Commercial scientific journals and their editors in Edinburgh, 1819–32

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Abstract

This paper explores the editorial policies and practices of three scientific journal published in Edinburgh in the first half of the nineteenth century. The first of these was the *Edinburgh Philosophical Journal* (1819–26), and its continuation as the *Edinburgh New Philosophical Journal* (1826–54). This was edited until 1824 by Robert Jameson, Edinburgh's professor of natural history, and David Brewster, natural philosopher and scientific writer and editor. Brewster left in 1824 to found his own journal, the *Edinburgh Journal of Science* (1824–32). The third journal published in Edinburgh in this period was the *Edinburgh Journal of Natural and Geographical Science* (1829–31), edited by Henry H. Cheek and William Ainsworth, two medical students at the University of Edinburgh. All three journals were direct competitors, being strikingly similar in form and content. As well as competing with his journal for readers and authors, Cheek and Ainsworth also used their journal to directly attack Jameson in print. This paper sheds new light on the ways editorship of these journals was used not only to consolidate and extend circles of patronage in early nineteenth-century science, but also to challenge existing centres of authority.

Introduction

In the early decades of the nineteenth century one figure more than any other dominated Edinburgh's vibrant scientific culture. That man was Robert Jameson (1774–1854). His dominant position was reinforced through a series of interlocking roles. Firstly, he was the University of Edinburgh's professor of natural history from 1804 to 1854.[1] Secondly, he was the keeper of the University's famous natural history museum.[2] Thirdly, he was the founder and perpetual president of the Wernerian Natural History Society (1808–1858), a learned society based in Edinburgh that counted among its members almost every scientist and natural historian of any stature resident in the city, as well as a large number of key figures nationally and internationally. His fourth important role, and the one I will be focussing on in this paper, was as editor of the *Edinburgh Philosophical Journal* and its successor the *Edinburgh New Philosophical Journal*, often known to contemporaries simply as "Jameson's Journal." This quarterly periodical was read and cited by such luminaries as Richard Owen, William Buckland, John Herschel and Charles Lyell, many of whom also submitted articles for publication.

[1] Hartley (2001),
[2] Swinney (2010).

Jameson's journal was one of three general science journals published in Edinburgh in the period 1819 to 1832. The others were the *Edinburgh Journal of Science*, edited by David Brewster (1781–1868), which was established in 1824 and ceased publishing in 1832, and the short-lived *Edinburgh Journal of Natural and Geographical Science*, which appeared from late 1829 until 1831 and was edited first by William Ainsworth (1805–82) and Henry H. Cheek (1807–33), and then by Cheek alone for its final volume. Setting aside the publications of learned societies, such as the *Memoirs of the Wernerian Society* or the *Transactions of the Royal Society of Edinburgh*, which were rather different beasts, serving the needs and interests of their respective parent organisations rather than a commercial imperative, these three were the only journals devoted purely to general science published in Scotland in the years 1819 to 1832.

The *Edinburgh Philosophical Journal* had originally been edited jointly by Jameson and Brewster. They shared editorial responsibilities from its foundation in 1819 until 1824. The story of the split between Brewster on one side and Jameson and the journal's publisher, Archibald Constable, on the other, has been comprehensively covered in an enlightening paper by Jonathan Topham.[3] Topham gives a fascinating account of the way in which Jameson and Brewster played Constable and his rival William Blackwood off against each other, until Brewster overplayed his hand in trying to transfer their journal from Constable to Blackwell, prompting the latter to take legal action against him. These events forced Brewster to give up his editorial responsibilities for the journal in 1824, leaving it in the hands of Jameson. Jameson retained sole editorial control, taking the journal to the publisher Adam Black after the bankruptcy of Constable in 1826, with a slight change in title to the *Edinburgh New Philosophical Journal*. Meanwhile, Brewster wasted no time in establishing his own journal, the *Edinburgh Journal of Science*, published quarterly by Blackwood from 1824 to 1832. A third scientific journal, the short-lived *Edinburgh Journal of Natural and Geographical Science* was established in late 1829 by two medical students, Henry H. Cheek and William Ainsworth. It was published monthly and was supported with articles and editorial assistance by a number of significant figures in Edinburgh's scientific establishment and published by Daniel Lizars.

In a recent paper Pietro Corsi has emphasised how evanescent journals could be in the eighteenth and nineteenth centuries. They always teetered on the edge of economic viability, often only sustained by the determination of their editors. Corsi rightly points out how "[l]ong-term survival was due to complex institutional strategies rather than to the intrinsic explicit function of communication the periodical was supposed to embody."[4]. This was certainly the case with the three periodicals that form the subject of this paper. Their respective fates were closely bound up with the specific and very different contexts they emerged from, and in particular the widely divergent circumstances, ambitions and social statuses of their editors. W.H. Brock has already explored in some detail the fraught business relationships between

[3] Topham (2016).
[4] Corsi (2016, p. 327).

Jameson, Brewster and their publishers.[5] In this paper I hope to focus instead on their editorial practices and their relations with their varied groups of contributors.

All three journals contained a diverse variety of different types of material. These included original accounts of research, material reprinted from previously published sources (often in translation), editorial digests of scientific news, book reviews, and reports of the meetings of learned societies. The latter three content types were written either by the editor themselves, or by an assistant (in the case of Jameson's journal during the 1820s this would probably have been either William Macgillivray (1796–1852) or Robert Knox (1791–1862)). All three journals drew large proportions of their original articles from scholarly circles connected with Edinburgh and its University. The shifting allegiances of these authors have much to tell us about patterns of patronage, friendship and influence in this crucial period in the development of modern science in a city with a vibrant and cosmopolitan scientific culture, yet at the same time surprisingly self-contained. The journals and their editors also reached out beyond Edinburgh to wider international networks of scholars, whose work was reported in their pages. Editors had much to gain from presenting their journals as conduits through which their readers could follow the latest international developments in the sciences and all of them endeavoured to publish articles by authors of international stature, even if these were often reprinted from other publications. They also had much to offer potential authors in giving them access to an influential readership of fellow scholars. This paper will show how, what was in essence a power struggle, unfolded between the editors of these three rival journals.

Jameson's journal and its contributors

Throughout the 1820s and into the 1830s the *Edinburgh Philosophical Journal* and its successor the *Edinburgh New Philosophical Journal* acted in many ways as the house journal for the Edinburgh scientific community. Few figures of any stature failed to contribute at least an article or two to Jameson's journal. Robert E. Grant (1793–1874) and Robert Knox, who both taught at John Barclay's extra-mural anatomy school, were the most important contributors of original research papers on zoology and comparative anatomy, while Robert Graham (1786–1845), Edinburgh's professor of botany, was the most prolific contributor of botanical news. John Fleming (1785–1857), perhaps the most significant Scottish zoologist of the early nineteenth century, wrote on both geology and zoology. Samuel Hibbert (1782–1848), the Edinburgh-based geologist and antiquarian, provided articles on mineralogy and geology. Edinburgh's professor of mathematics, John Leslie (1766–1832), wrote a number of articles on natural philosophy. William Macgillivray, who was employed as Jameson's assistant in the College Museum during the 1820s, and later became professor of zoology at Marischal College, Aberdeen, published seven papers on zoological subjects between 1825 and 1832. Current and former students of Jameson featured among the journal's contributors, including John Coldstream (1806–63), William Ainsworth and Ami Boué (1794–1881). Other contributors, including the American

[5] Brock (1984).

ornithologist John James Audubon (1785–1851), who contributed four articles between 1826 and 1832, had made Jameson's acquaintance during visits to Edinburgh (Chalmers, 1993).

Jameson drew a large proportion of articles for his journal from individuals who had some personal connection with him, either through the Wernerian Society, as former students or through the patronage he was able to dispense through his various roles. At least a fifth of his authors had personal connections with Jameson, although the true figure is probably considerably higher, as there is too little known of the biographies of many of the less well-known contributors assess the extent to which they were connected to the network of patronage around Jameson. Many of the authors with whom Jameson had a personal connection were prolific contributors, such as Robert Graham, who provided 24 articles over the period 1826 to 1832, mostly in the form of regular botanical news from the Edinburgh area and accounts of his excursions with students. George A. Walker Arnott (1799–1868), another member of the Wernerian Society, provided Jameson with ten botanical articles in the same period.

A large proportion of contributors were members of the Wernerian Society, including seven of the ten most prolific contributors to the *Edinburgh New Philosophical Journal* between 1826 and 1832. Among these were Grant, Knox, Graham, Fleming, Hibbert, Boué, Macgillivray and Audubon. Fleming had been a founding member of the Society in 1808. Patrick Neill, the printer, botanist and long-standing secretary of the Wernerian Society, contributed six articles between 1819 and 1832. Like the Wernerian Society, Jameson's journal also allowed him to exert influence by providing a welcome opportunity for scientists and natural historians to disseminate their findings. He reinforced his dominant position in Edinburgh natural history circles through his patronage of younger natural historians who fell into his orbit and building up mutually beneficial relationships with them. Robert Knox, who wrote nine papers for Jameson's journal between 1821 and 1826, seems to have had a particularly close association with the professor in the early 1820s, although this relationship appears to have largely broken down in the second half of the decade. He not only published papers in Jameson's journal, but also, according to his biographer, Henry Lonsdale, provided substantial editorial assistance to Jameson.[6] It was not without reason that Patrick Neill asked of Knox in 1830 "was it not, I would ask, in the University Museum, and under the auspices of Professor Jameson, that he first had an opportunity to distinguish himself?"[7] Knox's fellow extra-mural lecturer, Robert Edmond Grant, was an even more prolific contributor, writing no fewer than 13 papers between 1825 and 1827. Grant too seems to have been at the receiving end of Jameson's patronage in other ways. We know, for example, from Thomas Wakley's "biographical sketch" of Grant that Jameson recommended him for membership of the Linnaean Society of London in 1820. When he applied for the chair of zoology at the newly founded University College, London in 1827

[6] Lonsdale (1870, p. 36).
[7] Neill (1820, p. 20).

Jameson also provided him with one of the references that helped him secure the post.[8] In return, Grant donated specimens of invertebrates he had collected to the College Museum.[9]

The vast majority of articles from beyond the Edinburgh sphere were not suffixed with "communicated by the author," as are most of those by the contributors discussed in the preceding section. It can reasonably be assumed, therefore, that these were generally not original papers, but had been previously published elsewhere. Most of these appear to be translated articles from foreign-language periodicals. The most important authors of this kind were Alexander von Humbolt (1769–1859), Georges Cuvier (1769–1832) and Étienne Geoffrey St Hilaire (1772–1844). These works almost always turn out to have appeared in continental sources first before being published in English by Jameson. No acknowledgement of their original provenance was given, although this was hardly an unusual practice in this period.[10] A paper by Humboldt published as "Essay on the Structure and Action of Volcanoes in different Regions of the Earth" in 1828, for example, had previously appeared in Germany in the 1826 edition of *Ansichten der Natur*.[11] Between 1826 and 1836 Jameson published 21 translated and reprinted articles by Cuvier. Eighteen of these were *éloges* given by Cuvier to the French Academy. These were generally published by Jameson some years after they were first read to the Academy; for example, the *éloge* to Joseph Banks, read to the Academy in 1821, was published in the volume of the *Edinburgh New Philosophical Journal* for 1826/27.[12] Jameson continued to publish these after Cuvier's death in 1832, with the final *éloge* appearing in the volume for 1836/37. The papers by Étienne Geoffroy St-Hilaire are also generally translations of articles that appeared earlier in French journals. "On the vision of the mole," published in 1829, for example, is not actually by Geoffrey St-Hilaire himself, although attributed to him, but is a direct translation of an account by Julia de Fontenelle of a paper he read to the Acadèmie royale des Sciences in September 1828. It had been translated practically word-for-word from the original article in the *Bulletin des Sciences Naturelles et de Géologie*.[13] Anonymous papers also make up a significant proportion of the articles published by Jameson. In the *Edinburgh New Philosophical Journal* between 1826 and 1832 19 percent of the articles do not bear an author's name. This is a similar figure to the 16 percent in Brewster's *Edinburgh Journal of Science* in the same period. In the vast majority of cases there is no obvious reason why the authors would wish to withhold their identities, as the topics covered are relatively mundane.

We know from the correspondence of Thomas Carlyle (1795–1881) that Brewster and Jameson sometimes employed others to translate papers from foreign-language sources in the early days of the *Edinburgh Philosophical Journal*. In a letter to his brother Alexander, Carlyle recounts how Brewster had asked him to translate "a paper on Chemistry written (in French) by Berzelius,

[8] [Wakley (1850, p. 690).
[9] Scottish Universities Commission (1826) (1837, p. 631).
[10] See Beals (2018) for an insightful study of the reuse of articles in the *Caledonian Mercury*.
[11] Von Humboldt (1826).
[12] Cuvier (1827, vol. 3, p. 49).
[13] De Fontanelle (1828, p. 388).

professor of that science at Stockholm," for which Carlyle expected to be modestly remunerated.[14] Jameson probably continued this practice on occasion after he and Brewster parted company. However, after employing William Macgillivray as his assistant in the College Museum in 1821, he seems to have relied heavily on him to translate articles. Henry Cheek commented that Macgillivray was very often "occupied in making translations, &c., for Mr. Jameson's publications.".[15] Jameson must have made other arrangements after 1829, when Macgillivray left his employment.

We have seen that Jameson acquired main articles for his journal from two principal sources. Firstly, there were those that were accounts of original research communicated to the editor by the authors. For these, he relied largely on his network of contacts in scientific circles. Secondly, Jameson took previously published articles from other periodicals. These were generally taken from foreign journals and translated either by Jameson himself, or more likely by an editorial assistant such as Macgillivray. Around a fifth of main articles were published anonymously, making their provenance difficult to establish. In terms of content, there appears to be little to set these apart from attributed articles. Other anonymous material, such as digests of scientific news, book reviews or reports of the meetings of learned society are likely to have been either written or compiled by the editor himself or an assistant.

Jameson's journal and Brewster's *Edinburgh Journal of Science*

Having edited the 10 volumes of *Edinburgh Philosophical Journal* together over five years, Jameson and Brewster parted company in 1824. Jameson continued to edit it under the same name for a further two years before changing publisher and renaming it the *Edinburgh New Philosophical Journal*. Brewster set up the *Edinburgh Journal of Science* in the same year as he broke with Jameson. Relations between the two competing editors do not seem to have been good, and Jameson wrote in a letter to his nephew in 1832 complaining about "abuse he [Brewster] had heaped up on the editor of the New Philosophical J."[16] Unlike Jameson, Brewster did not hold a chair at the University. Rather he depended for his livelihood on his efforts as a writer, journalist and editor. As a man who lived by his pen, his income, and social status, were a great deal less secure than Jameson's. From 1808 until 1830 he edited the *Edinburgh Encyclopaedia* for William Blackwood, compiling the work of 150 contributors.[17] Many of these also wrote articles for the *Edinburgh Philosophical Journal* and, after 1824, Brewster's *Edinburgh Journal of Science*. As well as a host of Scottish scientists and natural historians, these included many nationally and internationally known figures such as John Herschel, Charles Babbage, Jacob Berzelius and William Scoresby (Brewster, 1830, pp.ix–xiv).[18] It seems more than likely that connections made through Brewster's work on the *Edinburgh Encyclopaedia* helped him secure articles by some of these major names.

[14] Carlyle (1819).
[15] Scottish Universities Commission (1826) (1837, p. 629).
[16] Jameson (1832).
[17] Brock (1984, p. 37).
[18] Brewster (1830, pp. ix–xiv).

Brewster was committed to the cause of the Evangelical Party within the Church of Scotland, while Jameson, in the absence of any evidence for strong religious commitments, seems likely to have been closer to the Moderate establishment. This raises the question of the role of the religious schisms in early nineteenth century Scotland in the rift between the two. There is, however, no evidence for a religious dimension to their rivalry. Brewster, indeed seems to have been happy to keep his science and religion compartmentalised, later writing that "the highest demands of truth and the best interests of mankind, are invariably sacrificed when religion is intruded into questions of science and civil policy."[19]

From a letter from Brewster to John Murray dated November 1820, it seems that Brewster and Jameson each took charge of their own respective areas of expertise on the *Edinburgh Philosophical Journal*; Jameson dealt with contributions on "Mineralogy, Zoology or Botany," other subjects were the province of Brewster.[20] However there seem to have been frequent demarcation disputes between the two editors, and both were doubtless happy to have full editorial control of their respective journals after the split. After 1824 Jameson's *Edinburgh Philosophical Journal* and Brewster's *Edinburgh Journal of Science* were very nearly identical in terms of style and content, containing a similar mix of original and reprinted articles, digests of scientific news and book reviews, and it does not seem that the editors made any attempt to avoid head-on competition. Brewster even chose an identical subtitle for his journal as for the *Edinburgh Philosophical Journal*. There is, however, an indication that the content of the two journals reflected to some extent the respective interests of the editors. Between 1824 and 1829 Jameson devoted only 3.0 percent (16 articles) of his journal articles to natural philosophy, while Brewster gave it 8.2 percent (44 articles) in the same period. Conversely, Jameson devoted 12.2 percent (66 articles) to zoology, while Brewster gave it only 3.7 percent (20 articles). The one notable anomaly is in the figures for geology and mineralogy, which would appear to be very much Jameson's province. They might therefore be expected to occupy significantly more of Jameson's journal. Yet Brewster gave these subjects 22.3 percent (119 articles) of his articles, while Jameson devoted only 11.8 percent (64 articles) to them. Brewster did have some interest in mineralogy, particularly in the optical properties of minerals, but he may also have been attempting to outdo Jameson on his own turf. The numerous articles on mineralogy submitted by the German mineralogist Wilhelm Haidinger (1795–1871), who had met both Brewster and Jameson during his stay in Edinburgh in 1822–25, undoubtedly helped to make this one of the best covered subjects in Brewster's journal.[21]

It is noteworthy that Jameson was unable to retain a significant number of the most important contributors to the *Edinburgh Philosophical Journal* from before 1824 after his split with Brewster. Many either ceased to submit papers altogether or greatly reduced the number they submitted. Jameson lost a significant group of figures with national reputations, such as John Herschel (1792–1871), Charles Babbage (1791–1871) and Robert Stevenson (1772–1850). In contrast,

[19] Brewster (1837, p. 4).
[20] Brock (1984, p. 38).
[21] Döll (1871, p. 5).

Brewster was able to bring many contributors with him when he set up his new *Edinburgh Journal of Science*. Francis Hamilton (1762–1829), for example, who submitted 15 articles up to 1824, completely stopped submitting papers to Jameson. The same pattern holds for seven of the 24 authors who had published six or more articles in the journal between 1819 and 1824. A further four of the 24 published between one and three articles between 1824 and 1826 and then nothing subsequently in Jameson's *Edinburgh New Philosophical Journal*. Jameson was only able to secure one or two more articles for his new journal between 1826 and 1832 from a third group, while they had published six or more between 1819 and 1824. Brewster, on the other hand, was able to maintain healthy relationships with five of the more prolific contributors to the *Edinburgh Philosophical Journal*, who completely abandoned Jameson and became major contributors to Brewster's new journal, including Hamilton, who published 12 articles in Brewster's journal between 1824 and 1829. Jameson was able to secure one or two more papers from some others, including Samuel Hibbert and Robert Knox, while they otherwise transferred their allegiance largely to Brewster. Of the authors who were prolific contributors before Brewster's departure, Jameson was able to retain the loyalty of only a few, including Robert Grant and Ami Boué, who continued to submit articles to him with more or less the same frequency as they had before. Boué was a former student of Jameson and fellow Wernerian geologist who was then resident in Paris. He seems to have maintained a particularly close relationship with Jameson, to whom he still referred in his autobiography many decades later as "mon maître".[22] For Grant it may have been more a matter of expediency, as he had benefited from Jameson's patronage in the past, and may still have had much to hope from him in the future.

There is striking evidence why many authors may have preferred to write for Brewster to be found in the "Memoir" of the life of John Fleming written by John Dun that appeared in Fleming's posthumously published *Lithology of Edinburgh* (1859). Here Dun writes about the one article Fleming wrote for Jameson's *Edinburgh New Philosophical Journal*, published in 1830. Dun recounts how, on being asked to write the article by Jameson, although "remembering the not very handsome treatment he had once and again received from the Professor, he was unwilling to break with him altogether."[23] . Duns goes on to quote Fleming, who recalled how

> I have found Dr B.'s friendship uniform, and kind, and intimate – 'the councils' [Jameson's] irregular, cold and distant. […] Nay I have not a few proofs of something approaching to ill usage. I know that he can compliment [sic] when he has an aristocratic motive – but I have found acting as if I was not worth his while – others have suspected a little jealousy. Yet after all I am willing to keep on good terms with him.[24]

It would be interesting to know how many other of the scientists and natural historians who had dealings with Jameson would have echoed Fleming's opinions. The Scottish Universities

[22] Boué (1876, p.ii).
[23] Duns (1859, p. xl).
[24] Dun (1859, p.xl).

Commission (1826), which visited the University of Edinburgh repeatedly between 1826 and 1830 to interview professors and other interested parties, paints a vivid picture of Jameson's character.[25] Again and again he is presented by their informants as fickle, cantankerous and extremely jealous of his own prerogatives. His treatment of others could be harsh, partial, and at times positively vindictive. His management of the University's museum, of which he was the keeper, is singled out for particular criticism. While his editorship of his journal would have been outside the scope of the Commission's enquires, if it was in any way comparable to his running of the museum, it would have been highly likely to alienate a significant proportion of his authors and other associates. All the evidence suggests that Brewster was better able to gain and maintain the friendship and loyalty of his contributors. Unlike Jameson, Brewster depended for his livelihood on his earnings from editorial work. It is evident that he therefore had much more to lose by making himself disagreeable to his contributors and much to gain by maintaining warm relations with them.

This flight of authors surely must have presented something of a problem to Jameson. One solution seems to have been to rely on translations of material from previously published foreign sources. The inclusion of an *éloge* by Cuvier at the start of every issue except two between 1826 and 1831, with an extra one included in some issues, made Cuvier the third most represented author in the *Edinburgh New Philosophical Journal* between 1826 and 1832. The decision to start including these suggests that Jameson was more in need than Brewster of easily sourced, previously published material that could readily be translated and re-used. The two authors who provided the largest numbers of original articles were also dependable stalwarts. The most prolific contributor, George Innes, had written quarterly catalogues of "Celestial phenomena" for the *Edinburgh Philosophical Journal* since 1822 and continued to do so after Brewster's departure. Robert Graham, Edinburgh's professor of botany, only starting writing for the journal in 1824 after Brewster had left. He wrote a "List of Rare Plants which have Flowered in the Royal Botanic Garden, Edinburgh during the last three months" for every issue thereafter. A Scottish, but London-based, botanist and friend of Patrick Neill, David Don (1799–1841), also only became a major contributor after 1824. He wrote fifteen articles for Jameson between 1826 and 1832 (although he had also written three papers for the old *Edinburgh Philosophical Journal* before Brewster's departure). Robert Grant and William Macgillivray were younger natural historians who may have felt obliged to contribute a significant number of papers to the journal edited by their patron. Macgillivray, as Jameson's assistant in the College Museum, is likely to have felt especially obliged to regularly contribute articles.

In the longer term, Jameson was able to recover from the problems created by the departure of Brewster and the ensuing haemorrhage of contributors. His journal had continued publication for a decade after Jameson's death, when, in 1864, it amalgamated with the *Quarterly Journal of Science*. Brewster's journal met a similar fate rather earlier. In 1832 it amalgamated with the London-based *Philosophical Magazine* to become the *London and Edinburgh Philosophical Magazine*. Brewster's involvement with the journal continued as one of three, and later four, editors, a role

[25] Scottish Universities Commission (1826) (1837).

he performed until his death in 1868. It must have been a relief for him to no longer have sole responsibility for a such a venture. Journals publishing was a financially precarious business, and Jameson, basking in the security of his university chair, was always in a far better position to deal with its ups and downs than his rival. This goes to show how crucial the personal qualities and professional circumstances of editors, and the strength of their patronage networks, were in determining the success or failure of scientific journals in the early nineteenth century.

The *Edinburgh Journal of Natural and Geographical Science*

In 1829 a new general science journal commenced publication in Edinburgh, the *Edinburgh Journal of Natural and Geographical Science*. It came from an unlikely source, as its two young editors, William Ainsworth and Henry H. Cheek, were both still medical students at the University of Edinburgh. Their journal was differentiated from both Jameson's and Brewster's by being both cheaper and monthly rather than quarterly. This put more pressure on the editors to procure content. In the first number of the journal the editors make a clear statement of their aims: "This Journal was, therefore, established for the purpose of affording to the public, with the requisite rapidity, in a condensed form, and at a cheap rate, those discoveries and observations, which could hitherto only be arrived at, by the slow process, at a high price".[26] The new journal, then, was intended to both undercut existing journals on price and bring the reading public the latest developments in science more promptly than was possible for a quarterly publication. As for the articles themselves, they covered a similarly broad range of territory to the existing two journals, although with the marked absence of articles on technology and inventions, which always made up a significant proportion of the articles in both existing journals. There was a strong emphasis on zoology, geography, botany and geology, which together accounted for around 71 percent of the papers. As for the contributors, the editors had this to say about them in their preface: "Among the authors of the "Original Papers" will be found many of the first academic names in Scotland, the approvers and liberal supporters of an undertaking which they are pleased to consider disinterested and praiseworthy".[27]

The editors of the new journal were quite correct in pointing out that they had managed to gain the support of a surprising number of key figures from Scottish science and natural history, including Robert Knox, William Macgillivray, George A. Walker Arnott, Sir William Jardine (1800–74) and John Fleming, who all contributed articles to the new journal (although, with the exception of Knox, they all continued to publish articles in Jameson's journal). For two young medical students, Ainsworth and Cheek seem to have been extremely well connected and to have had the goodwill of a significant proportion of the luminaries of Edinburgh's scientific and natural history circles. The journal was, however, heavily reliant on a relatively small number of

[26] Ainsworth and Cheek (1829, p. iii).
[27] Ainsworth and Cheek (1829, p. iii).

contributors; fully half of the "original papers" were written by only ten contributors, two of whom were the editors themselves.

Among the contributors to the *Edinburgh Journal of Natural and Geographical Science*, William Macgillivray presents a particularly interesting case. According to Cheek's testimony to the Scottish Universities Commission, he had been Jameson's assistant in the College Museum from 1821 to 1829.[28] His contributions to Ainsworth and Cheek's journal are all from the year immediately following his departure from Jameson's employment, which suggests that his loyalty to Jameson may have evaporated with his dependency on him for a living. This is not surprising, as it seems he had good reason to feel somewhat resentful about his time working for Jameson, and he appears to have been treated quite shabbily by the professor at times. Among Jameson's surviving correspondence is a letter from Macgillivray dated 5 March 1832 which make it clear that Jameson had imposed a contract on him that forbade him from lecturing on natural history in Edinburgh in Jameson's lifetime without explicit permission from the professor. Macgillivray was writing to ask if this clause was still enforceable now that he had left Jameson's employment.[29] Jameson had not replied two months later, as Macgillivray wrote to him again, requesting a reply and a copy of the contract, which he claimed he had never seen.[30] Jameson's ill-usage of Macgillivray is also attested to by Cheek in a submission to the Scottish Universities Commission (1826) in January 1830. In his statement Cheek described the situation of Macgillivray in the following terms: "the late Assistant having a short time ago resigned, from his inability to perform the numerous duties which were appended to his office, and from the inadequacy of his salary for the time employed.".[31] It may not be too surprising then, that Macgillivray was happy to support a journal whose editors were openly hostile to Jameson.

The ability of Ainsworth and Cheek to attract so many of the key figures in Scottish science and natural history as contributors nonetheless seems surprising. Not only had the journal been set up as a direct competitor to Jameson, but Cheek, in particular, used it as a platform from which to launch a veritable campaign against the professor of natural history. Cheek first attacked Jameson in his role as president of the Wernerian Society. According to Cheek, who was not himself a member, all was not well at the Wernerian, and he seems to have made his concerns widely known. This appears to have led to something of a rift within the Society, as in May 1830 the editors of the *Edinburgh Journal of Natural and Geographical Science* congratulated themselves on "having instigated the present investigation of the independent members of the Wernerian Society into the singular condition of their mis-directed institution.".[32] A further tirade against the direction of the Society appeared in the July number. There followed a very frank exchange of views between Cheek and Patrick Neill, the secretary of the Wernerian Society, who leapt to

[28] Scottish Universities Commission (1826) (1837, p. 629).
[29] Macgillivray (1832a).
[30] Macgillivray (1832b).
[31] Cheek (1837, p. 630).
[32] Cheek (1830a, p. 118).

Jameson's defence. This controversy was conducted largely through a series of journal articles and pamphlets through which it is possible to follow the course of the dispute. The tone of the exchange rapidly became very personal. In response to Neill's first reply to his journal article in an "Address to the Members of the Wernerian Society," Cheek attacked Jameson personally in his position as professor of natural history and keeper of the Natural History Museum:

> I can declare that, during the four years of my residence in Edinburgh, I have been grieved to see the Museum of the University closed to the student who did not purchase certain nominal privileges at an exorbitant price, and, what was more disgraceful, the total uselessness of that establishment to the man of science; – I have felt indignant at the perusal of the syllabus of lectures which the Professor of Natural History puts into the hands of his pupils, and which is only calculated to delude; and I have beheld with disgust a coterie brooding like a night-mare over the Wernerian Natural History Society, till there was little remaining of it but the mockery cast by its name, upon opinions which are now only to be found in the pages of the history of error.[33]

In a pamphlet published in October 1830 Neil accused Cheek of "doing all in his power (fortunately little) to hold up to contempt and infamy either its President or Secretary, or both, by the grossest imputations."[34] He accused Cheek of trying to present himself "as the patron of naturalists here, – the Baron Cuvier of Edinburgh."[35] (Neill also accused Robert Knox, who had supported Cheek, of gross ingratitude to Jameson, who had helped him so much in his early career. Despite their acrimonious dispute with Jameson and Neill, Cheek and Ainsworth continued to enjoy the support of their influential backers. Ainsworth left the journal before the publication of the final volume of the journal. Its last volume was edited by Cheek with the support of a distinguished group of five editorial advisors, who had "undertaken the entire direction of their several Departments." The five were Sir William Jardine, George A. Walker Arnott, John Scoular, Robert Knox and James F.W. Johnston (1796–1855).

Cheek left Edinburgh in 1832 after graduating, and with his departure the *Edinburgh Journal of Natural and Geographical Science* ceased publication. Cheek's editorship of the journal and his use of it as a platform to attack Jameson was, however, to have a baleful influence on his subsequent career and play a role in his early death. In 1842 William Francis Ainsworth, his friend and one-time fellow editor of the *Edinburgh Journal of Natural and Geographical Science*, wrote a short appreciation of his friend in a journal he edited. According to his account, Cheek had committed suicide in 1833. If Ainsworth is to be believed, his dispute with Neill and Jameson had blighted his subsequent career on his return to his native Manchester and had led him to take his own life. Ainsworth wrote that "when, after taking out his medical diploma, he went to

[33] Cheek (1830b, pp. 3–4).
[34] Neill (1820, p. 4).
[35] Neill, 1830 (pp. 15–16).

establish himself in his profession at Manchester, he found that to meddle with science was to be expelled from all fraternity in the profession" leading him to "a sad, self-inflicted death".[36]

Of those scientists and natural historians who had previously contributed to the *Edinburgh New Philosophical Journal* and had gone on to play a significant role in the short but dramatic history of the *Edinburgh Journal of Natural and Geographical Science*, some did subsequently go on to publish articles again in Jameson's *Edinburgh New Philosophical Journal*. Both sides seem to have been sufficiently pragmatic not to bear grudges for too long. Jameson needed high-quality papers for his journal, the authors needed somewhere to publish their work. By 1835 Fleming and Jardine had each published an article in Jameson's journal and Walker Arnott had published two. Robert Knox, however, who in the early 1820s seems to have been one of Jameson's closest associates, never published an original contribution to Jameson's journal again after his involvement in Cheek's ill-starred coup against the professor of natural history.

Conclusion

The respective fates of these three journals and the success or otherwise of their editors in recruiting scientists and natural historians to contribute to them tell us much about periodical editorship in the early nineteenth century, as well as about the workings of Edinburgh scientific and natural history circles. By extension, they provide us with an enlightening model for the functioning of similar circles of patronage elsewhere. Jameson's dominance as the editor of Edinburgh's only scientific journal was challenged twice in the years between 1824 and 1831, once by his former editorial colleague David Brewster, and once by Henry Cheek and William Ainsworth's short lived *Edinburgh Journal of Natural and Geographical Science*. Both Brewster and Cheek and Ainsworth seem to have been able to win the support of significant sectors of Edinburgh's scientific and natural history circles for their efforts.

In the case of Brewster's journal, it is evident that many authors who had been prolific contributors to the old *Edinburgh Philosophical Journal* remained loyal to Brewster, and switched to publishing in the *Edinburgh Journal of Science* either completely or for the majority of their scholarly output. In the short term, this must have left Jameson with a shortfall of material for his journal, which he seems to have filled by calling in dependable new contributors, such as Robert Graham, to produce regular articles on developments in their respective field. He also published significant numbers of articles drawn from foreign sources during this period. The series of *éloges* by George Cuvier which commenced every number of the *Edinburgh New Philosophical Journal* being particularly noteworthy in this regard. It is noticeable that individuals, such as Robert Grant, William Macgillivray and Patrick Neill, who were either under some obligation to Jameson or were dependent to some extent on his goodwill, continued to support his journal with articles after his break with Brewster. Of course, Jameson's status as

[36] Ainsworth (1842, p. 260). I am indebted to Julian F. Derry for bringing this fascinating article to my attention.

Edinburgh's professor of natural history must have ensured that the flow of unsolicited contributions to his journal was never likely to dry up in such a way as to threaten its viability.

Several key Edinburgh figures not only contributed articles to Cheek and Ainsworth's journal but also their editorial expertise and allowed their names to appear alongside Cheek's on the title page of the final volume of his journal. Despite the rifts this must have created in Edinburgh's scientific and natural history community, and the conflict between the supporters of Jameson and Cheek seems to have been particularly bitter, this seems to have had little lasting impact. Once the threat had been seen off, the previous balance was largely restored. It seems simply to have been the case that maintaining cordial relations with Jameson was essential to anyone who wished to play a significant role in natural history in Edinburgh. Jameson consequently succeeded in seeing off both challenges and his *Edinburgh New Philosophical Journal* survived and continued to be published until long after his own death. Those who had sided with Brewster or Cheek for the most part simply later fell back into line and made their peace with the professor once the challenge had failed.

While Partick Neill accused Henry Cheek of attempting to play the "Baron Cuvier of Edinburgh," ironically this accusation was far more true of Neill's patron, Professor Jameson. Cuvier had been able, through great political astuteness and a carefully constructed network of patronage, as well as his position as Europe's foremost comparative anatomist, to attain a position in the institutional framework of French science that was unassailable. Jameson could not claim such a glittering career on the national stage, but within the world of Scottish natural history he too was a powerful figure, and could have made a fair claim as any to the title of "legislator of natural history" in Scotland. His extensive patronage network built up through his professorship, curatorship of the College Museum and his control of the Wernerian Society put him at the centre of interlocking spheres of influence. His journal, the most important scientific journal in Scotland in its day, made up the fourth pillar of his authority. But it was his professorial chair, which he held for life, that made his position unassailable. Unlike Brewster and Cheek, his status and income were assured for life, making him seem effectively invulnerable to any challenge to his authority.

Nonetheless, it must have alarmed Jameson and Neill when Cheek's Gardner's Crescent circle briefly seemed to be coming to represent a second centre of attraction to Edinburgh's scientific and natural history community, threatening to destabilise the system that Jameson had built up. It must have been particularly unsettling to them that Cheek had attracted so many of the luminaries of that community into his sphere. Cheek's belligerent attitude towards Jameson can only have amplified the threat. Nevertheless, given the strength of Jameson's position, Cheek must have represented more of an irritant rather than a genuine threat to the professor. That someone like Cheek was able to gain so much high-profile support says a great deal about how objectionable Jameson had made himself to many in Edinburgh's scientific and natural history circles. But however objectionable he might have been, and however thoughtlessly he might sometimes have treated his fellow scientists and natural historians, his position at the centre of natural history could not be challenged. Most of his peers, like Fleming, were wise enough to

acknowledge this and strove to maintain good relations with him despite their private thoughts on the matter.

In a recent book Steven Shapin has emphasised the importance of personal relationships in the construction of scientific knowledge.[37] In this study we have seen how they could be no less crucial in the development of the scientific journals through which that knowledge was disseminated. Relations of friendship and mutual respect seem to have played a significant role in the success, albeit temporary, of Brewster and Cheek's ventures. While Jameson may have been an unsympathetic character, he too had been able to establish a powerful network of patronage through his interlocking roles in Edinburgh natural history circles that ensured the long-term survival of his journal. While many of those who Jameson had alienated rallied to Brewster and Cheek and supported them in their editorial challenges to the professor, Jameson's position was so entrenched that it was his journal that was to outlast the others by several decades.

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[37] Shapin (2008).

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