‘phrenology’ is said to have been first used by Benjamin Rush (1745–1813), the American psychiatrist, although with

a different meaning than it eventually acquired. He is also believed to have anticipated Gall’s ideas on the interaction between physical and mental processes, and by his additional belief in the innateness of certain mental powers. America’s first formal society devoted to the study of phrenology was formed in Philadelphia in May 1822. Despite this initial interest in the subject, by the end of the decade, the enthusiasm had largely waned. It was largely rekindled, however, with Spurzheim’s lecture tour of 1832.

⁵¹ Walsh AA. The American tour of Dr. Spurzheim. *Journal of the History of Medicine* 1972; **27**:187–205.

⁵² There is some suggestion that Spurzheim completed his course of lectures in Boston, and that he fell ill while delivering a course of lectures in Cambridge.

⁵³ Coues WP. The Spurzheim collection of phrenological casts. *Boston Medical and Surgical Journal* 1927; **196**:400–3.

⁵⁴ Anon. *Daily Evening Transcript* 1832; **3**:No. 686, p. 2.

⁵⁵ Capen N. *Reminiscences of Dr. Spurzheim and George Combe: and a review of the Science of Phrenology, from the period of its discovery by Dr. Gall to the time of the visit of George Combe to the United States, 1838, 1840* New York: Fowler & Wells, 1881.

⁵⁶ Spurzheim (1833). See pp. 135–6.

⁵⁷ Walsh (1972). See p. 195.

⁵⁸ Spurzheim (1833). See pp. 146–147.

⁵⁹ Shurtleff NB. Anatomical report on the skull of Dr Spurzheim; read before the Boston Phrenological Society. *Phrenological Journal and Miscellany* 1837; **10**:39–45. (See p. 40).

⁶⁰ Gibbon (1878). See Volume 1, pp. 277–8.

⁶¹ Kaufman MH, Basden N. Items relating to Dr. Johann Gaspar Spurzheim (1776–1832) in the Henderson Trust Collection, formerly the museum collection of the Phrenological Society of Edinburgh: with an abbreviated iconography. *Journal of Neurolinguistics* 1996; **9**:301–25.

⁶² Anon. *A catalogue of phrenological specimens, belonging to the Boston Phrenological Society* Boston: J. Ford, 1835.

⁶³ Warren JC. The collection of the Boston Phrenological Society – a retrospect. *Annals of Medical History* 1921; **3**:1–11.

⁶⁴ Follen C. Article III. Funeral oration: delivered before the citizens of Boston assembled at the Old South Church, November 17, 1832, at the burial of Gaspar Spurzheim, M.D. *Phrenological Journal and Miscellany* 1834; **8**:317–31. (See p. 319).

⁶⁵ Carmichael A. *A memoir of the life and philosophy of Spurzheim* Dublin: WF Wakeman, 1833. (See p. 27).

⁶⁶ Gray J. *History of the Royal Medical Society 1737–1937* Edinburgh: Edinburgh University Press, 1952. (See p. 90).