

Professor June Zimmerman Fullmer (1920–2000), of Ohio State University, instigated The Rees Project by convening in 1986 a meeting in London of members of the invisible college of scholars who knew of Rees's *Cyclopaedia*, which is very rich on the science and technology of the long eighteenth century. She used it for her work on Humphrey Davey.¹ I used it to write a series of papers, 1985-2000,² about the life and times of John Farey Jr, (1792-1851), the consulting mechanical engineer, and technical author, who wrote for the *Cyclopaedia* a number of the technology articles and made drawings from which the plates were engraved. The object of the meeting was to investigate the production of a printed concordance to the contents of the *Cyclopædia*. This was intended to make Rees much more widely accessible to the modern reader, as Rees is neither paginated nor indexed. Funding was not forthcoming, and the matter lapsed.

I began the Rees's article in Wikipedia in September 2004. I learned in about 2011 of the digitisation of the English and American editions, so the volumes were now readily searchable online, so making the discovery of material comparatively simple. In 2012 I began the expansion of the Wikipedia article. It now has lists of the *Cyclopaedia*'s contributors, for example. During the research for this I noted Professor Lonsdale's comment about the desirability of having a listing the music articles.³ There have always been numbers of Libraries with sets of the *Cyclopaedia*, but impossible from which to locate Burney's writings, due to lack of indexing. They are a significant component of Dr Charles Burney's literary output, but have been hidden. I realised that Wikipedia would be the ideal means of publishing the lists, but I would need something to which to link them, so I created the Rees *Cyclopaedia* Music page in July 2014. This a brief account the work of the authors Dr Charles Burney, (1726-1814), John Farey Sr., (1766-1826) who wrote on music theory, and John Farey Jr , (1791-1851) who wrote and illustrated technical accounts of topics such as the organ. Shortly afterwards I researched and placed on Wikipedia a brief life of Frank Mercer (1891-1955) who edited the modern version of Burney's *History*.

I have long had my own set of Rees used for the work of investigating John Farey Jr.. I set up 3 pages on my text editor, one for the Biographies one for General articles and one for the Plates. The reason for splitting biography away was historical. Members of the Rees Project felt that there was so much biographical material that was important, that it needed special treatment.

I leafed through the work's pages, one by one, noting the detail of each article - Title, Author, Length in columns. The length is a measure of the bulk. I set up tables on my Wikipedia Sand box, -- a private space where I can edit and use Wikipedia, but be invisible -- for each type and flowed in the lists, then went back to the *Cyclopaedia* volumes, checking the articles and annotating the entries with information from Mercer's edition of Burney' Histories, Scholes' and Lonsdale's biographies and the published Burney's travels.⁴ I also coding them for any existing Wikipedia article. The lists were posted in Wikipedia 27 May 2016, and I put a note on Musicology-L. This was soon spotted by a Burney Project editor who told me about it and urged I got in touch. I contacted Professor Sabor and I offered to make a series of documents of the texts, for the use of the editorial team.

The technique of extracting texts was time consuming but straightforward. The pages were identified in the online sites and the OCRd version (sometimes noted as TEXT version), copied and pasted into a text editor, page by page, which had the effect of stripping out all the hidden HTML coding of the web-page, leaving it in pure TEXT format. I use the NoteTab editor, but others are available. This in turn was copied and pasted into the word processor which enabled the text to be properly formatted and edited, retaining such features like italics and bolds. I used

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Libre Office Writer. Farey Sr's articles on music theory abounded with mathematical ratios, so I used the Formula feature on Writer component of the Libre Office Suite for type-setting them.

I produced documents of the General and Biographical articles for each volume — two sets of 39 files each. They needed careful editing against the original. They were consolidated into two volumes of 630 and 535 A4 pages each and PDFs were sent to the Burney Project in March 2018. A further volume of 71 pages of Plates was sent shortly afterwards. Condensed verisions of the introductions were published as articles in the *Burney Letter*⁵

So the time span has been 2014-2016 to make the Wikipedia lists and 2016-2018 to make edited texts from them. I learned in April 2020 that a digital and searchable edition of Dr Jamie C. Kassler's seminal work : *The Science of Music in Britain, 1714-1830: A Catalogue of Writings, Lectures and Inventions*. Garland, New York, 1979, had just appeared on Trove, the new search engine of the National Library of Australia, and suggested that the same might be done with the edited texts on the Burney Centre's website.

They were prepared as working documents, intended to aid the project's editors, and not for commercial letterpress publication. For this reason, despite care, there may be occasional typographical errors. Such publication would undoubtedly need a very hefty subsidy and be sold at a high price, and end up on a library reference shelf.

I am a great advocate of the Citizen Science concept, which is really what describes Wikipedia, and also Open Copyright, so I have published the work here with a Creative Commons Licence BY-NC-SA, so people may freely use it, and being on the internet, access it very easily.

A similar exercise might be done on other subject areas in the cyclopaedia. For example: Sir James Edward Smith (1759-1825) wrote 3,348 articles and 57 biographies on Botany following the deaths of previous contributors William Woodville (1752-1805) and William Wood, (1745-1808). These are illustrated by some 20 plates. There is an entire volume of close on 200 natural history plates, covering : fish, insects, birds, etc etc. There are the long articles: for example, John Farey Sr's account of Canals of 210,000 words and John Landseer's series of 4 articles discussing schools of European engraving, totalling 460,000 words. About 150 articles exceed 15 columns or about 11,000 words.

It might be argued that the inclusion of the writings of John Farey, Sr and John Farey, Jr are not relevant for the Burney project, so might have been omitted. But they are part of the corpus of Rees's material on music, so cannot be ignored. Burney could not have described the mechanics of a pipe organ. John Farey Sr's work on music theory looks, and is indeed, erudite. He was interesting in defining musical temperaments. It abounds in Greek musical terminology and mathematical fractions of some length.

He is better known today as a pioneering Economic Geologist, advising landowners on the mineralogical potential of their property. But he was also an amateur singer, a member of the Cecilian Society. He was also a keen amateur mathematician, which he did in his leisure time.⁶ But his work today is pretty well forgotten.⁷

The C18 saw in England a series investigators into musical theory.⁸ It was evidently an interest of amateur and professional musicians and mathematicians⁹

The composer and organist, William Boyce, (1711-79) had been a pupil Johann Christoph Pepusch (1666/7-1752), who was greatly interested in Greek music and the music of antiquity: Boyce followed this interest. On Boyce's death, Marmaduke Overend (1730-1790) who had been a

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pupil, bought his teacher's manuscripts. Overend constructed elaborate mathematical tables noting the relationship between note values, or intervals. Following Overend's death, his library was sold in 1791 by Egerton Bros. His manuscript volumes, as well as Boyce's treatise, were bought by John Wall Callcott, (1766–1821) who used these manuscripts as sources for his projected dictionary of music. In 1807, Callcott donated all the manuscripts to the Royal Institution, where they were consulted by John Farey Sr. and informed his writings on music theory in Rees's *Cyclopædia* and the *Edinburgh Encyclopaedia*: the manuscripts include Farey's MS notes. Overend's MS are now in the Bodleian Library, Oxford Overend MS. Don c.136-42. They comprise now one volume by Boyce, six by Overend and two by Callcott, nine volumes in all, but Farey commented in his article on the Farey Notation, *Edinburgh Encyclopaedia*, vol 9, p 274, that he consulted fourteen volumes, so it must be presumed that five have been lost.

Farey's writings on music theory in the two works comprise more than 350 articles, as well as a number of letters on the topic published in periodicals such as the *Philosophical Magazine*, but completely forgotten, or rather overlooked, because of the difficulty of locating them. I hope to investigate Farey Sr's work further.

It has been a great joy to discover on YouTube the extraordinary wealth of music by composers that Burney wrote about, and also sites with a very comprehensive collections of videos on Early Music sources, discussing the musical instruments played then and describing many of the topics on Music Theory that John Farey Sr, wrote about.¹⁰

The methods of extracting texts can be used on a smaller scale. The resulting documents can have editorial commentary, and extraneous material removed – more useful than just raw page images.

I co-edit the website of the Bridgwater Heritage Group : www.bridgwaterheritage.org.uk.
Bridgwater, Somerset, England, is a market town with medieval origins. It was the birthplace in the C17 of the Commonwealth Navy's General-at-Sea, Robert Blake, (1599-1657) and is very near the site of the Battle of Sedgemoor (1685). This website has a series of features of use to local and family historians, and school and college students. It hosts original research. There are a series of descriptions of town beginning with William Worcester, in the C15, and full texts of a series of town histories 1854-1908, as well as texts on mundane topics like C19 accounts of the techniques of brick and rope making, which were important in the past.

NOTES

1) June Z. Fullmer, *Young Humphry Davy: The Making of an Experimental Chemist*, Philadelphia: American Philosophical Society, 2000

2) A. P. Woolrich, "John Farey and the Smeaton manuscripts", *History of Technology*, 10 (1985), 181-216

A. P. Woolrich, "John Farey, jr (1791–1851), engineer and polymath", *History of Technology*, 19 (1997), 111–42

A. P. Woolrich, 'John Farey, jr, technical author and draughtsman: his contribution to Rees's Cyclopaedia', *Industrial Archaeology Review*, 20 (1998), 49–68

A. P. Woolrich, 'John Farey and his Treatise on the steam engine (1827)', *History of Technology*, 22 (2000), 63–106

A. P. Woolrich, "Farey, John, (1791-1851)," *Oxford Dictionary of National Biography*, (Oxford: Oxford University Press, 2004)

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3) Roger Lonsdale "Dr Burney's 'Dictionary of Music'," *Musicology Australia* 5.1 (1979) 159-171, 160

4) Frank Mercer, ed, Charles Burney, *A General history of Music*. 2 vol, G. & T. Foulis. , 1935, rep.
New York, Dover Publications, 1957;

Percy Scholes, *The Great Doctor Burney*, 2 vol Oxford: Oxford University Press, 1948

Roger Lonsdale, *Dr Charles Burney: A Literary Biography*, Oxford: The Clarendon Press, 1965

Percy Scholes, *Dr Burney's Musical Tours in Europe*, 2 vol, London, The Oxford University Press,
1959

5) *Burney Letter*, Vol. 23, No 1, Spring 2017 "Dr Burney and Rees's Cyclopaedia".

Burney Letter, Vol. 23, No 2 fall 2017 "Consolidated edition of music biographies from Rees's
Cyclopaedia 1802-1819".

Burney Letter, Vol. 25, no 1 Spring 2019 "The general music articles in Rees's Cyclopaedia, by Dr
Charles Burney, John Farey sr. and John Farey jr.

6) His prolific, but now largely forgotten, work is discussed in the introduction by: Trevor D. Ford
& Hugh S. Torrens, to the reprint by the Mines Historical Society (1989) of Vol 1 of *General View of
the Agriculture and Minerals of Derbyshire*, by John Farey, Sen, 1811. The work appeared in 3
volumes 1811-1817, and was the largest Report published by the Board of Agriculture, totalling
1901 pages

7) E. Taylor, in *The Mathematical Practitioners of Hanoverian England*, 1714-1840, Cambridge,
Cambridge University Press, 1966, noted his Rees Cyclopaedia articles on Trigonometric surveying
and Barometric pressure — and nothing else! Yet another instance of the impenetrability of the
Cyclopaedia. Quoted by Scott B. Guthery, *A Motif of Mathematics: History and Application of the
Mediant and the Farey Sequence*. Docent Press, Boston Mass, 2010, 114.

8) Tim Egginton, *The Advancement of Music in Enlightenment England: Benjamin Cooke and the
Academy of Ancient Music*, 2014

9) Catherine Nolan "Music theory and Mathematics", in Thomas Christenson, ed., *The Cambridge
History of Western Music Theory*, Cambridge, Cambridge University Press, 2002, pp 272-304

10) Orchestra of Age of the Enlightenment videos:

<https://www.youtube.com/c/OrchestraoftheAgeofEnlightenment/videos>
and

Early Music Sources: <https://www.youtube.com/channel/UCJOiqToQ7kiakqTLE7Hdd5g>