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Reviews

Number 99
November 2009
The recent revival of Tom Stoppard’s wonderfully witty Arcadia is an entertaining reminder of the dangers of the interpretation of historical sources. The play switches between 1809 and the 1990s, so the audience is privy to what actually happened and the attempts of the latter day characters to recreate those events. Valentine, the quantitative researcher, is confused by the noise of the raw data; Bernard, the ambitious self-publicist, is prepared to jump to conclusions for the sake of his dramatic pet theory; and Hannah, is the voice of caution in interpretation but still striving to validate the story she imagines. In one telling exchange Valentine says; ‘But you don’t know that.’ Hannah responds; ‘Oh, but I do, I do. Somewhere there will be something if only I can find it.’

The play emphasises the pitfalls of the interpretation of historical evidence, particularly if the historian is in pursuit of a pet theory. The business historian is no different. There may be a wealth of documents in the archive, but there is still a need for the selection and interpretation to be scrupulous if the account of events is to be accurate. If this is true for historians it is even more true for organisational researchers.

My recent experience in organisational research was that fellow doctoral candidates were reluctant to go to the archives. Even if the post-modernist denial of the possibility of truth has dwindled in importance, there is still a nervousness about the validity of the written word. Access to recent papers could be difficult for reasons of commercial sensitivity. The volume of material was vast and unstructured and therefore too time consuming. There was a feeling that the documents were self serving, being written for public relations purposes, and that it was easier to talk to people than to retrieve documents. There was a strong preference for the questionnaire or interview rather than the unruly piles of paper.

Yet interviewees are fickle. Their memories are suspect. They deliver the responses they think are expected or which their self image dictates. The responses may vary from one day to the next reflecting the shift in daily challenges. The language they use is not fully considered. In contrast organisational documents are, in the main carefully and precisely drafted.
Only a very small proportion are for external consumption and therefore drafted with the corporate image in mind.\textsuperscript{2} They are not created for researchers but for clear business purposes which strictly control their nature and their meaning. There is a consistency in style and interpretation over time. Familiarity with the nature of organisational documents gives an insight into commercial thinking in the real world of day to day decisions and gives the researcher the opportunity to explore different levels and locations within an organisation which would otherwise be unavailable. Once access is given the researcher can wander where the research dictates and not have to rely on the one-off nature of a questionnaire or interview schedule. There is guidance for researchers but some advice falls on stony ground.\textsuperscript{3}

An awareness of the origin of the document and its consequent interpretation is hardly new. Grammar school boys of Shakespeare’s era studied analysis as part of rhetoric and Tudor teacher’s guidebooks were based on classical texts. But headings for analysis, ‘the quis, the quid, the cui, the causa, the locus, the quo tempore and the prima sequela’ \textsuperscript{4} (which I have translated rather liberally) are just as relevant today in the interpretation of the internal rhetoric of an organisation.

I have based my comments on over 30 years of creating, supervising and interpreting organisational documents. Inevitably my experience is confined to a small sample of organisations, which were not selected with an eye on research validity, but I believe that the rules set out below are generally valid for the second half of the twentieth century, at least until the dramatic changes in style inherent in electronic communication.

There are a number of overriding considerations. Most documents were written in the expectation they would be kept forever and therefore come back to haunt you. The paper record was critical to a manager’s career, at least in the mind of that manager. Consequently the content was very carefully considered and drafted for clarity or deliberate obtuseness. The reports of events was accurate enough to survive scrutiny, advice was carefully thought through and kept within the remit of the author and opinions were not lightly given.

Each organisation had its own culture, in the sense of ‘the way we do things around here’, in the preparation of documents. Senior management were brought up to prepare documents in a certain way and they imposed those styles and standards on their successors. A change required a conscious effort. Consequently there will be some consistency over time, even with a change of authors.
The Quis
Who wrote it? Establishing the author is fundamental and in most cases straightforward. Internal memos and external letters will show the author and often the post they held at the time of writing. Papers to the board will have a declared author or a departmental source which makes clear their specialist, narrow role. Alternatively, such papers may be the work of a project team representing a wide variety of disciplines with a much wider remit. Minutes of meetings are typically written by a secretary (in the sense of an experienced manager, not a typist), edited by the chairman and subject to comments before being approved by the other members present.

In many non-business contexts the author is self serving, seeking to enhance his role or contribution or attribute blame elsewhere, and documents have to be interpreted accordingly. Business history is tainted by this reputation, of being merely commissioned hagiography or ghosted, self aggrandising autobiography. This is rarely true for documents within an organisation, particularly if the culture is collegiate and the decisions are reached by consensus. In such a culture the minutes rarely attribute the credit for an idea to one person; achievements and failures are the outcome of teamwork and there is little public dissent to a decision. Neutrally prepared documents suppress personality and as managers are likely to be criticised for self congratulation it rarely appears.

The importance of authorship is not to look for personal characteristics, these are almost entirely subjugated in formal documents but to establish the author’s relationship with the recipient and the relative expertise and experience of the author. His role will affect the breadth of his knowledge and the reliability of his report. A senior manager will tend to be more diplomatic and diffuse in his language, he is much more conscious of the politics and consequences of his writing. A young professional adviser is more likely to be precise and pedantic in his advice, not being aware of the wider picture. A report of a crisis will be couched very differently if written to a senior who has control of your career, to a fellow expert who is helping to resolve the crisis and to subordinates who need to be kept motivated. So the role of the author is key in addition to the identity; is it being written by a leader, of the company, division, department or team; is it being written as the member of a team amongst professionals or as an adviser with a dispassionate point of view or as the passionate proponent of an idea or project? The motive will affect the style and therefore the interpretation.

A typical paper to the board is submitted to brief the board on a project, for example an acquisition or a new plant to be built or product to
be launched. These may be submitted by the prospective owner of the project, i.e. the division or subsidiary who will be responsible for it, or by the central function analysing the project for the board. The approaches will be very different. While the division will be careful not to oversell the project, there will be a degree of enthusiasm and optimism. The ‘hockey stick’ is the frequent shape of the graph of projected earnings, losses will increase for two or three years, then the project will come good and earn profits. Central functions have a very different role. They are still supportive of good projects, it is in their interests for the organisation as a whole to do well, but they may be more dispassionate about the prospects, pointing out the risks as well as the rewards and there is a scepticism towards the hockey stick.

**The Quid**

What speaks? The nature of the document will dictate its form and interpretation. A small sample of the most frequently used documents illustrate the point.

Board or committee minutes are very different from notes of other meetings. They are not verbatim reports of the debate. They are intended to form a brief record of the meeting, as an action plan for the directors and as briefing notes for subordinates. They are prepared by an experienced manager, edited by the chairman and open to amendment by all the members. They may record key facts and points in the debate, but these are reported selectively by the secretary and relevant but unmentioned material may be added to aid clarity in communication or to protect the company’s position in case of compulsory exposure, e.g. in litigation. They are what the directors would have said had they had time to think.

A trading or manufacturing report to the board is submitted by the responsible manager who has a negotiated budget to meet and on which his performance and bonus is based. There may be an incentive for imaginative or selective reporting. An operating plant report has less scope for manipulation, but it is still prepared by a plant manager who has a budget to meet and a career to think of. The author will want to enhance the view of his performance, but it cannot be over exaggerated. It must survive audit both internal and external. It must contain some reserve for unexpected downturns and it is probably being judged by at least one superior who has done the job and who knows every detail of the business and every trick in massaging the figures. Whilst internal figures are less influenced by public relations than the figures for external consumption, there is still a complex
agenda in their preparation which must be allowed for in trying to determine their accuracy. The data in a report is never raw, it has been selected and interpreted in order to tell a story, but with attention to the source it is possible to allow for the bias.

Internal memoranda or correspondence may be less formal than minutes or papers, but they are rarely casual. An early lesson for every organisational drone is that everything is filed and the files are open to senior management. An ill-judged note, even to a peer, may come back to bite you. However, notes between directors or fellow senior managers who have the security of rank may have an element of spontaneity which may be less carefully drafted and therefore get closer to the unvarnished truth, particularly in matters of criticism.

Cui.

To whom is the document addressed? A memo to a superior reporting a problem will be couched in very different terms than one to a junior on the same matter. The first will understate the problems and the latter may well exaggerate them. Monthly reports to a board may be regarded as the closest to the truth, but the motivation for their author, even on a monthly basis, needs to be taken into account. Many companies operate on the basis of ‘no surprises’. The more quickly a problem is identified the more quickly it can be resolved. An executive who fails to report a problem swiftly will be criticised more for his failure to report than for the initial problem. Consequently, reports to superiors will often contain warnings of early signs of problems. If the worst happens the executive gets credit for his caution, if it does not he gets credit for solving the problem quickly. There is merit in having a touch of Cassandra rather than Pollyanna. But don’t overdo it; a manager who is over pessimistic and encourages his superior to issue an unnecessary profit warning will not last long. The art of management was to negotiate a budget which was seen to be stretching but which you knew to be achievable, to report monthly on a struggle to meet it with a hint of downside in the forecast, and to come through with some over performance (not too much or next year’s target will be much tougher) at the end of the year after an heroic struggle.

While this is true within an organisation it is even more relevant in the public announcements of the Chief Executive to the market. Analysts like companies who perform as the analyst predicts. It is therefore a key role of the Chief Executive and his public relations machine to manage the expectations of the analysts to fit with the likely outcomes. If the market
expectations of profits are too high they must be massaged down, but without giving any single analyst more market sensitive information than his colleagues and without having to issue a general statement which may be read as a profit warning. Public forecasts therefore have to be read with care, they are tainted by code words aimed at the analysts to guide their thinking.

Documents prepared for shareholders also have an agenda heavily influencing their drafting. The annual report has become more and more bland as the content has become more prescribed and the risk of misunderstanding has become more expensive. Every statement in communications with the shareholders is subject to verification, it must be capable of documentary proof to the satisfaction of the bankers or auditors who have become increasingly conscious of their own financial responsibility for misleading documents. The consequence is that statements are much more bland, cautious and hedged with warnings. Documentation of 20 years ago was still carefully drafted for accuracy, but was more vigorous in the way it was presented to shareholders and arguably more understandable and closer to reality.

**Causa.**

Why was the document created? Was it to report, when the facts are selected to fit a prescribed format; to persuade, when the facts are recast to support a particular case; or to inform, when the facts may be simplified to make clear the bigger picture. The same set of ‘facts’ could be presented in one way to make a case to justify a bonus, where the profits are emphasised, or to justify new investment, where the potential for better profit is the key, or simplified and the profits understated in a presentation to the workforce as part of the wage negotiations. The documents can tell a story of the profitability of the company, but they tell an even more interesting story of the relationship between the author and the addressee. In Pilkingtons, the company which I have researched, senior management in the 1950s were told the costs of their operations but not the profits, ‘so as not to overburden them with the detail’.

**Locus**  
Where was the document created? It is obvious from all that has been said so far that the fundamental key to interpretation is the relationship between the author and the recipient, and to understand this the researcher must be totally au fait with the organisation chart of the organisation on the day the
document was written and the position on the chart of the author and addressee. At the very least who is the senior, was the author a line manager, from the central functions or acting as the voice of an ad hoc team?

There are other subtleties which come from becoming immersed in the archive. Was the author someone who was held in particular regard for his experience and a frequent sounding board for problems? Was the author a member of the owning family on the fast track to the board whose view may be given disproportionate weight? In either case the influence of the document may be more powerful than the organisation chart may suggest.

**Quo Tempore**

When was the document created? This is rarely in doubt as the date is almost always on the document itself. The strict chronology of writing may be straightforward but there may be complications with the timing of perception. Just because something is reported does not mean that its importance is recognised or that it is immediately acted upon. The more interesting aspects of the ‘history’ of an event come from the distinction between the historian’s perception of importance and that of the contemporary actors. With the benefit of hindsight we may know when a key breakthrough in research occurred; at the time there may be no recognition of the breakthrough or why it had happened. The distinction is important if we are to understand why the characters acted in the way they did.

**Prima Sequela**

What happened next? It is surprising how often information is noted but no reported action is taken; or instructions are issued but never apparently acted upon. The silence can be informative if there is enough in the contextual documents to determine why the logic was not followed through. This is particularly true in trying to follow the culture of the organisation and the role of culture in strategic decision making.

There is an assumption that the organisation acts rationally and that its decisions are the consequence of logical consideration of all of the relevant facts and forecasts. But the board papers and minutes do not always conform to this pattern. Decisions are made in contradiction to the carefully considered recommendations, or are agonised over even when the correct solution is obvious or strategic moves are made without even being discussed in the organisation ⁶. The strictly logical pattern is being
influenced by something just as vital in decision making, the intuitive part of the process, unvoiced and therefore unrecorded. At least, unrecorded in the strict sequence of events. However, there will be evidence in the archive of the culture of the organisation or the industry which, as part of the unconscious make up of the decision makers, will influence the decision. If relationships with competitors have always been collusive there will be no need to expressly decide to be collusive on a particular occasion, it goes without saying. If technology has always been licensed between a group of manufacturers there may not be an express decision, duly recorded, to licence a new technology. Everyone will assume that the licence will be granted and act accordingly. Collusion will take place or technology licensed without dissent or debate and the evidence of that intuitive decision comes from other, out of sequence, evidence; for example, an earlier decision which creates the precedent or a later document which explains the rationale to a third party not privy to the intuition.

The evidence may only be circumstantial and may be open to other interpretations, but a comprehensive archive can deliver as rich a text as any anthropological account and without any bias induced by the presence of the researcher. Archives, especially if they are supplemented with interview and observation, are a vastly underutilised resource in organisational research.

4 J. Bate, *Soul of the age*, (2009).
5 Rowlinson and Procter, ‘Organizational culture’.
TELEGRAPHS – SHRINKING ECONOMIC DISTANCES? A PRELIMINARY ENQUIRY, 1870s-1912

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Introduction and archival data
Telegraphs are usually analysed in the context of railway expansion and the literature has somewhat neglected the role of telegraphic communication for the development of steamship navigation. Telegraphs meant that the owners of a cargo ship could communicate with its captain whenever it reached a certain port and shippers could keep track of their shipments. Since steamships were very costly to build and operate, cable communication would then allow profitability as ships could be continuously transporting full loads of cargo. Without a cable connection in the port, it would have been difficult for ship owners to maximise their profitability and hence less steamships would have touched that port. It is possible then that telegraphic communication was at the heart of diminishing transport costs across the Atlantic. Despite the alleged importance of telegraphs, there are very few works published on its economic history.

Thanks to the support of the Business Archives Council Bursary I was able to collect a substantial amount of data for several companies mostly located in the Americas (even though I also collected data for the Eastern Telegraph Company). I had to collect data on a geographical basis due to the sheer amount of data for telegraph companies worldwide. The dataset refer to digital photographs of report of directors, reports of proceedings, letters to the London Stock Exchange, official concession documents, subvention documents, court cases between telegraph companies, British Post Office data and reports, price lists, etc. A summary of the main documents gathered can be seen in table 1. At the end of this paper, the reader will find a more comprehensive and detailed list of some of the references consulted, though those for Porthcurno Telegraph Museum are not listed as the documents are still not catalogued.
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</table>
The Archive at University College London (UCL) hosts an important collection of material for one specific company: The Western Telegraph. This company was the subsidiary of Eastern Telegraph and eventually absorbed all the other companies operating in Brazil: the Montevidean & Brazilian Telegraph Company and London Brazilian-Platino Company which made the connection between Brazil and Uruguay/Argentina; the Brazilian Submarine Telegraph Company, responsible for the connection between Pernambuco (Brazil) and Carcavellos (Portugal); and The Western & Brazilian Telegraph Company which made the costal connections along the Brazilian coast, from the Brazilian Amazon to the Southern Cone. The collection is comprised of letter books (1883-1949), staff lists including European staff books (1910-1930), and Rio staff list, 1899 (see Appendix 2). The BT Archives provides a glimpse on the relationship between submarine and terrestrial telegraph companies in Britain, especially after the terrestrial system was nationalised. In regard to specific submarine companies, there are some legal documents relating to court disputes between the Anglo-American Telegraph Company and the transatlantic French company Compagnie Française de Cables Télégraphiques (see Appendix 3).

The Guildhall Library possesses most of the reports of directors for various telegraph companies from 1880 onwards. It is much more comprehensive in scope if compared to the material in the UCL and BT Archives but less detailed if the researcher needs data for a specific company. In the period up until the First World War there are only two years missing and the researcher can construct an almost complete set of financial data for telegraph companies. For many of these companies, this dataset can be completed by accessing the archives at the Porthcurno Telegraph Museum. Since the documents are organised by company and not by years (as at the Guildhall), individual companies are easily located and scrutinised. The Museum possesses data prior to 1880 and much more information on the companies, such as reports of proceedings, accounting books, ledgers, etc., especially for the companies under the Eastern Telegraph’s system. Additionally, the Porthcurno Telegraph Museum also hosts an extremely valuable collection of maps and artefacts on submarine telegraphy. From these maps and from information provided in books and papers, I sketched a simplified map of the development of the telegraph in South America (see figure 1). The same can be done for Central (not shown here) and North Americas.
Figure 1 Main telegraph connections in South America, c.1880

Source: constructed by the author. The map was drawn using modern borders. Moreover, it only shows approximate location of main cities and cable nodes.
The history of the development of submarine telegraphy is outside the scope of this short article. What is important to note is only that submarine telegraphy developed first in the United States-United Kingdom route, spreading afterwards along the entire American continent. By the 1880s, submarine cables connected Argentina and Chile to the United States and Europe. Depending on the traffic, several of these routes were later duplexed or duplicated, increasing the reliability of the network. Despite some attempts to break monopoly power, the Anglo-American Telegraph Company controlled a pool of cables that dominated the United States-United Kingdom route (see figure 2) whereas the connection between Brazil (and consequently the rest of South America) was dominated by Western Telegraph Company, (itself an extension of the Eastern Telegraph worldwide communications empire).

Figure 2 Main transatlantic telegraphic lines, c. 1880

Data and results
The primary objective of this project is to examine what was the impact of the establishment of the Atlantic submarine cable connecting England to Canada and thence to the United States on freight costs. The idea is to see if the cost of sending messages by telegraph along the Atlantic cables can explain the decreasing freight rates charged in the trade between England and the United States by applying econometric techniques and qualitative evidence. The project will use other routes and companies as counterpoints.

In order to do this, it is necessary to estimate the cost of sending messages. There are several problems here though. First, the price structure
was invariably non-linear. Messages were quoted at a certain fixed amount for messages up to a given number of words and a price per any word exceeding this threshold. It is then difficult to translate this price structure into ‘a cost per word transmitted’ that we could compare over time and across different routes and companies. This problem may be overcome by simulating the cost of transmitting two or three messages of different lengths and compare their prices over time and across companies. All one needs is the tariff books of the companies, something not easily accessible though for all years and companies.

Another possibility would be to base the computation on an estimate of the average number of words. It is very likely that the length of the messages varied enormously over time. Messages in code became increasingly popular, following the publication of several code books. Telegraph companies started to regulate the definition of a word, loosely defined as words found in the commonest western languages. Anything different from that would be considered as a coded message, thereby being charged a different price per word. This significantly increased the difficulty in defining the cost of message, especially because the average number of words would probably be dependent on the price differential between coded and non-coded words as well. To make matters worse, press and official government messages were transmitted at reduced rates.

One way to get around this problem would be to compute the average cost of message by dividing the revenues per line by the number of messages transmitted through that same line. Revenues per line may be computed from financial data in the reports of directors and other documents already gathered in this project. Luckily, most companies operated only one route and thus their message revenues often refer to a single route/line. The problem here lies in obtaining the number of messages transmitted through a given line. Only very seldom did telegraph companies report this data.

Since a complete dataset of tariff books has not been found or processed yet and since the number of messages transmitted was not reported, it has been so far impossible to obtain a good estimate of the cost of sending messages. However, it is possible to infer the trend in the cost of sending messages by using the average cost of sending messages via the United States terrestrial system (from Western Union accounts) and compare the estimates with point estimates for submarine routes. Figure 3 provides an estimate of the average cost of sending messages through Western Union telegraph system.
Figure 3 Average cost of message sent through Western Union Lines, 1876-1910, (in $US per message)

Source: computed as the ratio between receipts and messages from 1910 Report of Directors - Western Union, Guildhall Library, Reports to the London Stock Exchange, Telephone and Telegraph Companies, catalogue number: 1177. Prices are denominated in current US$.

It is not possible to use Western Union’s data to extrapolate Anglo-American or Western Telegraph companies’ figures as the evolution of the cost of message sent will depend on the degree of monopoly control these firms held in different periods of time. It is instructive though to compare their tariffs. For 1880, the British Post Office compiled a ‘Statement with Reference to the Anglo-American Telegraph Company’s Traffic Transmitted to and from the United Kingdom’. From the information therein, it is possible to compute something analogous to the data presented in figure 3 for a single year only: 1880.
Table 2 Comparison of cost of message sent through different companies, 1880, $US

<table>
<thead>
<tr>
<th></th>
<th>Western Union</th>
<th>Anglo-American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of messages transmitted</td>
<td>29,215,509</td>
<td>779,795</td>
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<tr>
<td>Receipts</td>
<td>$10,034,983</td>
<td>$1,042,850</td>
</tr>
<tr>
<td>Average cost per message</td>
<td>$0.438</td>
<td>$1.337</td>
</tr>
<tr>
<td>Average cost per cable-mile (in 1,000,000)</td>
<td>$1.874</td>
<td>$94.366</td>
</tr>
</tbody>
</table>


The cost per cable mile is computed assuming 233,534 miles of wire for Western Union in 1880 and 12,315 nautical miles of wire for Anglo-American in 1877. The latter figure was obtained from The New York Times, 17 September 1877. Nautical miles were converted into miles using 1nm = 1.15077945 miles.

Prices for Anglo-American were converted from pounds sterling into US dollars using worthmeasuring.com tool: $4.84 per £.

From table 2, it can be seen that the average price charged by Anglo-American was well above Western Union’s. This may reflect either or both two things. First, Anglo-American may have possessed more market power in 1880 compared to Western Union. Secondly, the costs of Anglo-American were probably much higher; a consequence of the different network these two companies operated: terrestrial (Western Union) versus submarine (Anglo-American).

Unfortunately, it was not possible to obtain similar estimates for the Brazilian Submarine Telegraph Company for 1880, only for 1884-5. It is possible then to compare the figures against Western Union’s. As it can be inferred from table 3, the Brazilian Submarine Telegraph Company charged much higher rates compared to Western Union. The comparison would be even more striking if the price of sending message per mile was shown as the Brazilian Submarine network was much more limited compared to Western Union and still much smaller than Anglo-American’s. The idea now is to extend these tables for as many years as possible up to 1912. I have already collected data for the early years of Anglo-American but I still need to find data for the subsequent period. The strategy is now to look for price lists in newspapers as well as to search the Smithsonian Archives in Washington which currently holds all the Anglo-American Telegraph Company’s surviving material.
Table 3 Comparison of price of message sent through different companies, 1884, $US

<table>
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<tr>
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<th>Western Union</th>
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<tr>
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<td>Receipts</td>
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<td>Average cost per message</td>
<td>$0.421</td>
<td>$10.042</td>
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</table>

Sources and notes: Western Union, Guildhall Library, Reports to the London Stock Exchange, Telephone and Telegraph Companies, catalogue number: 1177; Brazilian Submarine Telegraph Co, Handwritten notes to the Report of Directors, Porthcurno Telegraph Museum, 1884-1885.

Prices for Brazilian Submarine were converted from pounds sterling into US dollars using worthmeasuring.com tool: $4.855 per £.

Conclusion and extensions
This short paper is a first step towards computing the price of sending messages across the Atlantic. Compared to the US terrestrial system, the price of sending messages was quite high, especially considering the more limited extension of submarine network. There are two possibilities that may explain the high differential in prices: monopoly power and costs of network maintenance. In order to disentangle these two factors, more time series data is required. This is exactly the next step of my research.

Furthermore, the project also aims at identifying periods in which certain routes suffered disruptions. With both the price of sending messages and the duration of cable disruptions it will finally be possible to investigate the effect of the telegraphs on freight rates and consequently on trade.
### Appendix 1 Annual Stock Exchange Reports at Guildhall Library - reference guide for telegraph companies

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<td>1912-1913</td>
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Appendix 2 Western Telegraph Company records at UCL Archive

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<td><strong>Out-letters WTC/A 1883-1949</strong></td>
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<td>WTC/A/1</td>
<td>1883-93</td>
<td>Letters from Rio</td>
</tr>
<tr>
<td>WTC/A/2</td>
<td>1890-93</td>
<td>General Superintendent to Maranhao</td>
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<tr>
<td>WTC/A/3</td>
<td>1901</td>
<td>Misc. letters from General Superintendent</td>
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<tr>
<td>WTC/A/4</td>
<td>1904-13</td>
<td>Letters to W.B. Chaplin in Santa Catharina, Desterro, and Florianopolis</td>
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<td>WTC/A/5</td>
<td>1905-10</td>
<td>General Superintendent to Santos</td>
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<td>WTC/A/6</td>
<td>1905-11</td>
<td>General Superintendent to Pernambuco</td>
</tr>
<tr>
<td>WTC/A/7</td>
<td>1909-13</td>
<td>General Superintendent to London Secretary</td>
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<td>General Superintendent to Para</td>
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<td>1917-22</td>
<td>General Superintendent to Sao Paolo</td>
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<td>WTC/A/10</td>
<td>1922-24</td>
<td>General Superintendent to Victoria</td>
</tr>
<tr>
<td>WTC/A/11</td>
<td>1932-49</td>
<td>Manager in Brazil to Maceio</td>
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<tr>
<td>WTC/A/12</td>
<td>1937-46</td>
<td>Manager in Brazil to Natal</td>
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<tr>
<td>WTC/A/13</td>
<td>1938-47</td>
<td>Porto Allegro to Head Office (including landline reports)</td>
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<tr>
<td><strong>In-letters WTC/B 1905-1942</strong></td>
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<td>WTC/B/1</td>
<td>1905-09</td>
<td>Bahia to General Superintendent</td>
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<tr>
<td>WTC/B/2</td>
<td>1905-10</td>
<td>Santa Catherina to General Superintendent</td>
</tr>
<tr>
<td>WTC/B/3</td>
<td>1906-09</td>
<td>Santos to General Superintendent</td>
</tr>
<tr>
<td>WTC/B/4</td>
<td>1908-09</td>
<td>Letters to Head Office and General Superintendent (misc.)</td>
</tr>
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<td>WTC/B/5</td>
<td>1908-10</td>
<td>Pernambuco to General Superintendent</td>
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<td>1908-12</td>
<td>Para to General Superintendent</td>
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<td>WTC/B/7</td>
<td>1922-25</td>
<td>Maceio to General Superintendent</td>
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<td>WTC/B/8</td>
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<td>Misc. letters to General Superintendent</td>
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<td>WTC/B/9</td>
<td>1925</td>
<td>Misc. memoranda</td>
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<td>WTC/B/10</td>
<td>1925</td>
<td>Staff Superintendent to General Superintendent</td>
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<td>WTC/B/11</td>
<td>1933-36</td>
<td>Chief General Manager to Manager Brazil</td>
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<tr>
<td>WTC/B/12</td>
<td>1937-42</td>
<td>Rio Grande to Manager Brazil</td>
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<td><strong>Staff lists WTC/C 1893-1930</strong></td>
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<td>WTC/C/1</td>
<td>1893-1906</td>
<td>Staff List</td>
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<td>Rio Staff List</td>
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<td>European Staff Books</td>
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<tr>
<td>WTC/C/5</td>
<td>1922-1930</td>
<td>European Staff Books</td>
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For more information see also:
http://www.aim25.ac.uk/cgi-in/search2?coll_id=4908&inst_id=13&term1=western%20telegraph
### Appendix 3 BT Archives: selected documents

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>TCB282/30</td>
<td>The Atlantic Telegraph and Cable Company</td>
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<tr>
<td>POST30/742</td>
<td>Anglo-American Telegraph Co.: Traffic for various Years in America and South America (2 folders)</td>
</tr>
<tr>
<td>POST30/473B</td>
<td>The Anglo-American Telegraph Co.: proposed revision of the terms of agreement, company demur to payment of 1d. per word to the department, 1880. The Anglo-American Telegraph Co.: proposed new agreement, terms of the draft 1883 not accepted, no further steps taken in view of the expiration of the main agreement in 1900, 1894</td>
</tr>
<tr>
<td>POST30/262D</td>
<td>Direct United States Cable Co. &amp; Anglo-American Cable Co: treatment of messages</td>
</tr>
<tr>
<td>POST30/1/2/1/6</td>
<td>Cable Companies Accounts</td>
</tr>
<tr>
<td>POST30/1/6/2/12</td>
<td>Anglo-American Telegraph Co.: Proposed New Agreement, 1900</td>
</tr>
<tr>
<td>HIC002 010/0011</td>
<td>The Atlantic Telegraph: A Descriptive History, published by order of the directors of the company.</td>
</tr>
<tr>
<td>TGP/1/1/1</td>
<td>Anglo-American Telegraph Co.: Tariff Books, 1867-1871</td>
</tr>
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<td>TGK/1/1/1</td>
<td>Eastern Telegraph Co.: Tariff Book, 1882</td>
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<td>TGK/1/1/2</td>
<td>Eastern Telegraph Co.: Tariff Book, 1883</td>
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<td>HIC 002/010/002</td>
<td><em>One Hundred Years of Submarine Cables</em>, G. R. M. Garratt, (London, 1950)</td>
</tr>
<tr>
<td>POST30/1/1/2/26</td>
<td>COUR D’APPEL DU ROUEN. Memoire pour L’Anglo-American Telegraph Co. Ltd. contre La Compagnie Francaise du Telegraphe de Paris a New York (en liquidation), Paris, Typographie et Lithographie Maulde, 1899.</td>
</tr>
<tr>
<td>POST30/1/1/2/26</td>
<td>COUR D’APPEL DU ROUEN. Documents par ordre chronologique pour L’Anglo-American Telegraph Co. Ltd. contre La Compagnie Francaise du Telegraphe de Paris a New York (en liquidation), Paris, Typographie et Lithographie Maulde, 1899.</td>
</tr>
</tbody>
</table>
Appendix 4 Secondary literature: shipping and telegraphs


The Amazon Steam Navigation Co., *The Great River: notes on the Amazon and its tributaries and the steamer services, with maps and illustrations*, (1904).


Bright, C., *Imperial telegraphic communication*, (1911).

Bright, C., *Submarine telegraphs: their history, construction and working*, (1898).


Chamber of Commerce of New York. *Report of the proceedings at a banquet given to Mr. Cyrus M. Field by the Chamber of Commerce of New York at the Metropolitan Hotel, November 15th 1866*.


Hearn, C.G., *Circuits in the sea: the men, the ships, and the Atlantic Cable*, (Westport, 2004).


Isserlis, L., ‘Tramp shipping cargoes and freights’, *Journal of the Royal Statistical Society* 101,


The British popular music industry was an important contributor to British manufacturing, retailing, and exports in the period after the Second World War. Yet at the same time while there is no shortage of material on the musical and cultural aspects of the business, with a plethora of reminiscences and general surveys, the business history of the period has not been so well covered. It is true that the largest company, Electric and Musical Industries (commonly known as EMI), has been analysed in two commissioned histories, the first by Peter Martland, the second a book on Thorn-EMI by S.A. Pandit. An EMI insider, Brian Southall, has published a number of works that shed light on the company’s business arrangements, not least a recent account of the decline of EMI Records from the late 1980s. There are also a few general works that provide pathways to the study of the industry’s business structure, conduct and performance. American sources are particularly useful, notably Pennies from heaven by Russell and David Sanjek, and Tarnished gold by Denisoff and Schurk, and Geoffrey Hull’s The recording industry. However, these rarely offer insights on the British market, and indeed can be misleading in that some comments may be taken erroneously to apply to Britain and Europe. Good examples of a number of general works on Britain are Charlie Gillett’s Sound of the city, Louis Barfe’s Where have all the good times gone?, and Pete Frame’s The restless generation, all of which provide historical narratives on the key players in the music business. Barfe’s book is particularly informative for historians since it covers much the longest period, from the late 1870s to the contemporary world of Simon Cowell and the TV spectacular Pop Idol. The work of economists, such as Peter Alexander, or of sociologists of culture is useful where it attempts to provide an historical context for current trends, for example Brian Longhurst’s Popular music and society, and the works of Keith Negus and Roy Shuker. However, all too often the historian’s narrative skills are absent, and the amount of detailed historical information is frustratingly thin, nor is there much evidence of the use of economic or business history.
methodologies. Business insights frequently appear in memoirs of leading artists, managers and producers, such as Andrew Loog Oldham, manager of the Rolling Stones, Joe Boyd, producer of the Incredible String Band and Pink Floyd, and George Martin, producer of the Beatles recordings at EMI’s Abbey Road studios.\(^8\) Helpful as these are, their work is rarely presented in a systematic way to facilitate a long-run analysis of a company’s performance or an industry trend. And the same goes for the veritable mountain of record label memoirs, which provide often idiosyncratic accounts of iconic labels such as London-American, Joe Meek’s Triumph, Immediate, Creation Records and Rough Trade.\(^9\)

Some of the best academic business history of the music industry has been published in journal articles, for example Geoffrey Jones’s 1985 article on the Gramophone Company, D. J. Mabry’s piece on Ace Records, and Gerben Bakker’s important analysis of PolyGram. However, with the exception of Jones’s work, which deals with one of the antecedents of EMI before 1931, these are concerned with American and Dutch businesses, and although music industry is multinational and global, these works do not offer a great deal on British conditions.\(^10\) More important is Leslie Hill’s short piece for the *Three Banks Review* in 1978, which sets out the record industry’s organisational structure, cost profile and finances in the mid-1970s from an EMI perspective.\(^11\) With the exception of Hill, and other articles written at the same time for the trade association, the British Phonographic Industry (BPI), many of the elements essential to most business histories — data on production, sales, and market-share, for categories of musical output, remain known only in the barest outline. Part of the explanation lies in the structure of the industry. The major British companies in the 1950s and 1960s – EMI, Decca, Pye and Philips – did not specialise in British music production. The first two of these were multinational conglomerates with an interest in defence equipment, electronics and consumer goods. The third, Pye, was an electronics and radio/TV manufacturer. The fourth, Philips, was a Dutch multinational manufacturer of lighting, consumer electronics and domestic appliances. Given the rather limited level of disclosure common to British companies under the Companies Acts of 1948 and 1967, the music elements of corporate performance data were not always distinguished from that of other parts of the business. Moreover, there was a further element inhibiting disclosure. Since companies such as EMI and Decca were supplying defence equipment to the British and other governments, their emphasis on discretion in reporting was greater than normal. At the same time, there is
another explanation for the dearth of business information. It was commonly agreed within music circles that the industry had a less than generous attitude to the publication of data. Thus, Frank Smyth, the joint managing director of *The Record Retailer*, the trade paper catering mainly for the independent retailer, was moved to observe in 1965 that ‘the surprising thing about the record industry to outsiders from other industries is the almost total lack of figures available’.\(^\text{12}\) And the *Record Retailer* periodically admitted that the industry should publish more statistics.\(^\text{13}\) The Board of Trade’s censuses of production provide very rudimentary information on the production of gramophone records by larger establishments as follows: for 1948 and 1951 production value, but including ‘musical instruments not otherwise specified’; for 1954 production numbers and value; for 1958 production numbers and value including ‘pre-recorded tape and wire for reproduction of gramophone records’; for 1963 including tape and wire, and ‘matrices for reproduction of gramophone records and biscuits’; for 1968, production data plus the number of enterprises. From 1972 more detailed information is available on sales value, employment, number of enterprises, etc. for ‘gramophone records and tape recordings’. However, the Board of Trade was concerned with protecting company confidentiality, and did not publish data on concentration levels in the industry.\(^\text{14}\)

More might be expected of the trade association, the BPI, but here the situation is also somewhat disappointing for the period before the late 1970s. Unfortunately, the BPI’s library is not accessible at present, but the association did publish a series of useful statistical yearbooks from 1976, and these have been deposited in the British Library. A few researchers have used them to derive insights into the operations of the British music companies, and, in particular, the level of competitiveness within the industry. For example, Peter Ross has analysed the corporate response to the emergence of punk rock, using the market-share data for the period from 1972 published in the BPI yearbooks from 1976.\(^\text{15}\) But for our purposes it is a pity that the BPI did not publish data on market-shares for the pre-1972 period, and the only long-run information it provides relates to the production, sale and price of records - 78s, 45s and LPs – from 1955.\(^\text{16}\) Even here, it is clear that much of this information was not assembled by the industry itself, but was taken from material collected by the Board of Trade.\(^\text{17}\) Its own dataset began only in 1972. Some useful insights may be drawn from commissioned articles for the *BPI Year Book*. They include contributions on distribution, retailing and the compilation of the music
However the authors rarely adopt critical positions, are very much concerned with the situation in the late 1970s, and make no claim to provide a longer-run assessment.

What then of business archives? The position here is much gloomier than, say, the position with other major British industries such as banking, shipbuilding and brewing. The four music majors have experienced significant corporate changes which have worked against the preservation of archives and their availability to researchers. Three of them have disappeared through merger and acquisition activity. The music business of Decca, an intensely private company, was sold to the Dutch firm PolyGram in 1980; the rest of the business was acquired by Racal Electronics. No formal archive appears to have survived, and much of what we know is derived from a 95-page memoir privately published by the company’s founder and long-time chairman, Sir Edward Lewis. A controlling stake in Pye Records, a division of Pye, the electronics, TV and Radio manufacturer, was purchased by the independent television company ATV in 1959, and the business became wholly-owned in 1966. Pye itself was acquired by Philips. In 1962 Philips Records entered into a joint venture with the Siemens-owned Deutsche Grammophon, whose popular music subsidiary was named Polydor. In 1972 Philips [now known as Phonogram] and Polydor formally merged to create PolyGram (though Phonogram and Polydor continued to operate separately in the UK until 1981). PolyGram does have business archives, and these were consulted to good effect by Bakker, but detailed information on the British operation does not appear to have survived. The position is much better with EMI, despite the vicissitudes of merger and demerger. EMI merged with Thorn Electrical Industries in 1979, demerged in 1996, and was the subject of a private equity takeover by Terra Firma Capital Partners in 2007. Fortunately for researchers of the music industry’s pre-war history, an EMI Archive Trust was established in 1996, primarily to manage the company’s pre-1946 archives. Unfortunately, however, this is of little comfort for the research project in which I am engaged, which is concerned with the British popular music industry from c.1950 to c.1980. For this period, access to EMI’s ‘corporate’ information lies outside the remit of the Trust, and permission to consult records is at the discretion of the company. Currently its custodians tend to err on the side of caution. The situation is scarcely surprising, given the company’s post-war manufacturing activity for the defence industry. Moreover, corporate lawyers harbour justifiable concerns about protecting confidentiality in the music industry, where the numerous
disputes about copyright and royalties frequently have to be settled by expensive litigation. I made three visits to consult some of EMI’s post-1946 records in the course of 2008, but was not able to consult the items conventionally analysed by business historians, such as the reports and accounts, the directors’ minute books, the minutes of leading committees, and strategy reports from senior executives. That these sources exist is clear, not only from the commissioned history written by Peter Martland, but also from the work of researchers who were granted access on a limited basis in more generous times. Thus, Barfe was able to see documents relating to RCA’s deteriorating relationship with EMI following its purchase of Capitol Records in 1955, and RCA’s defection to Decca in 1957. The material I was able to see in 2008 was more limited in nature, confined to newspaper and journal cuttings relating to the career of Sir Joseph Lockwood, chairman and chief executive from 1954 to 1970, and on the Stateside label, and redacted studio recording sheets of artists such as Kenny Lynch, Helen Shapiro and the Dave Clark Five. A formal request to the company in March 2009 to see more important sources of business history, made with the help of Eric Nicoli, chairman of the Archive Trust, has [so far] proved unsuccessful.

In this article I set out the ways in which business history work was undertaken in the absence of access to company archives. In particular, I show how a study of concentration and competitiveness was approached by the use of alternative source materials, and highlight the problems which this involved. The research was undertaken by Terry Gourvish and Kevin Tennent of the London School of Economics. Our first port of call was the Guildhall Library, so often the refuge of the beleaguered business historian. Aside from its wealth of deposited business records, the Library has an invaluable run of London Stock Exchange listing materials, including the annual reports collection of quoted companies from 1880 to 1965. For many projects these reports form the bedrock of any corporate analysis. Alas, it quickly became clear that this material had severe limitations from our point of view. As we anticipated, the level of disclosure was frustratingly thin in our period (here 1950-65). Decca in particular produced a very short and uninformative annual report, principally because although a public company, it was operated largely as a private concern by Sir Edward Lewis, who was de facto chief executive from 1931 to 1979, and chairman from 1957 to 1979. The report to shareholders for the year 1955/6, for example, extends to a meagre two pages and fails to reveal who the chairman was. Indeed, so limited was the information provided to the
Stock Exchange that officials were moved to append more revealing articles clipped from the *Financial Times* in order to supplement the report provided by the company.\textsuperscript{25}

Another disappointment was provided by the National Archives, which has surprisingly little on the music industry and its companies. Occasionally regulatory matters relating to mergers and acquisitions, corporate disputes, or broadcasting policy resulted in the creation of files in government departments such as the Board of Trade or Home Office. This material includes the Board of Trade’s response to a dispute between EMI and CBS regarding the use of the Columbia trademark in the 1970s, and an ‘illicit broadcasts file’ for 1974-5 which revealed that some EMI records had reached the pirate radio ship Radio Caroline.\textsuperscript{26} There is also a copy of the EMI submission to Lord Annan’s Committee on the Future of Broadcasting in 1975.\textsuperscript{27} However, on its own this material scarcely provides enough to support serious research.

The trade press did not seem at first sight to provide a promising avenue of research. First of all it varies enormously, second its overwhelming concern, naturally enough, is with the music and the artists who perform it, rather than with their business relationships and the corporate environment. This is certainly the case with some of the best-known magazines, such as *Melody Maker* and *New Musical Express*, best known from the 1950s for their music charts. We had greater expectations of publications closer to the more commercial interests in the music business, notably *Record Mirror* and *Record Retailer* (later called *Music Week*). *Record Retailer*, launched in 1960, catered for the independent record retailer. Although it includes a great deal of rather inconsequential information, for example the revelation that Decca beat EMI 8-3 in a football match in 1962,\textsuperscript{28} tucked away in its pages is key information on the changing organisational structure of the industry, its production, distribution and marketing arrangements, the relationship between the British majors and smaller British independents, and the relationship between the British majors and the leading American firms. It also provides analyses of market-share based on the charts, though not of course for the entire period with which we are concerned. The decision was taken to use the trade press, and the *Record Retailer* in particular, to produce a contribution to the debate about changing levels of concentration in the industry. More controversially, the aim was to construct a market-share database using the popular music charts.

The use of pop charts to yield information on corporate concentration,
competitive levels, and creative impulses in the industry is not new. Indeed, it has been the basis of a substantial academic literature owing its provenance to the work of Richard Peterson and David Berger on the American market in the mid-1970s. While some scholars have been critical of the extent to which best sellers can serve as a proxy for the popular music market as a whole, there is evidence in support of this approach from the trade itself, especially in relation to the singles market, where an EMI executive observed that 70 per cent of sales were derived from the Top 30. In Britain the first chart was a top 12 singles chart in the *New Musical Express* [NME] in November 1952 (see table 1). This became a Top 20 in October 1954 and a Top 30 in April 1956.

### Table 1 *New Musical Express* top twelve singles chart, November 1952

<table>
<thead>
<tr>
<th>Position</th>
<th>Title</th>
<th>Artist</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Here in my heart</td>
<td>Al Martino</td>
<td>Capitol</td>
</tr>
<tr>
<td>2</td>
<td>You belong to me</td>
<td>Jo Stafford</td>
<td>Columbia</td>
</tr>
<tr>
<td>3</td>
<td>Somewhere along the way</td>
<td>Nat King Cole</td>
<td>Capitol</td>
</tr>
<tr>
<td>4</td>
<td>Isle of Innisfree</td>
<td>Bing Crosby</td>
<td>Bruswick</td>
</tr>
<tr>
<td>5</td>
<td>Feet up</td>
<td>Guy Mitchell</td>
<td>Columbia</td>
</tr>
<tr>
<td>6</td>
<td>Half as much</td>
<td>Rosemary Clooney</td>
<td>Columbia</td>
</tr>
<tr>
<td>7</td>
<td>High noon</td>
<td>Frankie Laine</td>
<td>Columbia</td>
</tr>
<tr>
<td>8</td>
<td>Sugarbush</td>
<td>Doris Day &amp;</td>
<td>Columbia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frankie Laine</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Homing waltz</td>
<td>Vera Lynn</td>
<td>Decca</td>
</tr>
<tr>
<td>10</td>
<td>Auf wiedersehen (sweetheart)</td>
<td>Vera Lynn</td>
<td>Decca</td>
</tr>
<tr>
<td>11</td>
<td>Because you’re mine</td>
<td>Mario Lanza</td>
<td>HMV</td>
</tr>
<tr>
<td></td>
<td>Cowpuncher’s cantata</td>
<td>Max Bygraves</td>
<td>HMV</td>
</tr>
<tr>
<td>12</td>
<td>Walking my way back home</td>
<td>Johnnie Ray</td>
<td>Columbia</td>
</tr>
</tbody>
</table>


The first LP or ‘album’ chart – a Top 5 - appeared in the *Record Mirror* in July 1956, then was followed by others, notably a Top 10 published by *Melody Maker* from November 1958. From March 1960 more authoritative charts published by *Record Retailer* (from March 1972 *Music Week*) are available, providing (from late March 1960) the Top 50 singles, Top 20 Extended Play (EP) and Top 20 LPs. There were numerous adjustments to these charts, particularly in the periods 1966-7
and 1969-73. The EP charts ceased in December 1967, and the LP charts exhibited considerable fluctuation, both in coverage and extent. However, in general reliability was improved once compilation was entrusted to the marketing company British Market Research Bureau from February 1969.32

Assembling the data was at first a straightforward matter since for the period 1952-60 we were able to draw on the published work of Rees Lazell and Osborne, who provide a complete listing of the weekly NME singles charts.33 However, from March 1960 the Record Retailer charts appeared, and the general consensus among pop music aficionados is that these provide a more reliable source than either NME or Melody Maker.34 Unfortunately, no enthusiast has assembled weekly chart listings for Record Retailer to match the work of Rees et al. There are, of course, numerous chart compilation books, notably the Guinness book of hit singles and albums, compiled by Jo and Tim Rice, Paul Gambaccini and others, Graham Betts’s British hit albums, and the singles and albums compilations of Dave McAleer, and Tony Brown, Jon Kutner and Neil Warwick.35 But, with the exception of McAleer, these are impossible to use for market-share purposes, since they are arranged chronologically by artist. McAleer lists the top 20 singles and albums for each month from 1954, and it was tempting to use this material to construct our database. Certainly, it would have involved less work! However, McAleer has tinkered with the raw data on a basis which he fails to explain fully. Thus, in his singles book he states that in combining the weekly chart information into a monthly database he used ‘a complex and comprehensive system which considers not only a record’s weekly chart position and peak position, but the number of weeks in the Top 10 and Top 20, its weeks at No.1 (if applicable) and its performance on other major charts’.36 The way this was done was not fully explained, and so we had no alternative but to assemble our own weekly database of singles (from 1960) and LPs (from 1956) from the raw data. The process also enabled us to include EPs from 1960 to 1967, which were a not inconsiderable part of the record market in the 1960s. Much of the transcription work had to be carried out at the British Library’s Newspaper Library at Colindale, the hapless historian’s gulag-like outpost. Fortunately, the St. Pancras site houses the British Library Sound Archive. Its library, based on the former British Institute of Recorded Sound, includes fairly large runs of the music trade press, which are available on open shelves in ‘Humanities 2’. So far we have
assembled weekly data for the Top 30 singles, Top 20 EPs and Top 20 LPs, for the period 1952-75. Hit records are assigned to labels, and the labels assigned to companies which either owned the material or licensed the recordings of other companies and, in particular, American companies such as MGM, RCA, CBS and Warner. The results are being used to map changes in the British industry’s concentration levels.

How reliable is the database we have created? It is important to recognise that we have not assembled a perfect record of corporate market-share and that our dataset, like others, has been affected by manipulation (see figure 1).

**Figure 1 Concern about manipulation of the charts:**
**Phlip cartoon, 1966**

![Figure 1 Concern about manipulation of the charts: Phlip cartoon, 1966](Record Retailer and Music Industry News, 21 July 1966 p.11 (courtesy Music Week))

The charts were susceptible to intervention at various stages of the process, for example through the payment of inducements for disc jockeys to play records on the radio and television (‘payola’), and the activities of record ‘pluggers’ in music shops and elsewhere. The Saturday interventions of the pluggers was a common feature of working life in those record shops whose sales returns contributed to the charts. Indeed, the legitimacy of the *Melody Maker* and *Record Mirror*’s charts in the late 1950s was doubtful given the fact that the names of the shops were published. ‘Payola’, the making of cash payments to disc jockeys in order to ensure radio and TV airplay, was also present, and although the practice appears to have been less common in Britain than in the
United States, scandals surfaced from time to time, notably that involving the singer Janie Jones, who was accused of involvement in a sordid conspiracy to manipulate the BBC playlist in 1971. With the BBC having a virtual monopoly until the appearance of commercial television and pirate, then commercial, radio, the process was legitimised in the BBC’s only challenger in the 1950s, Radio Luxembourg, where the process of song plugging was readily conceded, with record companies hosting their own programmes on air. In June 1963, for example, record companies ‘sponsored’ 23% of Radio Luxembourg’s airtime, and EMI alone had 14% (24 programmes and 11 hours broadcasting a week). Pirate ships broadcasting Radio London and Radio Caroline in the mid-1960s brought their own regulatory challenges, stimulating changes at the BBC. Here the major development was the creation of Radio 1 in 1967, after which corporate plugging of records on Radio Luxembourg ceased.

Next, we must recognize that the sales coverage of our charts is by no means comprehensive. Our data, collected from independent shops such as Tipples in London and Hime and Addison in Manchester, may have been representative of the market in the early 1950s, but with substantial changes in retailing accounted for only about 45 per cent of total retail sales twenty years later. In our period, the emerging chains of Boots and W.H. Smith refused to provide sales information, while Woolworths agreed to do so only from the beginning of 1975. But even if the charts were a consistent indicator of actual sales volumes, the database of hit records is a far from perfect indicator of concentration in the conventional business sense, where turnover or sales volumes would be preferred. EMI was certainly aware of this. In 1959 Charles Thomas, one of its leading executives, pointed out that while in 1957 its 22 Top 10 hits had produced nearly 8 million in sales for the company, in the following year 27 hits produced sales of only 6 million. Our data, which gives equal weight to hits in position 1 and position 30, for example, may well under-estimate the market-share of a smaller independent fortunate to enjoy a cluster of big hits (see figure 2). However, the problem is not a large one, given the relatively small size of the independents at this time.
Finally, there is a more significant problem of coverage. Nearly all the charts in our period list only full-priced records of what may be termed the ‘mainstream’ pop and rock music genres. We know that budget LPs were big sellers, since when (for example in March-May 1969) they were included with full-price LPs in a ‘combined’ chart, they dominated the top positions.\(^{43}\) Our database of popular ‘hits’ consists primarily of ‘pop’, ‘pop/rock’, ‘rock’ and ‘MOR’ (middle of the road) music. Other markets were important too, including classical, jazz, children’s records and the spoken word, but the deficiencies arising from our failure to cover them adequately in our database should not be exaggerated. For example, our categories accounted (in 1978) for about 70 per cent of all LPs sold.\(^{44}\) There is also the challenge of capturing music sold outside the conventional chart market-place, for example, taped music, and records distributed through record clubs or sold in racks in petrol stations and elsewhere. However, there is no reason to believe that corporate shares of these activities differed from their shares in chart music, since the major companies were prominent in all of them. For example, one of the largest record clubs, The World Record Club, was owned by EMI from 1959. The same company also began ‘rack jobbing’ retailing in the UK with a pilot scheme in October 1966. In March 1968 it launched rack retailing in earnest with the creation of Record Merchandisers Ltd., in which it was quickly joined by Decca, and Pye.\(^{45}\) On the other hand, it is important to recognise changes in the composition of a chart when interpreting trends. When the first British LP chart was compiled, it was dominated by the American musicals and film scores produced by Hollywood. For example, the musical *South Pacific*
was in the charts for 313 weeks in 1958-65, and was at No. 1 continuously from 8 November 1958 to 5 January 1961. Later on, LPs made by rock stars such as Cliff Richard, Elvis Presley and the Beatles challenged the supremacy of the soundtrack and by 1978 film music accounted for less than 10 per cent of LP sales.\textsuperscript{46} With all these caveats, we have confidence that our database provides a consistent indication of market-share that is more comprehensive than that previously available. An important element in our calculations was the decision to weight the chart data using the national production data. The weights applied are the production volumes for singles [78s and 45s] and LPs listed in the BPI’s yearbooks. We do not have information on EPs, but we do know the percentage of the market which LPs commanded from 1955. Thus, when combining the figures for singles, EPs and LPs, the latter are adjusted to provide a total which equates to the LPs’ total share in production.

Our new database is currently being used to capture the challenge to the dominance of Britain’s ‘Big Four’ companies - EMI, Decca, Pye and Philips - which came, first, with the rise of independent British companies, and then with the determination of American companies to break free of restrictive licensing agreements and operate independently in British and European markets.\textsuperscript{47} These developments are set against the main changes in musical styles – the introduction of American ‘rock n’ roll’ in 1956, the emergence of the Beatles phenomenon from 1962/3, the cross-cultural importation of rhythm and blues, soul and reggae from the mid-1960s and finally the establishment of British ‘indie’ music.\textsuperscript{48} In addition to our market-share data, we have also embarked upon a comparison of musical dominance, i.e. the extent of American versus British representation in the successful popular music of the period. This is measured by dividing our database into UK and US artists. Several trends emerge. The charts began with US dominance: 81 per cent of the hits were performed by American artists in 1952. The shift to near convergence by 1955 took place was based on the aping of American music by British artists, notably in the skiffle craze led by Lonnie Donegan, and in the work of balladeers such as Ronnie Hilton, David Whitfield and Anne Shelton. When LPs are included in our data from 1956, the Americans regain their dominance, but chiefly because they dominated film scores and musicals which made up so much of the LP charts in the mid-late 1950s. However, once EPs are added to the data, these had more British compilations than American ones at first, contributing to the UK’s lead in the period before the Beatles phenomenon. In fact, the Beatles’ role in the growing presence of UK music in the 1960s
charts should not be exaggerated. Rather the surge in British music was built upon artists such as Cliff Richard, Shirley Bassey, Kenny Ball, Adam Faith, Craig Douglas, Anthony Newley, Max Bygraves and Russ Conway. From a low point in 1964 an American recovery was built upon Tamla Motown and the R n’ B/soul sounds later popularised in Britain’s Northern clubs. This was followed by another British recovery built on prog [progressive] rock (e.g. Genesis, Pink Floyd), and glam rock (e.g. T Rex, David Bowie, Sweet and Gary Glitter). This analysis is just one example of the use of the database to develop the business history of popular music from 1950, linking it to the changes in consumer tastes and musical styles.

1 This article draws on research undertaken for the ESRC-supported project on ‘Enterprise and Creativity: The British Popular Music Industry 1950-75’, ref. RES-062-23-1100. My thanks to Richard Coopey and Kevin Tennent for their comments.

2 P. Martland, Since records began: EMI, the first 100 years (1997); S.A. Pandit, From making to music: the history of Thorn EMI (1996).


8 A. Loog Oldham, Stoned (2000) and 2Stoned (2002); J. Boyd, White bicycles: making music in the 1960s (2006); G. Martin, All you need is ears (1979), and Playback: an illustrated memoir (Guildford, 2002).


11. L.F. Hill, ‘An insight into the finances of the record industry’, *Three Banks Review*, 118 (June 1978), 28-45. Hill’s article was also published in the *BPI Year Book 1979*. Since Hill was an insider – he was Director, Group Music, of EMI – his work must be treated with a degree of caution. See also his ‘In at the deep end with EMI’, *BPI Year Book 1977*, pp.72-4.


17. The BPI data do not correspond to the Census of Production sales data for 1958, 1963 and 1968.


19. *Times*, 26 February 1980, p.18. Some Decca material is now in the possession of Universal Records, but access to it is limited.


23. Lewis led a syndicate which took over the company in 1929, and in 1932 his family strengthened its control.

24. In fact, the report was signed by two directors, Lewis and Sir Cyril Entwistle, chairman from 1934 to 1957, without revealing their positions: Decca, *Annual Report and Accounts 1956/7*, London Stock Exchange annual reports collection, Guildhall Library, London [LSE/Guildhall].


26. TNA BT209/1439-41 and HO255/497.

27. TNA HO245/555.


Numbers are of course lower where the chart is smaller.


Williams, ‘Changing patterns of distribution’, p.87; Walker, ‘How the charts are compiled’, p.29.


A combined LP chart in March 1969 had 19 budget and 11 full price records in the Top 30, and 9 of the Top 10 were budget: *Record Retailer*, 5 March 1969.

*BPI Year Book 1978*, p.124.


Aluminium smelting has held a place in the Scottish industrial landscape for over 100 years. The first aluminium smelter in the UK, opened by Lord Kelvin, was located in Foyers in the Scottish Highlands in 1895 and operated from 1896 to its closure in 1967 by the British Aluminium Company (BACo). BACo went on to operate further smelters at Kinlochleven and Fort William before opening its flagship, and final, smelter in Invergordon in the Scottish Highlands in 1971. The Invergordon smelter was part of the Wilson Government’s smelter programme which led to an enormous increase in the domestic production capacity of aluminium smelting in both the UK and Scotland. By the opening of the Invergordon smelter, BACo came to dominate both the Scottish and UK industries, exploiting its close links to the British government and its historical position in the Scottish Highlands to win support and favour with political, social and economic elites and basing its business model on these relationships. Any discussion of smelting in Scotland requires recognition not only of the company’s dominance of the industry, but also its very close relationship with government. To all intents and purposes BACo was the aluminium industry in Scotland, although heavily involved with government throughout as both a customer and a primary source of funding, and motivation for the expansion.

BACo’s archives are held at the University of Glasgow’s Business Records Centre and have recently yielded several pieces on the company by Andrew Perchard covering its activities in the Highlands, and relationship with the UK government throughout its lifetime, illustrating in depth the continued reliance on government throughout the company’s history and the corrosive nature of this dependence on BACo’s ability to operate effectively in the global marketplace. Another, older, piece on BACo based on the Glasgow archives is an article by Ludovic Cailluet who analysed the demise of the company from a business history perspective, attributing decline to the
inefficient management structure and the crutch of government support which, when withdrawn, caused the company to fail. Of these pieces, Cailluet’s work is based specifically on the BACo archives and Perchard’s work blends governmental archival material with the BACo archive.

This article focuses on the discussions between BACo and government on the construction and operation of the Invergordon smelter; the largest aluminium smelter built in Scotland and singularly responsible for increasing production capacity of aluminium in the UK by over 360 per cent. The research is based primarily on government archives in both the National Archives of Scotland, and the National Archives at Kew. This is due to the central role that government played in the expansion of capacity and production in the industry: it was government that proposed the idea, funded it, offered to support it through the establishment of nuclear power stations and then bailed out BACo when things started to go wrong. The material offers a rich resource to properly assess the motivations behind the expansion, the cost, and what went wrong, and it offers a slightly different perspective on what has been written on BACo thus far by two very able historians.

Motivations: balance of payments, regional policy and technology
The first Wilson Government’s announcement in 1967 concerning the construction of two new smelters at Invergordon in the Scottish Highlands, and Holyhead on the Isle of Anglesey, was a result of a combination of three separate factors: balance of payments; regional policy; and technology.

Until the announcement of its intention to build the smelters, Britain produced around one tenth of the intended output of the new smelters. British consumption of aluminium at this time was 360,500 tonnes, but production (at Kinlochleven and Foyers – the only smelters in Scotland and the UK) was only 38,200 tonnes per year, powered by hydro-electric. Capacity was only 39,000 tonnes per year, meaning the two smelters were running at 97.95 per cent, leaving very little room for improved efficiency. The new smelters were to reduce the reliance on imports of aluminium by up to two thirds, helping the balance of payments by between £50-60 million per year. Nuclear power was identified as the source of cheap electricity and companies were invited to tender bids for the operation of the smelters. The aluminium industry at this point in time was ‘a highly integrated producer-to-consumer field’. Having a producer on the doorstep was an attractive proposition to any national consumer of aluminium, especially if they were
being provided with development grants and a cheap source of power for production.

The Wilson Government’s commitment to regional development as part of its election manifesto meant that it sought to site the new smelters in designated development areas. Resultantly, the companies that were invited to tender had to propose to locate in an area that was not only designated as a development area, but also satisfied the aforementioned logistical requirements for operating a smelter. Invergordon and Holyhead satisfied these requirements and were the choices for the three companies that tendered bids: RTZ, Alcan, and BACo. Invergordon had been identified within government as:

the major industrial centre in the Highlands, providing in time the range of job opportunities which could sustain a balanced and expanding population and act as a holding point to offset the decline of population in the rural hinterland which must be expected to continue. As well as holding population which otherwise would be likely to drift south such a centre would be likely to stimulate growth over a much wider part of the Highland area.6

Invergordon’s position as a potential growth point for the region as a whole was of particular interest to the government through its acceptance of the recommendations in the 1961 Toothill Report on the Scottish economy that areas be identified for growth, and regional policy be tailored to this effect. Previously government had been more inclined to shape regional policy in Scotland towards solving unemployment in areas rather than focusing on areas with potential for growth. Toothill recommended that a different approach be taken, and Invergordon was to be the manifestation of this new policy.

Edmund Dell, former President of the Board of Trade, and Paymaster General in both Wilson Governments, wrote ‘Politically it [the smelter programme] had the further advantage of corresponding to the bright technological image which the Labour Government wished to create.’7 The Wilson Government’s industrial policy during this period is described by Coopey as a ‘directly interventionist, technologically oriented strategy’.8 Dell described the government rather more simply as having ‘interventionist inclinations’.9 Labour and the Conservatives at this point were tussling over modernity and each wanted to show to the nation that it was the party that would bring about the modernisation of British industry and technological change required. Investing in high-technology projects, such as aluminium
smelting powered by nuclear energy, would prove to the nation that the party was committed to modernising industry and was capable of delivering on its promises. In doing this, helping the balance of payments problem and avoiding a further devaluation of the pound would certainly curry favour. The aluminium smelters project was to help the Labour government satisfy all of these aims.

**BACo**

For its part, BACo was keen to operate the new smelter at Invergordon for a number of reasons. The company wanted to escape from its 54 per cent holding in Canadian BACo (CBA), which obligated it to take all the output from the company’s only smelter, in Baie Comeau, Quebec (hydro-powered), a 90,000 tonne output that between the period 1961-68 provided over half of BACo’s profits. However, there was a considerable drawback to this agreement: as a result of Canadian withholding of tax, all dividends paid to the UK were liable for a 59 per cent tax-rate, which in turn prevented the company from making use of the capital generated by the smelter.\(^{10}\) Ronnie Utiger, BACo’s chairman, described the arrangement as the company taking ‘all the commercial risk for only 54% of the profits (which were then excessively taxed) and had no access to the cash-flow.’\(^{11}\) BACo reached agreement with the American firm Reynolds Metals that if it acquired a British smelter then Reynolds would purchase BACo’s share in CBA. Utiger does not explain how the company got into such a peculiar arrangement, but the answer would most likely be found in its management. Alcan, examining the possibility of a merger with BACo in 1969, stated in a confidential report that ‘BACo has an uninspiring record of management… management and market attitudes are generally considered archaic… it is thought that their approach to labour relations is considerably behind ours.’\(^{12}\)

The soft loans on offer by the British government, as well as the development grant for building the smelter, were attractive to BACo, at least initially, as was the prospect of locating in a politically stable country close to main markets and using a power source supplying cheap power. Further, the company had become increasingly uncompetitive in the aluminium semi-manufactures field in the three years previous to the government’s announcement (losing £2 million per year), making the idea of operating a smelter in the UK attractive to the company in helping it improve its position relative to the other main producers, Alcan and RTZ, both of whom were planning smelters themselves.\(^{13}\) Most important however was the advice proffered by the United Kingdom Atomic Energy Authority (UKAEA)
(which was charged with providing consultancy on the construction of Hunterston B, having operated and built several other stations around the country), and the Scottish electricity boards. The South of Scotland Electricity Board (SSEB) was building and operating the Hunterston station, and the North of Scotland Hydro Electricity Board (NSHEB). Both told BACo that any escalation of energy costs was unlikely to affect adversely any arrangements made between the company and the boards for provision of electricity supply for the smelter, which eventually persuaded BACo to agree to the contract.14

The contract and ‘fair clause’

However before agreement was reached, BACo wanted guarantees on the price of power arguing, rightly, that it was absolutely crucial to the viability of the whole project. Aluminium smelting uses enormous amounts of electricity and therefore it was expedient on both the company and the government to ensure that a competitive price for supply to the smelter was agreed. The price of the power supply in aluminium smelting at this time accounted for 40 per cent of total conversion cost from alumina to aluminium ingot.15 Therefore, any increase in the cost of power would automatically affect the conversion cost for the company and have potentially disastrous consequences should it occur over a prolonged period resulting in a deficit build up, affecting profit margins and potentially jeopardising the entire operation. BACo sought assurances against this. In the initial stages of the smelter’s operation, its power was to be supplied by more expensive coal-powered stations with the supply being switched to nuclear power after the construction of Hunterston B nuclear power plant was completed, planned for 1974. BACo agreed to this under the proviso, gained after extensive negotiations and a personal intervention by the President of the Board of Trade, Dell, that in the event of any aspect of change in the design of the new nuclear power station that may affect the price BACo had agreed to pay, the government would agree to alter the agreement accordingly so that the company would not be wholly responsible for the extra costs. However, this was not written into the contract, but took the form of a letter written by Dell to Sir William Strath, the then chairman of BACo. This was to be known as the ‘fair clause’. This was to be a crucial element, not just in the telling of the story of the smelter, but also to the future of aluminium smelting in Scotland as a whole.

The price agreed by the government and BACo for the supply of power to the smelter was a result of extensive negotiations between the company
and the government’s electricity boards. After much discussion and consideration of other smelter operations in foreign countries and the prices paid there, the two parties came to an agreement. The breakdown of the price agreement is shown in table 1.

Table 1 Price agreement for electricity supply to Invergordon smelter

<table>
<thead>
<tr>
<th></th>
<th>p/KWH</th>
<th>Mils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital charge on annuity basis</td>
<td>0.141</td>
<td>3.38</td>
</tr>
<tr>
<td>Operating costs and fuel</td>
<td>0.117</td>
<td>2.81</td>
</tr>
<tr>
<td>Rates and royalty, net of plutonium credit</td>
<td>0.005</td>
<td>0.12</td>
</tr>
<tr>
<td>Total</td>
<td>0.263</td>
<td>6.31</td>
</tr>
</tbody>
</table>


Note: power prices for aluminium are measured in mils: 1 mil = 0.1 US cents.

BACo had mooted a price of 0.25p/KWH as the required level for competitiveness, which would have provided a total cost of 6 mils per unit, 1.5 mils above its target level of 4.5 mils, but offset by the 40 per cent investment grant on offer on the smelter. Other companies operating in foreign fields experienced prices ranging from 2.5 mils (Canada, Norway and the West Coast of the USA) to 4/4.5 mils (Tennessee in the USA and France). The final agreed price was set at 0.263 p/KWH that gave a total of 6.31 mils, 5 per cent over the company’s target power cost. The smelter at Invergordon would therefore be operating on a more expensive power price at nearly 2 mils per unit more expensive than its nearest rivals in Tennessee and France. BACo agreed this figure as over half was from the capital charge incurred for the construction of Hunterston B, which would not vary after construction and therefore began to proceed with the deal. Herein lies the crux of the power contract, and by extension the entire project. From the beginning the smelter was uneconomic without government subsidy. The price agreed was above the required level for competitiveness. Dell says: ‘No nuclear reactor could supply electricity at prices comparable with hydro-electricity in Norway. The electricity therefore would not have been cheap enough to make had it not been for the subsidy on the plant represented by the 40% investment grant.’ Smelter operations can operate profitably as long as their power prices remain competitive and the price of aluminium remains at a reasonable level. So, even though the power price agreed was above the required level for competitiveness, the investment grant was designed to
offset this. As a result, the company accepted the proposed price.

The location of the smelter in the Cromarty Firth area under NSHEB auspices gave rise to various problems for BACo during the negotiations. When figures changed, the company sought an explanation only to find that they had to go to both BSHEB and SSEB for them. The company found that there was apparent collusion between the Scottish boards and the Central Electricity Generating Board (CEGB), and that BACo was unlikely to get any special concessions in the negotiations.\textsuperscript{18} This should not have come as any great surprise however as NSHEB could not provide industry with more favourable pricing arrangements for electricity supply than domestic customers by virtue of its well-publicised statute.\textsuperscript{19} A further irritation to the company was that NSHEB insisted on negotiating the contract by itself, even though many key aspects of the contract necessitated SSEB’s consent for later provision of electricity from the yet to be built Hunterston plant:

There was an animated exchange on the subject of electricity supply, on which BACo said that they were nearing the end of their discussions with NSHEB but felt that they were being required to deal with a blinkered small middle man who was not the real supplier (which was SSEB), with the result that they were getting an unimaginative response \textit{not in the best interests of the UK economy} [my emphasis]; in particular their broad assessment was that electricity costs of their competitors in Canada and the US was 20\% less than here and this was an unfair handicap.\textsuperscript{20}

BACo was negotiating on the basis that the whole smelter development was a national interest project with Highland concerns secondary to the arrangements. NSHEB’s statute preventing it from providing industry with favourable pricing for electricity provision was viewed as a hindrance by BACo rather than an integral part of the whole function of the board. The UK government refused point-blank to get involved in the negotiations, claiming they were a private matter between BACo and the boards. In spite of the difficulties that transpired in these negotiations, they were completed on time and mostly to the satisfaction of all parties.

BACo had tried and failed to obtain guarantees over escalations in power costs written into the contract. However, the generating board was statutorily bound and unprepared to give any guarantees that would jeopardise the prices that their other consumers were paying. As a result, NSHEB insisted that an account be created so as to make clear the distinction between this agreement and its domestic provision of electricity.\textsuperscript{21} Further, the contract contained no
provisions for a revision of the agreement in the event of price escalation. The company was very unhappy at having to assume risks on matters that it felt it had no control or knowledge on, but eventually assented only after Dell had personally intervened with a letter reassuring the company of the government’s willingness to review the agreement in the event of an escalation in the power price. The contract was agreed and signed on 24 July 1968. BACo’s agreement with the government was set up on the basis of a total cost approach, covering as many variable and capital costs as possible as well as allowing for profit. If any of the variable or capital costs increased, predicted or not, it would be the company’s profit that would be squeezed. This was a feature of the aluminium industry worldwide under the producer pricing system until the introduction of new producers into the market (mostly additional non-OECD producers) and the introduction of aluminium onto the London Metal Exchange, significantly enlarging the previously small ‘free market’ in aluminium in the 1970s.22

The confidential nature of the contract was much to the chagrin of the Expenditure Committee in Parliament which noted that ‘the inability of Parliament to discover either the very large amount paid out in investment grants or the unit cost of electricity supplied to the smelters must greatly weaken any serious attempt to judge whether the public expenditure was justified.’ The Committee noted further that the basic motive was export saving although it did acknowledge that there were elements of regional development policy in the location of the smelters.23 This led to calls in the House of Commons for disclosure over the details to ensure that the consumers of the nations energy at large, the general populace, did not incur any of the financial burden created by the construction of the new smelters.24 Representatives in the House of Commons asked numerous questions, of which many were to be somewhat prophetic. Teddy Taylor, the MP for Glasgow Cathcart, asked:

What will the position be in the event… of the price of the power coming out being in excess of the estimates which are considered now?25

Dell, speaking as Minister for the Board of Trade, responded that ‘the company has negotiated the contract and takes the risk of escalation’26, contrasting with his earlier letter to BACo stating:

We agree that the Board of Trade and BACo will consult together if circumstances arise which, in the opinion of either party, substantially modify the assessments which at present underlie the project.27
In the terms of the actual power contract, the company had little recourse to the government for help with any potential escalation in the power price for whatever reason, save for Dell’s ‘fair clause’ letter, a result of the ‘novel form of the arrangements and the inability to foresee and provide for every contingency that might arise over the duration of the Contract’. In total, the government committed £37 million worth of loans and grants to BACo for the construction of Invergordon, motivated by the belief that it would see a substantial return on this investment in the form of contributions to the balance of payments.

After the successful conclusion of the negotiations for the contract to operate the smelter, plans for the construction and operation phases were implemented. Dell presented a draft of the Aluminium Industry (Invergordon Project) Scheme, 1968 to the House of Commons on 6 November 1968. During the debate, Nicholas Ridley, Conservative MP for Cirencester, said of the plan:

The motive is said to be import saving… This is a policy of protectionism designed to slow down world trade. If it does not pay us - as I believe it does not - to make aluminium here, we are distorting the whole mechanism of trade to save a few paltry pounds. Ridley illustrated the true intentions of the smelters in asserting that it did not ‘pay’ the UK to make its own aluminium - the smelter project was uneconomic without subsidised electricity provision and even more so in the Highlands due to the inflexibility of NSHEB’s statute of limitations concerning electricity supply, not to mention the increased transport costs of the finished products to markets and the lack of an adequate power supply in the region. It did however pay to provide a degree of protection through domestic production. In spite of Ridley’s protestations, as well as several other concerns over the power contract, loan arrangements, grant provision and potential escalation of costs and the effects on domestic consumers voiced by other MPs, the bill was passed on 20 November.

Operation

Having completed the construction of the smelter on time and within budget, BACo struck up the first pots in 1971. By this time, the balance of payments problem had improved when, in 1969, it moved into the positive posting results of £180 million to the good, an improvement on the previous year’s result of negative £380m. In 1971, it posted results of £770 million to the good, a considerable improvement. However, the smelter’s
start-up also coincided with a world slump in aluminium prices that began in 1970 and lasted until the oil shocks in 1974, when the price then increased because of higher energy costs. This can be more clearly seen in figure 1.

As a result of the slump, the smelter was only able to operate at 50 per cent of its intended capacity. This was an expensive and frustrating episode for the company, but accepted due to its belief in the cyclical nature of the industry. This belief coupled with the growth rate of 8 per cent per annum in demand over the previous twenty years in the industry, led the company to take the decision to operate at less capacity without much concern. The success of the planning and construction phase had buoyed BACo and it was confident about the new operation. Morale was high, the start-up had gone well and capital costs were low. This was against the backdrop of the discovery of oil in the North Sea and a subsequent influx of labour and interest into the Highlands.

Figure 1 Annual average aluminium price, 1959-98, (1992 prices)

As problematic as the world price of aluminium and the labour shortages were, they paled in comparison to the delay in construction of Hunterston B. This meant that the smelter had to use the more expensive coal-fuelled electricity, which the company had planned on using only until 1974, and of which it believed it would be able to offset the cost against its capital outlay on Hunterston B and subsequent supply of cheap energy, as per the power contract. The obvious downside of this was that using more expensive energy meant that the company was making less profit on the aluminium it was producing. Concurrent with this was that operating costs were rising as a result and if the profits were not there to cover this rise then a deficit would occur. Further compounding this rise in costs was the increase in the price of coal in 1972 to 5.5d/therm; whereas the agreed price for BACo was 4.7d/therm, resulting in further increases in the costs of energy for the smelter. Details of the power contract become central to the story here. The conditions of the contract and the side letter, ostensibly agreed to safeguard BACo against any such escalations, were inadequate when the company sought recourse to them. Indeed, the letter from Dell was the only (perceived) safeguard the company had. However, the letter was useless in the company’s representations to the new Conservative government and the electricity boards who stuck rigidly to the legal interpretation of the contract:

It is clear… that there are likely to be very substantial extra costs in supplying the smelter because of the forecast delays of Hunterston ‘B’. These extra costs, and in particular the interest charges on them, are such that the Smelter Account is unlikely to recover when Hunterston ‘B’ comes into full operation. The Board considered this review at their January Meeting and I was asked to raise the whole matter with the Department in the context of understandings previously given to the Board that the interests of their ordinary consumers be safeguarded.

The delay in completion of Hunterston B meant that the capital cost escalation exceeded the original estimate provided by the SSEB and was double what the company had provided for. SSEB tabled revised estimates that put the company’s contribution at £29 million for 189 MW, compared to £27.3 million in 1968. By October 1972, it became clear that the capital cost escalation was going to exceed £30 million; the limit of the loan agreed by BACo and the Government, without taking into account that Hunterston B would be operating potentially at only 80 per cent of the design rating due to corrosion caused by seawater getting into the reactor. BACo invoked the
Dell letter in January 1973, believing that this protected it from any such escalations and argued that the possible reduction in operating capacity, and coal and nuclear fuel price escalation were reason enough that they should, in the terms of the letter, ‘substantially modify the assessments which at present underlie the project.’\(^{37}\) This was a perfectly reasonable request on BACo’s part, given that it had entered the contract in good faith and on the understanding that it would not be left to bear the full cost of any such escalations. However, there was no response from the Government concerning the escalation in costs until October later that year, when the Department of Trade and Industry (DTI) (previously the Board of Trade) indicated that it was prepared to enter discussions regarding the situation. It should be noted however that there was correspondence between the two sides, at the behest of government, concerning the value of the aluminium smelters’ production to the balance of payments with the company providing an analysis of projected savings on imports provided by the new smelters.

**Table 2 Projected import savings from new aluminium smelters**

<table>
<thead>
<tr>
<th></th>
<th>1972</th>
<th>1973</th>
<th>1974</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UK Primary Production (000m. T)</td>
<td>171.0</td>
<td>252.0</td>
<td>355.0</td>
</tr>
<tr>
<td>2. Less Lochaber &amp; Kinlochleven (000m. T)</td>
<td>(32.0)</td>
<td>(36.0)</td>
<td>(36.0)</td>
</tr>
<tr>
<td>3. New smelters production (000m. T)</td>
<td>139.0</td>
<td>216.0</td>
<td>319.0</td>
</tr>
<tr>
<td>4. Price per tonne of imports, £ (a)</td>
<td>221.0</td>
<td>233.0</td>
<td>256.0</td>
</tr>
<tr>
<td>5. Equivalent import value, £m.</td>
<td>30.7</td>
<td>50.0</td>
<td>81.7</td>
</tr>
<tr>
<td>6. Alumina required (b)(000m. T)</td>
<td>271.0</td>
<td>533.0</td>
<td>622.0</td>
</tr>
<tr>
<td>7. Price per tonne, £ (c)</td>
<td>34.0</td>
<td>34.0</td>
<td>40.0</td>
</tr>
<tr>
<td>8. Cost of alumina, £m.</td>
<td>9.2</td>
<td>17.8</td>
<td>24.9</td>
</tr>
<tr>
<td>9. Other material costs (d)</td>
<td>2.0</td>
<td>3.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Import savings, £m. = (5-(8+9))</td>
<td>19.5</td>
<td>30.0</td>
<td>52.8</td>
</tr>
</tbody>
</table>

*Source:* John Wall (Chief Economist BACo) to F.C. Carter (Department of Trade and Industry), 29 June 1973, TNA PRO FV54/56. There is a counting mistake in the table.

*Notes:* the figures for 1973 do not add up. The import savings should read as being £29.0m and not £30.0m. It is not clear from the archival sources how this mistake arose.

(000m.T) = 1,000 metric tonnes.

a) actual average price for imports of pure primary aluminium in 1972 adjusted in proportion to actual or expected change in Alcan world price.

b) assumed 1.95 tonnes of alumina per tonne of aluminium.

c) actual for 1972, adjusted in proportion to rise in aluminium price.

d) petroleum coke, cryolite and fluoride.
This can be seen in table 2 and it is clear that the benefit of the smelters project to the balance of payments problem, if the above figures were realised, was to be quite substantial. More to the point, the timing of the correspondence reveals that the government was probably more interested in what benefits the smelters were bringing to the country’s economic situation than in rectifying the concerns expressed by BACo over the escalation of the energy deficit, unsurprising given that the country had lapsed back into deficit in its balance of payments again by this stage.

In March 1973, a letter from A.M. Cochran, writing on behalf of the Chief Engineer for the NSHEB to H.F.G. Kelly of the Scottish Development Department stated:

There is really very little that can be said about fuel or capital escalation assumptions made in 1968. At that time escalation was not uppermost in people’s minds, as it is today, and the provisions in the agreement were the normal ones to be expected in a long-term agreement. The BACo [BACo Company] are well aware that the price of fuel is outwith the control of the Electricity Boards and that any forecast of trends could be no more than speculative. Similarly, the effect of inflation and design changes on Hunterston ‘B’ could hardly have been anticipated. No doubt the BACo took the best possible advice from all sources before opting for a 100% nuclear supply tranche from 1974/75 onwards.38

This illustrates the electricity boards’ attitude towards understanding the predicament that the company was in, and the role of the boards in it. BACo had predicted the possibility of inflation and design changes in Hunterston B and had sought guarantees covering it against any such occurrences. Government though was unwilling to give any guarantees and the electricity boards similarly so. Instead of dealing with one centralised agency charged with negotiating on the government and electricity boards’ behalf, the company had to deal with NSHEB which had no real knowledge of what would be required of it, as well as being the middle-man between the SSEB and BACo. NSHEB’s statute meant it was unlikely to be an amenable partner in these arrangements. The problems inherent in such an arrangement are obvious. As successful as the completion of the negotiations on time was, had more time been taken and a more understanding approach to BACo’s concerns been given, then the problem of nuclear power cost escalation needn’t have
been as significant problem as it was turning out to be.

The change of government in 1974 signalled a change in policy towards discussions over the power escalation. Dell became the Paymaster General in the Labour Government and, as any agreement to cover the costs of the price escalation would have to go through the Treasury, this was deemed to be good sign for BACo. However, it wasn’t until August that the company was able to obtain a meeting with Dell where he agreed that his letter was significant, and not until January the following year that any decision was taken. During this period discussions were ongoing between the Treasury, Department of Energy, DTI, the Scottish Economic Planning Department, the Scottish Office and NSHEB about how best to deal with the situation. This resulted in a Treasury recommendation to the Secretary of State for Industry that the company be offered assistance on the basis that NSHEB should not pass on to BACo the cost of the company’s contracted share of any derating of Hunterston B, and the NSHEB be given guarantees by Government to make good on the deficit run up by the smelter. Further, the Treasury recommended that BACo be offered a Government loan to cover the company’s share of the increased capital cost of Hunterston B, also stating that those involved in negotiations should be prepared to concede to an extension of the current loan arrangements at 7 per cent. Willie Ross, reinstated as Secretary of State for Scotland in the Wilson Government, gave an undertaking to NSHEB that:

In present circumstances it is not possible to reach a firm view on the eventual outturn of the BACO smelter account. But to the extent that the eventual payments from the Smelter Company fall short of the costs of the NSHEB, the Government accept that the deficit should not fall on the Board’s other consumers, and will take an appropriate opportunity to seek statutory powers to make payments to the Board meeting the deficit.

This was only after the company had detailed the consequences of the price escalation without governmental help however, the upshot of which would be closure of the plant and a resultant effect on the balance of payments.

The DTI then made a decision in March to offer the company a loan of £7 million at an interest rate of 14.5 per cent, more than double the rate of interest for the original loan, and 4.5 per cent more than the Bank of England minimum lending rate at the time. However, the company
would be protected against further derating on the operating capacity of the delayed Hunterston B power station, but not further costs. The consequences of the new agreement were that the annual capital charge for Hunterston B rose from £2.1 million (in 1968) to £3.6 million per annum; resulting in an increase of 71 per cent of an element of the power price, which it was claimed in 1968 would be stable. As a result of Dell’s intervention, a payment of £113 million in 1976, approved by Parliament, was made to the NSHEB to cover the energy deficit in the Smelter Account, now subsequently known as the ‘Smelter Deficit Account’. In order for this to happen the government passed the Electricity (Financial provisions) (Scotland) Act of 1976. This was followed by a further payment of £57 million in March 1977. Dell was proving to be a good friend to the project, but the smelter was becoming increasingly expensive for all concerned, not least the government.

Hunterston B eventually became operational in 1976, two years after its projected start date. However, the much-heralded cheaper power that it was meant to bring failed to materialise. As the table 3 shows, the increases in power cost were considerable. From the agreed price of 0.263 p/KWH to a price of 0.503 p/KWH at the beginning of Hunterston B’s lifetime, and subsequent increases from then on, the price of nuclear power was nowhere near as competitive as it was meant to be. The agreed sum of £83,000 per tonne for nuclear fuel elements rose to £214,000 in 1976/7 and then to £287,000 in 1977/8, excluding reprocessing, as a result of the extended delays in completing the advanced gas-cooled reactor (AGR) nuclear power stations and the subsequent failure of demand to meet the supply. British Nuclear Fuels operated a two-part tariff system in order to ensure that its profit margins were not affected by a lowering of demand. As a result of the delay in completion of the AGR power stations, the cost of the fuel rose accordingly. SSEB had failed to build Hunterston B on time and NSHEB insisted on negotiating the discussions itself on behalf of SSEB. Thus, as a result of the delay, BACo refused to pay £24.5 million in running costs and a further £3.9 million in ongoing capital charges, but made provisions for them in the balance sheet. The company believed that the increases were not solely attributable to inflation, but were in fact a result of massive under-estimation of costs in the 1968 agreement on the part of the generating boards.
Table 3 Increases in annual running costs for power

<table>
<thead>
<tr>
<th>Year</th>
<th>£m.</th>
<th>p/KWH</th>
<th>Percentage increase over contract figure from 1968</th>
<th>Percentage increase over previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-7</td>
<td>4.2</td>
<td>0.241</td>
<td>198</td>
<td>40</td>
</tr>
<tr>
<td>1977-8</td>
<td>8.2</td>
<td>0.472</td>
<td>387</td>
<td>64</td>
</tr>
<tr>
<td>1978-9</td>
<td>10.9</td>
<td>0.627</td>
<td>514</td>
<td>26</td>
</tr>
<tr>
<td>1979-80</td>
<td>14.8</td>
<td>0.850</td>
<td>697</td>
<td>30</td>
</tr>
<tr>
<td>1980-1</td>
<td>16.4</td>
<td>0.936</td>
<td>767</td>
<td>9</td>
</tr>
<tr>
<td>1981-2</td>
<td>23.6</td>
<td>1.354</td>
<td>1110</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Utiger, Never trust, p.33.

Whilst the above may be true, it should also be noted that the company should never have agreed to enter into an agreement with open-ended escalation clauses and non-specific clauses relating to design changes. That, put simply, was writing the government a blank cheque. The contract relied, at least on BACo’s part, too much on good faith in the projections of UKAEA and SSEB, neither of who had any experience of constructing an AGR nuclear power station on time. Perhaps the most damning part of the story here is the price BACo was paying for its nuclear-based power in its last year of operation in 1981 (29mils/KWH) was almost five times the agreed price of 6.31mils/KWH in 1968.46

Closure

Excluding the problems with the energy deficit it was running, the smelter was profitably run for most of the late 1970s. According to a briefing for the Industrial Development Board, it was in fact the most efficiently run smelter in the country:

The smelter has given no major technical problems, and the delays in commissioning have been from causes largely outside the company’s control. The company is, in fact, regarded as the most efficient producer of aluminium in the UK. In 1973 average earnings per employee were £2050 per employee per annum and output per employee was almost £9000.47
Regarding Invergordon as the most well-run smelter in the country was faint praise. By 1973 the projects commissioned by the government during the previous decade were all running at a loss. The smelters at Anglesey and Lynemouth, operated by the RTZ consortium and Alcan respectively, were operating at annual losses of more than £4 million, with each company being accountable for approximately £0.5 million, and the CEGB and National Coal Board (NCB) exposed to the remaining £3.5m. The total gross trading profit for Invergordon from 1971 to 1975 (when the smelter finally reached its intended capacity of 100,000 tonnes), excluding the disputed power charges, was £4.65 million. From 1975 to 1981 when the plant closed its doors, the total trading profit was £14.482 million, a considerable improvement in operating performance. This was helped by a recovery of the price of aluminium when it rose from £371 per tonne in 1975 to £780 per tonne in 1980. This profit disappears when the power supply escalation cost is taken into account, since the company had been in dispute with the NSHEB over the power escalation costs since 1976, but it is an operating profit nonetheless showing that, given a competitive rate for power price, the smelter was capable of performing to expectation. The effect of the power costs on the profitability of the smelter can be seen in table 4.

<table>
<thead>
<tr>
<th>Year ending (March)</th>
<th>Trading profit</th>
<th>Disputed power charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976/77</td>
<td>4.224</td>
<td>1.8</td>
</tr>
<tr>
<td>1977/78</td>
<td>8.815</td>
<td>4.7</td>
</tr>
<tr>
<td>1978/79</td>
<td>7.724</td>
<td>6.1</td>
</tr>
<tr>
<td>1979/80</td>
<td>4.578</td>
<td>8.0</td>
</tr>
<tr>
<td>1980/81</td>
<td>0.577</td>
<td>8.7</td>
</tr>
<tr>
<td>1981/82</td>
<td>-19.131</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Source: Utiger, *Never trust*, appendix, table 1 & table 2B. Figures are before tax and interest.

It can be seen that it ran at a net profit until 1979 including the disputed power prices. It also shows that 1981 was the disaster period for the smelter, coming on the back of poor trading profit in the previous two years. Whilst the disputed power charges (which the company refused to pay) don’t, on first appearance, look to be of any great concern, when tax and interest is included they become more damaging. This combined
with a falling price in aluminium conspired to push the smelter’s operations into the red. From operating at trading profit from 1976 to 1981, the company posted losses of £19.131 million in 1981/82. This was a result of NSHEB posting escalated power prices for the smelter of 40 per cent more than in the previous year, which also included retrospective charges for the same year. The resulted in losses of almost £2 million per month for the smelter.50

The government, BACo, and the generating boards had all exhausted each other’s patience by the end of the project. The Conservatives were not interested in paying for what they viewed as a Labour error and BACo and NSHEB were threatening each other with legal action in an attempt to settle the Smelter Deficit Account. Closure of the smelter became the only real option when it was made clear that there would be no further intervention on the government’s part to keep it running. The final cost however amounted to considerably more than that originally envisaged by the Labour government in 1967.

<table>
<thead>
<tr>
<th>Table 5 Final cost of closure of the Invergordon Aluminium Smelter</th>
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<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>Grant 1969</td>
</tr>
<tr>
<td>Loans 1971-81 (net of interests and repayments)</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>1977</td>
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<tr>
<td>1979</td>
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<tr>
<td>1980</td>
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<tr>
<td>1981</td>
</tr>
<tr>
<td>Electricity capital addition 1976</td>
</tr>
<tr>
<td>Regional employment premium</td>
</tr>
<tr>
<td>Recycling costs 1981</td>
</tr>
<tr>
<td>Payment to BACo 1981</td>
</tr>
<tr>
<td>Value of NSHEB surplus supply</td>
</tr>
<tr>
<td>Grand total</td>
</tr>
</tbody>
</table>


Note: the figures are estimates as they are compiled from BA’s accounts and NSHEB’s accounts, as well as governmental accounts. There has been no official release of the actual financial cost of the smelter project.

Table 5 shoes the overall cost of the project and the estimated figures for
the closure of the Invergordon smelter (in 1981 prices). The government’s initial estimate of a £37 million outlay proved to be somewhat short of the actual outcome. The final cost of the smelter project, at £381.1 million, was the result of various governments throwing good money after bad, and paying large chunks of the deficit off instead of amending the contract to give the smelter the chance of survival. The Invergordon aluminium smelter closed its doors for the final time on 31 December, 1981.

Conclusion
The governmental archives chart the expansion of aluminium smelting in Scotland reveal not just details of the relationship between BACo and government, but much about BACo itself. The company made some serious errors of judgement and failed to recognise the strength of its bargaining position. In not insisting on the fair clause being an official part of the contract BACo effectively signed its own death warrant. The government was clearly desperate to get the smelter up and running, and to contribute to the balance of payments and said as much itself. Thus, BACo’s position was stronger than it thought. The archival material at no point reveals any kind of brinksmanship by BACo during the negotiations: the company never threatened to withdraw from discussions at any juncture, signalling it perhaps wasn’t serious about the fair clause. Had it done so, it is entirely conceivable that the contract would have taken a quite different form. Instead, BACo was relatively submissive and ended up ultimately responsible for the delays in the construction of the Hunterston AGR station. The increases in the power price coupled with the drop in the world price for aluminium led to the company incurring unsustainable monthly losses on the smelter. The experience fatally weakened BACo to the extent that the British multinational was taken over by its rival Alcan shortly after Invergordon smelter’s closure.

From an industry operating at over 95 per cent capacity quite comfortably, to one dogged by problems of power supply, deficits, fighting between business and government and threats of litigation, aluminium smelting in Scotland changed massively in the period between 1968 and 1982. The promise of cheap electricity from nuclear power never materialised, and the dream of a bright new technological dawn in the Scottish industrial structure faded almost as quickly as it appeared. The result? Over £380 million spent on a white elephant that brought unemployment levels of 20 per cent to a region, resulted in second generation unemployment, and caused the demise of a previously
successful British multinational company. More generally, it informed
government decision-making in respect of business in Scotland and the
UK: financial inducements, in the form of soft loans and grants, were not
an effective tool for developing and diversifying the industrial base.
Enterprise became the order of the day and the aluminium smelting
business in Scotland went back to its original form: small-scale production
and high efficiency.

1 A. Perchard, *Aluminiumville: metal, the British Government and the Scottish Highlands*
(Carnegie, Forthcoming).
4 Cailluet, ‘The BACo industry’, p.89.
p.154.
6 Memorandum, author unknown, Regional Development Division, Scottish Development
Department, 18 December 1967, National Archive of Scotland (NAS) NAS SEP4/177.
8 R. Coopey, ‘Industrial policy in the white heat of the technological revolution’ in, R. Coopey,
9 Dell, *Political responsibility*, p.103.
10 Analysis of BACO Company Smelter by S.D. Wilks (Board of Trade), 6 December 1967, The
National Archives, Kew (TNA) TNA PRO BT258/2659.
11 R. Utiger, *Never trust an expert: nuclear power, government and the tragedy of the
Invergordon aluminium smelter*, (Business History Unit, LSE, Occasional Business Paper,
no.1), pp.4-5.
12 Letter from D.A. Pin to P.J. Elton, January 1969, BACo Company Records (British Alcan),
University of Glasgow Business Records Archives, UGD 347/10/3/1.
13 Note by the Board of Trade for Chancellor’s visit to Invergordon, 27 June 1969, TNA PRO
BT321/40.
14 Note from R.E. Utiger (Managing Director of BACo) to Department of Trade and Industry,
25 June 1973, TNA PRO FV54/56.
15 From a Memorandum left by BACO for the Minister of State for the Board of Trade Edmund
Dell (no date) attached to a letter from J.B. Beaumont (SDD) to K.R. Vernon (NSHEB), 31
January 1973, NAS SEP14/1473.
17 Dell, *Political responsibility*, p.106.
19 G. McCrone, ‘The role of government’ in R. Saville (ed), *The economic development of
20 Letter from T.R.H. Godden to A.G. Manzie (Scottish Economic Planning Dept.) detailing a
meeting between BACO and representatives of Industrial Development Board concerning
possible expansion to Invergordon, 12 January 1977 NAS SEP4/4053.
21 Letter from NSHEB (author unknown) to Gordon Campbell MP, Secretary of State for
Scotland, 19 April 1973, TNA PRO T319/2090.
Background Note ‘Aluminium Smelters’ by Miss M.M. Deyers (HM Treasury), 27 June 1973, TNA PRO T319/2431.

Lack of transparency in smelter power contracts was a feature of many aluminium smelters in Europe during the period. For more information on this, see OECD, Aluminium industry, pp 88-91.


Ibid.

From letter from Dell (Minister of State, Board of Trade), to Sir William Strath (BACo), 23 July 1968, NAS SEP14/1473.


HC Deb, 20 November 1968, vol.773, col.1455. Ridley later served in Thatcher’s government and was a staunch advocate of monetarist policies and the insistence on pursuing a market economy - one of the reasons given for Invergordon’s eventual closure.

For the full text of the Parliamentary discussions with each concern raised by individual MP’s see the Commons debate on ‘Aluminium Smelters’, HC Deb, 20 November 1968, vol.773.

A. Scott, and M. Cuthbert, Reviewing industrial aid programmes: (I) the Invergordon smelter case, p.21.

Ibid.

Utiger, Never trust, p.20.


Utiger, Never trust, p.25.

Letter from Dell (Minister of State, Board of Trade) to Sir William Strath (BACo), 23 July 1968, NAS SEP14/1473.

From a letter from A.M. Cochran (for Chief Engineer of NSHEB) to H.F.G. Kelly (Scottish Development Dept) re Supplies to BACo, Invergordon, 19 March 1973 NAS Ref. SEP14/1868.

Treasury Recommendation regarding Invergordon Smelter to the Secretary of State for Industry by D.J. Gerhard, 12 December 1974, TNA PRO FV54/60.

Note by Department of Energy Officials (Electricity Division) concerning Aluminium Smelter Contracts, 27 January 1975, TNA PRO TS49/220.


Internal Audit Report - June 1979. Audit of Payments to Aluminium Smelter Companies by PA Merker (Chief Internal Auditor), TNA PRO TS49/220.


Utiger, Never trust, p.57.

OECD, Aluminium industry, p.37.


Utiger, Never trust, table 1, p.38. Figures are before tax and interest.

Ibid.
TRADE JOURNALS AS PRIMARY SOURCES: 
CONSTRUCTING HISTORIES AND 
DECONSTRUCTING KNOWLEDGE

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Introduction
This article discusses how trade and industry journals can offer a rich source of primary material to reconstruct (or deconstruct) business history. A variety of primary materials can be discovered in such journals such as first-hand industry or firm news and events, debates involving contemporary issues, problems, etc., new product announcements through ‘infomercials’ and advertisements, and technical information and educational material aimed at industry practitioners. Using examples of trade journals from two different industrial sectors, the wire industry and the milling trade, I argue that such journals can assist the historian in establishing chronologies and reconstructing contemporary events. They further help to deconstruct the mechanisms by which knowledge and information circulates within industries and between business groups (merchants, entrepreneurs, etc.).

The richness of the material can be amply demonstrated by illustrating its variety and showing how this diverse material could be used by a historian. I have chosen to illustrate this by discussing how I used material from two journals, the Ironmonger and Metal Trades Advertiser (hereafter Ironmonger) and the Miller, to develop detailed case histories of the British metal wire industry and the wheat markets of the nineteenth century respectively.¹ Rather than a broad survey of various trade journals, I will use a case study approach to show how I developed detailed case histories of two industries using the two trade journals to supplement other primary archival sources.

The journal, Ironmonger, was started in 1859, and was published from London. The journal, Miller, was started in 1875 by William Dunham, and was also published from London. It was similar to another journal for this industry by G.J.S Broomhall called Milling in 1891. The journals served as a forum to exchange information, knowledge, opinions, and developments that directly affected the respective industries. In it one would find
information about new developments, technological changes, newer manufacturing methods, innovations, etc. They also included trade related information, such as trade statistics, sources of materials (foreign and domestic), price lists and freight costs, selling methods and trade structure, and competition news. The editorial, technical, commercial and correspondence content was supplemented by a growing amount of advertising for industrial products. The British Library maintains holdings of both journals in its newspapers and periodicals collections.

The two case studies of the wire industry and the wheat trade dealt with different contexts but involved similar issues. The case of the metal wire industry explores how different business groups (producers and buyers of wire and wire products) negotiated and developed strategies to establish uniform wire sizes c1880. This involved understanding the competitive environment within the British wire industry and why different producers and buyers of wire preferred radically different sets of wire sizes. In other words, understanding the different negotiating positions was central to the case analysis. The case hinged upon reconstructing the debates between the individual firms or personalities involved and the various arguments they advanced to justify or solidify their negotiating positions.

On the other hand, the case of the British wheat markets explores how the industry established different quality grades for the numerous varieties of wheat that were imported into Britain. The case investigates how different business groups (producers, merchants, buyers) defined and measured quality in different ways, and the manner in which such practices differed. The case hinged upon establishing how important ‘facts’ about wheat quality ‘travelled’ within and between the various groups, such as wheat merchants and millers (one of the largest buyers of wheat in Britain).

The rest of the article is organised as follows. The following sections contain a discussion of the source materials and how they helped me to reconstruct some of the arguments I developed in the detailed case studies. The first part of the discussion shows how I depended upon the Ironmonger to establish chronologies and determine the historical debate the various business groups in the wire industry were involved in. The second part of the discussion shows how the Miller proved to be invaluable in reconstructing how knowledge and information circulated between business groups within the wheat trade. The final section offers some concluding remarks.
Trade journals and constructing histories
One of the issues I faced while studying the wire industry was reconstructing the historical events between 1878 and 1882 at a time when large manufacturers, small and medium scale producers, buyers of wire products, engineers and experts, etc. combined into various groups and negotiated with each other to agree on a uniform wire gauge. The other problem I faced was to establish the competitive environment and the general state of the industry in which these events were occurring. The third issue I needed to address was to deconstruct the nature and sources of the transactional issues that the industry was facing. Establishing the three types of historical facts was crucial to the arguments and claims I was making in the case study. Various primary sources that I accessed included the archives of associations such as the Chambers of Commerce (e.g. Association of Chambers of Commerce, Birmingham Chambers of Commerce), those of the Standards Department of the Board of Trade, and those of the Society of Telegraph Engineers. Surviving records of wire manufacturers, such as those of Nettlefolds in Birmingham, did not contain information that was relevant to my case. The Ironmonger became an important resource, along with these other primary sources, to help me establish the historical facts.

For instance, the editorials appearing in the Ironmonger were essential in establishing how the lines were drawn between the relevant groups involved in the standardisation debate. An article appearing in 1880 claimed that:

On scarcely any other subject does there exist anything like the same diversity of opinions and facts as in connection with the so-called Birmingham wire gauge, which is of great importance, seeing that it nominally governs an immense variety of transactions in almost all kinds of manufactured metals…There are many claimants for the honour of being ‘the only true and original gauge’…and each has friends that boasts that it, and it only, is the genuine and real article.\(^2\)

Another editorial titled ‘The Wire Gauges’ from 1880 reported:

It appears extraordinary…that scarcely any two wire or sheet-metal rollers are agreed as to the exact dimensions of any specified gauge, consequently purchasers are so completely at the mercy of the manufacturers that they are driven to all kinds of expedients in order to protect themselves, which they do not always succeed in doing.\(^3\)
These extracts show that the editorial reports were important in trying to piece together the nature of the issue to which standardising wire sizes was being proposed by various groups as a business solution.

The editorials were also crucial in providing ‘fly-on-the-wall-accounts’ of the various meetings that took place between the industry groups. For example, one article appearing in 1882 reported the following discussion that took place at a closed session of the meeting between different wire manufacturers and buyers of wire products.

A meeting of wire and metal mfg. was held at the Queens Hotel, Birmingham on Thursday the 16th to consider the advisability and possibility of a uniform gauge of sizes for wire and metals. The circular convening the meeting – which bore the signatures of the following firms viz; Edelsten, Williams & Co., R. Johnson & Nephew, Nettlefolds (Ltd), and Whitecross Iron & Co. (Ltd) – set forth that it was of great importance at this juncture that the trades in question should decide upon the course of action to be followed in this matter, and should take steps to bring their views and decisions officially before the Board of Trade without delay. Mr. Wilfred Williams (of Edelsten, Williams & Co.) presided, and there was good representative meeting of the wire manufacturers, not only of Birmingham but of Shropshire and Lancashire. Mr. Haydon attended on part of the Birmingham Chamber of Commerce and, Mr. Harding [a pin manufacturer from Leeds] whose gauge has been adopted by the Birmingham Chamber of Commerce, was also present by invitation. The proceedings were private, but it is understood, that although a majority in number of those present expressed themselves in favour of the gauge recommended by the Birmingham Chamber of Commerce, nearly all the leading makers – representing in the iron-wire branch from 70 to 80% of the production of the country- were opposed to it, on the ground chiefly that it is admitted to be a compromise and theoretically imperfect, and that it is not worthwhile to incur the great expense and inconvenience which such a change of gauge implies, unless the change were likely to be definitive and generally acceptable. Various objections to Mr. Harding’s gauge were pointed out, and it was ultimately decided to adjourn the further discussion of the matter to a day to be named. The
Warrington firms hold that the adoption of Mr. Hardings gauge would inflict great loss and inconvenience, not only on themselves, but on their customers; and as the Associated Chambers of Commerce will be asked at their meeting in London next month to pass a resolution in favour of petitioning the Board of Trade adopt and legalise this gauge as the standard gauge of the country, the trade have not much time to lose if they wish to protect themselves against what many of them consider a costly and questionable reform.4

This particular report proved invaluable as a primary account, as the only other reference to this meeting I came across was in Stones (1977). I was unable to locate or use the archives that Stones had access to.5 Using only the secondary source, it was not possible to satisfactorily piece together the extent to which the business firms and individuals involved in the standardisation story disagreed with each other.

Yet another report of the annual meeting of the Associated Chambers of Commerce proved to be equally illuminating:

Little progress has been made in the way of arriving at a settlement of this vexed question. The old differences of opinion dropped up afresh, and the champions of rival districts once more put forward their respective claims….The Birmingham proposition was supported by the districts chiefly devoted to the making of fine wire, and opposed by the thick wire interests…The question is one in which Mr. Chamberlain [President of the Board of Trade] himself may possibly take a personal interest, and, as he is practically acquainted with the whole subject [Chamberlain was an MP from one of the wire manufacturing districts], we may be reasonably certain that the issue will not be found opposed of the practical requirements of the leading branches of the trade.5

These reports, and other similar ones from the journal, provided vital evidence for the case study, and the journal in fact served as an alternative primary source where business archives were unavailable.

Similarly, news articles about the state of the industry shed light on the highly competitive and dynamic nature of the industry during this period. For example, a ‘provincial trade reports’ from 1880 give us a glimpse of the highly fluid nature of the industry.
The American demand for wire and the backwardness of the Westphalian wire-drawing firms in reference to their engagements, are important factors in influencing the trade in English Wire. I am told that the freezing of the canals and waterways in Germany has contributed greatly to retard deliveries of Westphalian wire this winter… The imputations of Westphalian wire are gradually diminishing, but if the present upward tendency of English wire continues, the foreign wire trade may be expected to revive.7

A couple of months later, the *Ironmonger* had this to report:

Wire drawers were fortunate in the autumn of last year in obtaining a considerable and general reduction of wages, without which they must inevitably have closed their mills on account of the severity of Westphalia competition, and their work people have had the sense to perceive that the time has not yet come for raising the scale, seeing that the foreign trade in wire is still virtually monopolised by the Belgians and German and the question is practically one of wages. Prices [are] rapidly rising in Germany under cover of protective tariff [and] there would be a fair chance for English makers to recover their lost supremacy in foreign & colonial markets. 8

In the following year, the journal was able to report the increasing competition from Germany, and its effect on the UK producers:

The depression of the wire trade becomes more marked from day to day… Yet the demand for wire [was] probably never so great as at the present day. The English manufacturers cannot meet the prices. German wire is both good quality & cheap.9

By 1883, the journal was able to report that:

The iron-wire trade is in a rather languid state….stocks are reported heavy and prices weak, consequent upon revival of Westphalian competition.10

These reports and news articles, although secondary in the sense that they did not always include primary data but rather its synthesis or were based on ‘opinions’ and general observations, were nevertheless invaluable in piecing together a picture of an industry for which there is very little published literature around this period.11
Letters published in the journal are a treasure trove of information concerning the opinions of various individuals on several subjects. I discovered a series of letters from rival business groups who used this forum to debate the various issues involved in establishing a uniform set of wire sizes. They reveal how various groups considered their own set of sizes as ideal for the rest of the industry to adopt as standards and enable us to reconstruct their reasons for saying so. The irreconcilable differences thus could be assigned rational and objective reasons and the path-dependency driving the standardisation process could be established.

For example, a wire maker from Birmingham, vehemently opposed the adoption of one of the proposed standards by protesting as follows:

Because the major quantity is supposed to be drawn in Warrington all the others must submit to the Warrington wire Gauge. Do we not see in the fact of the minority using the Birmingham Wire Gauge (BWG) and not the Warrington, that iron wire can be drawn to the BWG and if it can in Birmingham, Yorkshire, Wales, etc, why not in Warrington.12

Another letter by, Thomas Hughes (a wire gauge maker and author of pamphlets on the subject of wire gauges) wrote to the journal explaining exactly how the switch from an existing gauge to the new proposed gauge would affect production costs, by giving details of switch-over costs.13

The letter by Claude Morris (one of the dominant wire manufacturers in the UK and the president of the Iron and Steel Wire Manufacturers Association) published in this journal sums up the rivalry between the industry groups:

We have, therefore, this rather curious and interesting spectacle. On the one hand, a large & important trade petitioning the Board of Trade against a proposed legislation, and on the other hand, the delegates to the meeting of the ACC from some of the districts which are the seats of the said trade, delegates who are supposed to be representing the trade, …actually endeavouring to force the government to establish as legal the sizes which the trade say will be ruin to them.14

Such letters were indispensable as there are few other archival records that enable us to establish the relative negotiation positions of the individuals and firms with this level of detail. Given the absence of relevant corporate archives, such letters are the next best primary sources available.
Finally, a series of technical articles published in the journal also served as an indispensable source to establish important historical facts. These articles detailed the technology involved in the manufacturing process, the interrelatedness between the manufacturing process, labour and the wire gauges, and thus enabled to determine the likely sources of switch-over costs involved in adopting a new and uniform wire gauge. They served to underscore why there was a problem with wire sizes in the first place, and why it was so intractable in the second. These articles were no doubt informative to the trade at large, in addition to being of immense value to the historian. They differ from textbook accounts of the manufacturing process by describing the actual practices and not just the prescribed or recommended ones. Here is an extract from one of the articles describing the manufacturing process:

[If] No. 5 iron wire [is required] the drawer takes No. 1 annealed rod, reduces it, first hole to No. 3, second hole to No. 4, and third hole to No. 5 Here are three draws. Were the wire annealed each draw the reduction to No. 5 could be accomplished in two draws, but it would not be ‘finished’ wire fit for the market, and the cost of repeated annealings would ruin the manufacturer. [The wire drawer can] take 6 feet of No. 22 soft brass wire, fasten one end to a post and pull at the other, it will stretch to 8 feet long before breaking, and [become] No. 24. If we take 6 feet of No. 22 soft copper wire it will stretch to 7 feet only, and [become] No. 22¾. Iron wire weavers first fasten both ends of the string of wire and pull at the middle and stretch it considerably. The wire-drawer knows these points, and that if he gets near to the limits of cohesion, he either ‘sucks’ or breaks the wire. He has to avoid both. The wire gauge is his guide – hence the wire gauge is to him scientific, if science means ‘knowledge’ i.e. ‘truth ascertained’.16

A more vivid example of how articles in trade journals contributed to improving information and knowledge within an industry is presented below in the context of the case of the Miller. Nevertheless, the foregoing extracts from the Ironmonger demonstrate unequivocally how the materials from this journal were indispensable, in conjunction with other archival material, in reconstructing the dynamics of the industry, more generally, and the facts surrounding the standardisation debate, more specifically.
Trade journals and understanding knowledge transfer

In the case of the British wheat markets, the issue I grappled with was to show how the different groups within these markets were using different ways to measure the commodity’s quality, even though they began to use the same terminology that was used to develop the different wheat grades by the trade. I needed to show how knowledge of newer techniques, methods, processes relevant to milling and flour-making spread amongst millers as a major technological shift in this industry occurred after c1875. I also needed to show how knowledge about wheat itself (information about sources, varieties, availability, grain chemistry, etc.) circulated within the market, particularly amongst the largest groups of wheat buyers, i.e. the millers. Although an excellent and extensive secondary literature on the milling industry exists, I needed the primary sources to be able to reconstruct what individual millers were ‘actually saying to each other’.

In this regard, two elements from the journal *Miller* proved to be invaluable sources. Through the letters exchanged between correspondents, I could reconstruct the issues they were discussing, to what extent they agreed or disagreed with each other, how they would exchange information and share knowledge, etc. Through the technical reports that were published in the journal, I was able to ascertain the nature of information that was available to the millers: new methods, equipment, results of chemical tests and experiments, grading methods, production statistics, etc.

The following series of letters illustrate the nature of issues that millers discussed, the knowledge that was shared, and problems that this industry faced to convert a trade into a profession. We begin with a letter that appeared in the February 1880 issue of the *Miller*. This letter (no. 669) was by a miller who invited comment on whether the following mixture of wheat varieties ought to ‘make a good sack of flour: 3 sacks red winter, 2 sacks Michigan, 2 sacks No. 2 spring, 5 sacks English white.’ The miller mixed the different wheat types in the proportion he stated, however, this mixture did not ‘give entire satisfaction’. 17

Over the next couple of months this letter received several comments. One reply stated that ‘the proportion of English wheat is too high in the mixture’ and recommended the following mixture of wheat types as an alternative: ‘3 sacks of red winter, 2 sacks no. 2 spring, 3 sacks Michigan, 2 sacks [English] white’. 18 In contrast, another reply to the original letter (no. 669) recommended two alternative mixtures altogether: ‘3 sacks red winter, 2 sacks Michigan, 3 sacks no. 2 spring’ or alternatively, ‘1 sack red winter, 1 sack no. 2 spring, 1 sack English white’. 19 This correspondent did not
consider ‘English white’ to be of good quality as it ‘robs the flour of its elasticity’. By adding an excess of white wheat to the mixture ‘the colour is not improved, but diminished.’ A third reply, along the same lines as the second suggested leaving the ‘English white’ out altogether and ‘grind the remaining mixture separately, then let the meal sit in the back for a few days before mixing to dress’. A fourth reply suggested that if the author of the letter no. 669 was ‘a country miller then 6 parts each of no. 1 American spring and ‘sound’ new English white wheat, mixed well in a bin a week before grinding’ would be appropriate. A fifth reply recommended a mixture with very different wheat varieties: ‘1 sack Dantzig wheat, 3 sacks American white, 4 sacks English white (part new and part old), 3 sacks Winter American, 1 sack spring American.’

The varied responses that the original letter no. 669 generated give a fascinating glimpse into how the millers thought about the quality of different wheat varieties, how the quality of wheat affected the quality of flour, the level of knowledge and understanding about mixing different varieties of wheat, and what the different ‘grades’ of wheat meant to the miller, i.e. ranking versus identifying uses of the different wheat grades. This letter series illustrates the state of knowledge about milling, about understanding the nature of wheat and its chemistry and the extent to which the millers were sharing it. The pages of the journal abound with many such examples.

Another wonderful example is this pair of letters from April and May 1878 on the economics of milling techniques prompted by rapid technological changes occurring in the milling industry (the transition from grinding to roller milling). The first letter describes an ‘ideal’ milling process based upon long experiments ‘for making the best and greatest quantity of flour from a given quantity of wheat’. For a given mixture of wheat types and a given cost of milling this miller describes how ‘several grades of flour could be made for a given net margin. A reply to this letter (6 May 1878) describes how using a different configuration of machinery, the same mix of wheat varieties could provide a different combination of flour grades that virtually doubles the net margin. The fascinating aspect about this exchange is that it provides the details of mixtures, the resultant diversity of flour, the detailed cost breakdown, and the price assumptions that were made to calculate the margins. It enables the historian to ascertain the assumptions and detailed knowledge that the millers were using, at the time, to debate the efficacy of milling technology.
In addition to conversations between millers, the journal contents enable us to establish how the millers were able to access information and knowledge concerning various aspects that affected their profession. Reports regarding chemical experiments on different grain varieties, field experiments showing seasonal influences on the wheat crop, storage and handling methods, economics of making different types of bread, and regular tables of quoted prices for all the numerous types of wheat available in British ports, are examples of the depth and breadth of knowledge that this journal was circulating.

For instance, some of the early issues of the journal include a series of expert articles that detailed the impact of seasonal changes on the crop yield.25 A ‘Technical Issue’ of the journal discussed the chemical composition of different varieties of wheat and showed how ‘the value to the miller of a certain variety of wheat [depended] upon the quantity of fine flour it will yield, and next to quantity, the colour and quality of the flour determines its commercial value. Usually, the smoother and thinner the skin and the more transparent the grain the more fine flour it is likely to produce’.26 Another article showed how the density of the grain affected it flour making capability and how it was notoriously difficult to maintain consistent density in the field.27

On more commercial matters, the journal contains articles about the methods of storage, handing and selling of wheat. A report on the ‘wheat handling in America’ discussed at some length the structure of the wheat trade in the US and manner in which wheat is stored in silos, how it is graded, who measures it, etc. The report informed the readers that:

At every station on the railroads, or landing places on the navigable rivers, are located the wheat buyers, besides others who are at a distance from any means of steam communication…Each wheat buyer has his elevator, usually so situated that he can load directly either into the railroad cars or grain barges, without any cartage. The farmers sell the wheat to the buyer, by whom it is weighed and paid for…when the wheat is unloaded from the farmers wagon it is graded by the buyer, that is the latter forms his own judgement as to the quality, and shoots it down in bulk accordingly, putting together all he considers No. 1 in one place and No. 2 in another. When he has accumulated a sufficient quantity of any one quality to ship, usually one of more car-loads of about 10 tons each, he loads in bulk, and
forwards it to his commission merchant at one of the large primary wheat markets such as Milwaukee or Chicago.\(^{28}\)

A report on Mark Lane (an important terminal wheat market in London) described how wheat was sold by samples and the role that jobbers, brokers, factors, etc. played in this market:

The business is principally done by standholders called factors and [those without stands] called brokers; the great advantage of a standholder being that he is enabled [sic] to show a large sample of his wares, [whereas] the broker has to carry his in his pocket.\(^{29}\)

Reports also discussed measurement problems that the millers needed to be aware of when purchasing wheat:

A sample of corn was taken and the true weight of a standard bushel of it was ascertained to be 57lbs 2oz. [When] the ordinary flat strike was used [to level the corn up to the rim of the measuring vessel] the corn weighed 57lbs 3oz, while using the ordinary round strike or roller [was] employed, the quantity of corn increased to 57lbs 9oz. If the same measure be shaken when struck with a round ruler the weight rises to 62lbs 15oz.\(^{30}\)

The astonishing range contained in this journal gives us a flavour of the depth and breadth of information available to the miller. Product announcements (e.g. the advertisement for Baxter’s new automatic weighing and measuring machine), price lists, news about legislation, parliamentary debates, discussions at annual meetings of the National Association of British & Irish Millers, how to conduct forward sales of flour to hedge risks, and so on paint a picture of an industry exploding with new knowledge and information.

But it not only the nature and type of information available in this journal that makes it such a rich source of understanding the knowledge base within this milling profession. It is the fact that the journal makes it possible to determine how this information was used by entrepreneurs and business units and how valuable this information and knowledge (techniques, methods, sources) was to them that makes this such a rich source of primary material. It also enables us to place the institutional role of such journals in the context of the overall knowledge transfer process.\(^{31}\)

**Concluding remarks**

This article has shown how trade journals could be used as primary
sources. They assist the historian to reconstruct historical events, debates and chronologies. They also help the historian deconstruct historical processes, such as knowledge transfer, by providing rich evidence of the information that individuals use to construct knowledge and the manner in which it circulates between them. The article has also shown how in the absence of other archival sources, the trade journal could be an important, and sometimes the only, primary source available. Journals can undoubtedly complement other primary sources either by providing in missing details, confirming or cross checking evidence from other sources, or even providing pointers to other sources of data or evidence, for example, sources of trade statistics.

However, the historian needs to use this source with some caution. Not all the information contained here is first hand and therefore not primary in that sense. Just like other printed media, very often what is reported is the reporter’s observations or opinions. Nevertheless, such reports can become ‘fly-on-the-wall’ accounts and very often are our only source of information on some events. But, a variety of other material within the journals, such as technical reports, letters, statistics, advertisements, and so on, provide the historian with a plethora of evidence from diverse sources in a conveniently packaged form.

2 Broomhall had started another publication covering the corn trade called the Liverpool Corn Trade News (1888).
3 Ironmonger, 14 February 1880, p.209.
4 Ironmonger, 27 November 1880, p.621.
6 F. Stones, The British ferrous wire industry, (Sheffield, 1977). Stones had access to association minutes, industry statistics, private records and correspondence files from individual companies, which ‘could not be accessible to the readers of [his] book’ (p. v, Foreword). In any case, his records seem to date mostly from the period after May 1882 i.e. after this meeting in February 1882.
7 Ironmonger, 24 February 1883, p.245
8 Ironmonger, 21 February 1880, p.259.
9 Ironmonger, 10 April 1880, p.494.
10 Ironmonger, 9 April 1881, p.510.
11 Ironmonger, 6 January 1883, p.24.
12 Velkar, ‘Wire industry’, p.223.
14 Letter by T. Hughes, Ironmonger, 25 March 1882; see also, Velkar, ‘Wire industry’, Table 5.
15 Ironmonger, 24 February 1883, p.249.
16 J. Bucknall Smith, *Wire, its manufacture and uses*, (London and New York, 1891) is an example of such a textbook.
17 Ironmonger, 26 February 1881, p.261.
18 Miller, 2 February 1880, p.922.
19 Miller, 1 March 1880, p.45.
21 Ibid., p.46.
22 Ibid.
23 Miller, 5 April 1880, p.119.
24 Miller, 1 April 1878.
25 Miller, 6 May 1878.
26 Miller, 1 March 1880, p.109, ‘Chemistry of breadmaking, part III – Lectures by Professor Graham’.
27 Miller, 5 May 1879, p.193.
28 Miller, 3 November 1879, p.682.
29 Miller, 5 April 1880, p.99.
30 Miller, 7 February 1876.
31 Miller, 3 February 1879, ‘Secrets of the bushel measure’.
ERRATA:
BUSINESS ARCHIVES. SOURCES AND HISTORY,
NUMBER 96, NOVEMBER 2008

There are three corrections and clarifications relating to Drew Keeling’s article on the voyage abstracts of the Cunard Line which appeared in last year’s issue.

1) On page 22 the sentence starting in the third line should read ‘The fares did not decline over the period as a whole, even though passenger volumes rose…’ and not ‘The fares did not decline over the period as a whole, even though passenger volumes did…’

2) Due to a misalignment of figures, the 1898 Q1 data for Westbound quarterly derived fares (Appendix 1, p.26) was misleading. The table should read:

<table>
<thead>
<tr>
<th>Derived fares, £</th>
<th>WESTBOUND</th>
<th>EASTBOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Liverpool -&gt; New York</td>
<td>New York -&gt; Liverpool</td>
</tr>
<tr>
<td>Travel class</td>
<td>Travel class</td>
<td>Travel class</td>
</tr>
<tr>
<td>Year</td>
<td>Quarter</td>
<td>First</td>
</tr>
<tr>
<td>1889</td>
<td>I</td>
<td>17.7</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>24.4</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>23.7</td>
</tr>
</tbody>
</table>

3) In Appendix 2, pp.29-33, the running heading ‘Equivalent passengers’ refers to ‘Adult equivalent passengers’ as indicated in the title.
The division into classes follows the Standard Industrial Classification main groups, followed by a general section. Place of publication is London and year of publication 2008 unless otherwise shown.

**Agriculture, forestry and fishing (SIC 01-09)**


Dodds, B. and Britnell, R., eds., *Agriculture and rural society after the Black Death: common themes and regional variations*. Hatfield: University of Hertfordshire Press.


**Mining (SIC 10-14)**

Brown, I. J., *Madeley Wood Colliery: Halesfield and Kemerton Pits: from*


**Construction (SIC 15-17)**


McDonald, F. and Sheridan, K., *The builders: how a small group of property developers fuelled the building boom and transformed Ireland*. Dublin: Penguin Ireland.


**Manufacturing (SIC 20-39)**


Ashworth, H., ‘Russell’s Tannery, Hitchin, Hertfordshire’, *Hertfordshire
Archaeology and History, 15, pp. 155-60.
Echard, S., Printing the Middle Ages. Philadelphia: University of Pennsylvania Press.


**Transportation, communications, electric, gas, and sanitary services**

(SIC 40-49)


Fitzwalter, R., *The dream that died: the rise and fall of ITV*. Leicester: Matador.


Rippon, S., ‘Coastal trade in Roman Britain: the investigation of Crandon Bridge, Somerset, a Romano-British trans-shipment port beside the Severn estuary’, *Britannia*, 39, pp. 85-144.


**Wholesale and retail trade (SIC 50-59)**

Church, R., ‘Salesmen and the transformation of selling in Britain and the US in the nineteenth and early twentieth centuries’, *Economic History Review*, 61, pp. 695-725.


Rössner, P. R., *Scottish trade in the wake of the Union, 1700-60: the rise of a warehouse economy*. Stuttgart: Franz Steiner.


**Finance, insurance, and real estate (SIC 60-69)**


Carlos, A., Maguire, K. and Neal, L., “‘A knavish people”: London Jewry and the stock market during the South Sea Bubble’, *Business History*, 50, pp. 728-748.


Scott, P., ‘Marketing mass home ownership and the creation of the modern working-class consumer in inter-war Britain’, *Business History*, 50, pp. 4-25.


Services (SIC 70-89)
Lucey, C., “‘In very good business”: Andrew Callnan’s house-decorating


Miller, D. and Dinan, W., *A century of spin: how public relations became the cutting edge of corporate power*. Pluto.


O’Regan, P., “‘Elevating the profession’: the Institute of Chartered Accountants in Ireland and the implementation of social closure strategies 1888-1909”, *Accounting, Business and Financial History*, 18, pp. 35-59.


Starkey, P., “‘Temporary relief for specially recommended or selected deserving persons”: the mission of the House of Charity, Soho, 1846-1914’, *Urban History*, 35, pp. 96-115.


Tomkins, A., “‘The excellent example of the working class”: medical welfare, contributory funding and the North Staffordshire Infirmary from 1815’, *Social History of Medicine*, 21, pp. 13-30.

General


Lamb, H., *Fighting the banana wars and other fair trade battles: how we took on the corporate giants to change the world*. Rider.


Roth, R. and Dinhobi, G., eds., *Across the borders: financing the world’s railways in the nineteenth and twentieth centuries*. Aldershot: Ashgate.


BUSINESS RECORDS DEPOSITED IN 2008

MIKE ANSON

Compiled from information supplied by the National Archives, Kew.

Advertising, printing and publishing

Bath and North East Somerset Record Office, Guildhall, High Street, Bath, BA1 5AW: Bath Chronicle Ltd, newspaper publishers: minutes and accounts incl records of predecessor companies 20th cent (Acc 764)

Bristol University Information Services: Special Collections, Arts and Social Sciences Library, University of Bristol, Tyndall Avenue, Bristol, BS8 ITJ: Penguin Books Ltd, publishers: additional books and papers (DM2129, DM2141)

Cambridge University Library, Department of Manuscripts and University Archives, West Road, Cambridge, CB3 9DR: Harley Books, publishers, Cambridge: records c1980-2008 (MS Add. 9804)

Cambridgeshire Archives, RES 1009, Shire Hall, Cambridge, CB3 0AP: Cambridge Bookbinding Co: records 1939-1987 (R108/006)

Dudley Archives and Local History Service, Mount Pleasant Street, Coseley, Dudley, WV14 9JR: Mark & Moody, printers, Stourbridge: order books 1960-1974 (D36)


London Metropolitan Archives: City of London, 40 Northampton Road, London, EC1R 0HB: Pollinger Ltd, authors agents, London: papers incl corresp, accounts, permissions and authors’ contracts 1935-2004 (B08/076)

National Library of Ireland, Kildare Street, Dublin 2: TownHouse, publishers, Dublin: administrative papers and corresp late 20th cent (Acc 6836)

National Library of Scotland, Manuscript Collections, George IV Bridge, Edinburgh, Midlothian, EH1 1EW: John Murray, publishers, London: further book files and ledgers c1920-1950 (Acc.12927)

Oxford University: Bodleian Library, Special Collections and Western Manuscripts, Broad Street, Oxford, OX1 3BG: Clutag Press, Thame: records 2000-2008
Agriculture, forestry and fishing

Cambridgeshire Archives, RES 1009, Shire Hall, Cambridge, CB3 0AP: Fowlmere farmer’s account book 1886 (R108/038)

Cambridge University Library: Royal Commonwealth Society Library, West Road, Cambridge, CB3 9DR: Arnold Paice, tea trader and farmer in Africa: family corresp and papers 1901-1963 (RCMS 178)

Carmarthenshire Archive Service, Parc Myrddin Richmond Terrace, Carmarthen, Carmarthenshire, SA31 1DS: K Williams, farmer, Llysnewydd, Cilycwm: farm diaries, accounts, day books and photographs 1878-1945 (8041)

Centre for Buckinghamshire Studies, County Hall, Walton Street, Aylesbury, Buckinghamshire, HP20 1UU: Francis Coales & Son, millers and animal feedstuffs manufacturers, Newport Pagnell: additional accounts, deeds and corresp c1885-79 (D 276)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Hodge family, farmers, Bosistow, St Levan: family and business papers 1757-1941 (AD1916)

Denbighshire Record Office, 46 Clwyd Street, Ruthin, Denbighshire, LL15 1HP: Williams Bros, farmers, Fron Gelyn, Llandyrnog: farming and family papers c1900-70 (DD/DM/1677)

East Riding of Yorkshire Archives and Local Studies Service, The Treasure House, Champney Road, Beverley, HU17 9BA: Coulson Hutchinson, farmer, Flamborough: account book 1852-1868 (DDX1340)

Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: Clarks Farm (Kelvedon) Ltd: accounts 1900-1969 (D/F 302); Glencroft Nursery, Hawkwell: records 1931-1970 (D/F 300); London Co-operative Society:
records of Essex farms c1938-1982 (D/F 301); Skinnerswick Farm (addnl): farm memoranda and accounts 1797-1817 (D/DU 623); Spencers Nursery, Hawkwell: records 1976-1982 (D/F 299)

Gwynedd Archives, Caernarfon Record Office, Victoria Dock, Caernarfon, LL55 1SH: South Caernarfonshire Dairy: records incl minutes and corresp c1922-78 (XM11917)

Hertfordshire Archives and Local Studies, Register Office Block, County Hall, Pegrns Lane, Hertford, SG13 8EJ: Valentines Farm, Galley Lane, Barnet: records 1954-2003 (Acc 4471)

Hillingdon Local Studies and Archives, Central Library, 14-15 High Street, Uxbridge, UB8 1HD: Milton Hutchings, nurserymen, Hillingdon: glass negatives (ADB/08/49)

Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: William Holmes, farrier, Hemswell: recipe book containing remedies and medicines for animals and mixtures for cleaning brass, etc 1831-1898 (17-MLL)

Norfolk Record Office, The Archive Centre, Martineau Lane, Norwich, NR1 2DQ: Grange Farm, Fundenhall: diaries, labour accounts etc 1876-1885 (ACC 2008/197); South Pickenham Estate Co Ltd: records incl farm and wage accounts 1931-1986 (ACC 2008/249)

Reading University: Museum of English Rural Life, Redlands Road, Reading, RG1 5EX: Walter Gregory & Co Ltd, animal medicine producers, Crawley: recipe books and photographs 1869-1939 (DX1797); John Powling (Seeds) Ltd, Downham Market: business records incl photographs 20th cent (DX1798)

Somerset Record Office, Obridge Road, Taunton, TA2 7PU: Hebditch family, farmers: additional New Cross Farm and family papers 1887-1958 (A/AJK); Longbottom Farm, Axbridge: letters received on agricultural and business matters 1939-1950 (A/CXF)

Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: Wonham family, farmers: accounts rel to farms in Dorking and Albury 1835-62 (8427)

Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire, SN15 3QN: S Ponting, farmer and corn merchant, Ponds Farm, Purton: corresp, bills and papers 1888-1939 (3738)

Architects

Hampshire Archives and Local Studies, Hampshire Record Office, Sussex Street, Winchester, SO23 8TH: Colson & Son, architects and surveyors, Winchester: scrapbook c1873-1906 (59A08W)
Hertfordshire Archives and Local Studies, Register Office Block, County Hall, Pegs Lane, Hertford, SG13 8EJ: Victor Farrar Partnership, architects, Bedford: further Herts records late 20th cent (Acc 4524)  
Hull University Archives, Brynmor Jones Library, University of Hull, Cottingham Road, Hull, HU6 7RX: Francis Johnson & Partners, architects, Bridlington: working papers c1977-1988 (DFJ)  
Plymouth and West Devon Record Office, Unit 3, Clare Place, Plymouth, Devon, PL4 0JW: Peter Roseveare, architect, Plymouth: plans, docket files rel to building projects 1975-2000 (X57)  
Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: Barefoot & Gillies, architects, Ipswich: further misc records 1898-2004 (HG400)  

**Auctioneers, estate agents, surveyors, and property**  
Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: Ernest Jennings, auctioneer, surveyor and estate agent, Saffron Walden: further papers and sales particulars 19th cent-20th cent (D/F 261)  
Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: Andrew Watton & Co, surveyor and valuer, Stroud: deeds rel to businesses and property in Nailsworth 1819-1981 (D11173)  
Highland Archives: North Highland Archive, Wick Library, Sinclair Terrace, Wick, KW1 5AB: Hamilton’s Auction Marts Ltd, cattle salesmen, Thurso: records 20th cent (Acc.817)  
Hounslow Library Local Studies Service, Hounslow Library, Local Studies, CentreSpace, Treaty Centre, High Street, Hounslow, TW3 1ES: Mr
Whitman, estate agent, of Turnham Green: photographs of Chiswick houses and streets 1895-1932 (HALS/ARC 241)


Northumberland Collections Service, Woodhorn, Queen Elizabeth II Country Park, Ashington, Northumberland, NE63 9YF: Geoffrey Humble, surveyor: records 1920-85 (NRO 07792)

Somerset Record Office, Obridge Road, Taunton, TA2 7PU: Sherwood & Giles, estate agents, Bridgwater: rent books 1901-1921 (A\CWA)

Staffordshire and Stoke-on-Trent Archive Service: Staffordshire County Record Office, Eastgate Street, Stafford, ST16 2LZ: Jeremiah Ginders, land agent, Sandon: notebooks and diaries 1841-1845 (D6850)


Banking, finance and insurance


Hertfordshire Archives and Local Studies, Register Office Block, County Hall, Pegas Lane, Hertford, SG13 8EJ: North Hertfordshire Permanent Mutual Benefit Building Society: further records 1908-1970 (Acc 4478)

Lancashire Record Office, Bow Lane, Preston, Lancashire, PR1 2RE: Blackburn Savings Bank: additional records incl ledgers, declaration book and nomination forms 19th-20th cent (DDX 2144)

Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: Lucas & Sharpe, chartered accountants and auditors, Boston: cash books, ledger and bank account pass book 1876-1935 (MISC DON 1453)
London Metropolitan Archives: City of London, 40 Northampton Road, London, EC1R 0HB: George Henry Ross Goobey, pension fund manager: papers 1953-1960 (LMA/4481)
Manchester Archives and Local Studies, Central Library, St Peter’s Square, Manchester, M2 5PD: Insurance Institute of Manchester: records incl minutes, reports, corresp and journals 1874-2001 (2008/7)
Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Christopher Barber & Sons, stock and share brokers, Sheffield: corresp, investment lists, share certificates, war damage records and market reviews 1907-1982 (X179)
West Sussex Record Office, Sherburne House, 3 Orchard Street, Chichester, West Sussex, PO19 1RN: John & Andrew Burt, bank, East Grinstead: corresp 1810-25 (Acc 15077)
Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire, SN15 3QN: Friends’ Provident Life Office, Salisbury: minutes, accounts, administrative papers 1832-1975 (3677)

Brewing
Bedfordshire and Luton Archives and Records Service, Riverside Building, County Hall, Cauldwell Street, Bedford, MK42 9AP: Thomas Sworder & Co, brewers, Luton: business and property records c1850-1900 (X95)
Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Redruth Brewery Co Ltd: additional records 1800-2000 (AD1940)
Cumbria Record Office and Local Studies Library, Whitehaven, Scotch Street, Whitehaven, Cumbria, CA28 7NL: Jennings Brothers plc, brewers and wine merchants, Cockermouth: additional account book, reports and balance sheets 1968-2004 (YDB 28)
Cumbria Record Office, Kendal, County Offices, Kendal, Cumbria, LA9 4RQ: A Bertwistle & Sons, brewers’ agents, Appleby: wages books 1937-1955 (WDB 144)
Devon Record Office, Great Moor House, Bittern Road, Sowton, Exeter, Devon, EX2 7NL: City Brewery Co Ltd, Exeter: plans, deeds and papers collected by the Brewery History Society 1833-1989 (7327)
Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: TD Ridley & Sons Ltd, brewers, Chelmsford: further ledgers 1968-1984 (D/F 49)
Manchester Archives and Local Studies, Central Library, St Peter’s Square, Manchester, M2 5PD: Walker & Homfrays Ltd, brewers, Salford: directors’ meeting minute book 1937-41 (2008/110)


Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: Nottingham Brewery Ltd: deeds 1815-1863 (7352); Warwicks & Richardson Ltd, brewers, Newark: specifications and bill of quantities for public houses in Newark-on-Trent and Farnsfield, registers of alterations and repairs to public houses, accounts book, and register of proposed alterations and plans submitted for public houses c1880-1964 (7416)

Building, construction and supplies

Bedfordshire and Luton Archives and Records Service, Riverside Building, County Hall, Cauldwell Street, Bedford, MK42 9AP: George Keast, builder, Luton: out letter book 1895-1907 (Z835/27)

Bolton Archive and Local Studies Service, Civic Centre, Le Mans Crescent, Bolton, BL1 1SE: RC Williams & Sons, painters and decorators, Bolton: accounts and apprenticeship indentures 1915-75 (Acc No 2069)

Bury Archives Service, Moss Street, Bury, BL9 0DG: Arthur Lomax, joiner and undertaker, Ainsworth: records incl funeral account books 1894-1969 (BAL)

Centre for Buckinghamshire Studies, County Hall, Walton Street, Aylesbury, Buckinghamshire, HP20 1UU: HJ & A Wright, builders, Great Missenden: records incl financial papers and plans c1940-59 (D-X 1846)

Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE: Browne Morton Ltd, builders, Chester: records incl staff wages, accounts and register of employees employed on civil defence, 1942 1884-1941 (ZCR 7381)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Samuel Symons Martyn, timber and builders merchants, Wadebridge: records 1832-1910 (AD1853)

Devon Record Office, Great Moor House, Bittern Road, Sowton, Exeter, Devon, EX2 7NL: Packer & Son, builders, Exeter: additional and personal papers of the Packer family 1912-1980 (7225)
East Sussex Record Office, The Maltings, Castle Precincts, Lewes, East Sussex, BN7 1YT: Frederick J Beck, carpenter and undertaker, Lewes: accounts 1911-18 (ACC 10012); Field & Cox, builders and joiners, Hove: records c1926-89 (ACC 10100)

Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: John William Chipperfield, carpenter and decorator, Widdington: records 1891-1998 (D/F 303); Henry Everett & Son, builders, Colchester: further records 1924-1948 (D/F 305)

Hampshire Archives and Local Studies, Hampshire Record Office, Sussex Street, Winchester, SO23 8TH: AV Francis, builder, Colden Common: letter books 1902-51 (111A03)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: William Beckwith, beer retailer, builder and joiner, Whitwick: accounts 1853-1859 (DE7399); GE Gamble & Sons, builders and funeral directors, Syston: accounts, building plans and associated papers for air raid shelters, Eatough’s factory and residence of Sir Lyndsey Everard c1920-1960 (DE7390); Lancaster & Clarke Ltd, builders, Kirby Muxloe: records c1935-1974 (DE7437)

National Monuments Record, Enquiry & Research Services, English Heritage, National Monuments Record Centre, Kemble Drive, Swindon, SN2 2GZ: CJ Wills & Sons, building contractors, London: photographs showing construction of island forts in the Humber estuary 1915-1918 (IFH01)

Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX: Burnard Green, civil engineers, London: architect’s drawings of Peterborough Town Hall 1929-31 (2008/14)

Powys County Archives Office, County Hall, Llandrindod Wells, Powys, LD1 5LG: Alfred J Jones, builder, contractor and wheelwright, Erwood: accounts and letter books 1893-1959 (B/BI/3)

Suffolk Record Office, Bury St Edmunds Branch, 77 Raingate Street, Bury St Edmunds, Suffolk, IP33 2AR: William Rendall, builder and surveyor, Bury St Edmunds: corresp rel to building the maltings at Bury St Edmunds 1882 (HC583)

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: Robert Cady, thatcher, Chediston: account books 1855-1867 (HC487)

Tyne and Wear Archives Service, Blandford House, Blandford Square, Newcastle Upon Tyne, NE1 4JA: RD Rogerson, builder and undertaker, Gateshead: account books, plans, misc material 1922-1977 (DX1298)

West Yorkshire Archive Service, Bradford, Bradford Central Library,
Princes’s Way, Bradford, BD1 1NN: Stonemason, Bradford: account book 1821-1834 (WYB413); A Hirst & Co, builders and contractors, Honley: ledger 1907-1912 (WYK1490)


Chemical industries

Anglesey County Record Office/Archifdy Ynys Mon, Shire Hall, Glanhwfa Road, Llangefi, Anglesey, LL77 7TW: Peboc Eastman, chemical manufacturers, Llangefi: collected photographs of works and staff (WSM 611)

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: Bristol & West Tar Distillers Ltd: time book, papers, photographs and ephemera (Ted Brown Collection) 1879-1970 (43976)

Lancashire Record Office, Bow Lane, Preston, Lancashire, PR1 2RE: Leyland & Birmingham Rubber Co Ltd: minutes and copy letter book 1887-1925 (DDX 2330)

Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: WE Saxby Ltd, dyers, Basford: photographs, plans and newscuttings 20th cent (7480)

Staffordshire and Stoke-on-Trent Archive Service: Staffordshire County Record Office, Eastgate Street, Stafford, ST16 2LZ: Evode Group plc, manufacturers of adhesives, sealants and industrial coatings, Stafford: corresp rel to products, premises, customers and trade organisations, product licensing 1900-1999 (D6848)

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: Fisons plc, fertiliser and brick manufacturers, Ipswich: further records, incl photographs and printed publicity material 1860-2003 (HD2616)

West Glamorgan Archive Service, Civic Centre, Oystermouth Road, Swansea, SA1 3SN: Melincryddan Chemical Works: wages book 1841-47 (D/D Z 703)

Electrical industries

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Falkirk Lighting Co: legal papers, accounts, corresp 1829-1888 (A1800/F2)

Hillingdon Local Studies and Archives, Central Library, 14-15 High Street, Uxbridge, UB8 1HD: British Electric Transformer Co Ltd, Hayes: patent register, photographs, technical drawings and misc further records 1924-68 (ADB/08/15)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: AB Butt Ltd, auto electrical engineers, Leicester: financial and staff records, corresp and misc papers c1920-2000 (DE7544); Electrical Wholesale Supply Company (Leicester) Ltd: ledgers c1940-1990 (DE7628)


Museum of Science and Industry in Manchester, Liverpool Road, Castlefield, Manchester, M3 4FP: General Electric Company plc, manufacturers of electrical and electronic equipment: photographs and drawings relating to electric locomotives built by GEC and the English Electric Co Ltd 1845-1960 (2008.37); JH Humphreys & Sons, electrical engineers, Oldham: records rel to the manufacture of dynamos c1900 (2007.8); Metropolitan-Vickers Electrical Co Ltd, manufacturers of electrical goods and equipment: papers and photographs relating to the Gas Turbine Department c1940-1950 (2007.16)

Oxford University: Bodleian Library, Special Collections and Western Manuscripts, Broad Street, Oxford, OX1 3BG: Philips Electronics: Research Laboratories photographic collection, with conference videos and annual reviews c1930-2000

Oxfordshire Record Office, St Luke’s Church, Temple Road, Cowley, Oxford, OX4 2HT: Oxford Electricity Co: details for supply to individual households and other buildings 1899-1933 (Acc 5780)

Surrey History Centre, 130 Goldsworthy Road, Woking, Surrey, GU21 6ND: Arcolectric Switches Ltd, electrical component manufacturers, West Molesey: records, mainly printed material, with company history 1943-2005 (8312)
West Sussex Record Office, Sherburne House, 3 Orchard Street, Chichester, West Sussex, PO19 1RN: Chichester Electric Light & Power Co: misc records c1906-30 (Acc 15150)

Employers, trade and business associations
Aberdeen University, Special Libraries and Archives, Historic Collections, King’s College, Aberdeen, AB24 3SW: Well Services Contractors Association, Aberdeen: board meeting minutes c1997-2007 (Acc 312)
Barnsley Archive and Local Studies Department, Central Library, Shambles Street, Barnsley, S70 2JF: Barnsley Chamber of Trade: minutes and sub committee minutes 1907-1974 (A/3178/B)
Bromley Local Studies & Archives, Central Library, High Street, Bromley, BR1 1EX: Scientific Instrument Research Association: photographs and published material c1947-58 (1816)
Bury Archives Service, Moss Street, Bury, BL9 0DG: Radcliffe Manufacturers Association: minutes 1921-1968 (GRM)
Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG: Chesterfield Junior Chamber of Commerce: records 1930-1939 (D6901)
East Riding of Yorkshire Archives and Local Studies Service, The Treasure House, Champney Road, Beverley, HU17 9BA: Beverley Junior Chamber of Commerce: accounts, newsletters and misc records c1980-1999 (5490)
Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: Federation of Master Builders, Gloucester branch: minutes 1954-1989 (D11255)
Jersey Archive, Jersey Heritage Trust, Clarence Road, St Helier, Jersey, JE2 4JY: Jersey Chamber of Commerce: additional records 1807-2003 (JA/1450)
Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: Newark Chamber of Commerce: minutes 1923-1967 (7411); Newark Tradesmen Association: minutes, presscuttings book, Newark Tradesmen’s Plate Glass Insurance Company Ltd minutes and
accounts 1893-1978 (7410); Nottingham, Derby and Lincoln Society of Chartered Accountants: minutes, reports, accounts, membership and subscription records, ledgers, and other records 1901-2006 (7293)

Oldham Local Studies & Archives, 84 Union Street, Oldham, OL1 1DN: Greater Manchester Chamber of Commerce Oldham: accounts incl balance sheets 1960-99 (2008/82)

Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY: Lyric Theatre, Belfast: records 1951-2000 (D4445)

Rotherham Archives and Local Studies, Central Library, Walker Place, Rotherham, S65 1JH: Parkgate and Rawmarsh Chamber of Commerce: minutes 1961-1976 (756-G)

Staffordshire and Stoke-on-Trent Archive Service: Stoke-on-Trent City Archives, Hanley Library, Bethesda Street, Hanley, Stoke-on-Trent, ST1 3RS: North Staffs Master Plumbers and Painters Association: records 1942-2007 (SD 1454)

Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: Woking Chamber of Commerce: additional minutes, yearbooks and newsletters 1974-2008 (8369)

Warwick University: Modern Records Centre, University Library, Coventry, CV4 7AL: Cocoa, Chocolate and Confectionery Alliance and the Cake and Biscuit Alliance: minutes, journals, corresp and other records 1900-1999 (acc no 646); Confederation of British Industry: records 1900-1999 (acc no 656); Imperial Industries Club: minutes, ephemera 1911-1952 (acc no 621)

**Engineering, machine making and manufacturing**


Coventry History Centre, Herbert Art Gallery and Museum, Jordan Well, Coventry, CV1 5QP: Wickmans Ltd, machine-tool manufacturers, Coventry: papers 1947-1993 (PA2737)

Cumbria Record Office, Carlisle Headquarters, The Castle, Carlisle, Cumbria, CA3 8UR: Cowans, Sheldon & Co Ltd, crane manufacturers, Carlisle: additional records, incl register of apprentices and corresp 1859-1985 (DB 40)

Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG: Markham & Co Ltd, steam engine and colliery equipment manufacturers, constructional engineers, Chesterfield: minutes, accounts and other records 1987-2005 (D7037)
Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: Davey, Paxman & Co Ltd, boiler makers and diesel engine builders, Colchester: register of employees 1915-1929 (D/F 23 addl.)

Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: EO Putley & Son Ltd, engine manufacturers, Gloucester: corresp, accounts and papers 1968-2002 (D11434)

Hertfordshire Archives and Local Studies, Register Office Block, County Hall, Pegs Lane, Hertford, SG13 8EJ: Watford munitions factories: misc records c1914-18 (Acc 4573)

Hull City Archives, 79 Lowgate, Hull, HU1 1HN: Priestman Brothers Ltd, mechanical grab manufacturers, Hull: apprenticeship register incl photographs 1954-1985 (DIBD)

Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: Ruston & Hornsby Ltd, agricultural and general engineers, engine builders and boilermakers, Lincoln: records incl product catalogues, specification sheets and records rel to the Ruston car 1923-1962 (MISC DON 1467)


North Devon Record Office, North Devon Library and Record Office, Tuly Street, Barnstaple, Devon, EX31 1EL: William Harris, wheelwright, Broadwood Kelly: labour and account books 1868-1906 (A156)

Oxfordshire Record Office, St Luke’s Church, Temple Road, Cowley, Oxford, OX4 2HT: Daniel Young Ltd, mechanical engineers, boilermakers, brassfounders and millwrights, Witney: historical, genealogical and research material gathered by John Hirons while writing a company history c1889-1942 (Acc 5270)


Reading University: Museum of English Rural Life, Redlands Road, Reading, RG1 5EX: Clayton & Shuttleworth Ltd, agricultural engineers, Lincoln: photographs of engines (15 vols) 19th-20th cent (DX1792); International Harvester Co of Great Britain Ltd, agricultural equipment manufacturers, Doncaster: films and slides 20th cent (DX1804)

Somerset Record Office, Obridge Road, Taunton, TA2 7PU: Maurice Page: antiquarian papers incl records rel to Wellworthy Engineering Works, Bridgewater 1699-1989 (DD\BLM)

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: Crane Ltd, valve manufacturers and heating engineers, Ipswich: volume of engineering drawings and glass negatives of factory views, product samples and metallurgical samples c1937-2000 (HC477, HC488); H Warner & Son Ltd, heating, plumbing, refrigeration and general engineers, Ipswich: further records 1859-2004 (HC20)

Tameside Local Studies and Archives, Tameside Central Library, Old Street, Ashton-under Lyne, OL6 7SG: Jones’s Sewing Machine Co Ltd, sewing machine manufacturers, Ashton-under-Lyne: records incl share ledgers, advertising material and photographs 19th cent-20th cent (DD379)

West Yorkshire Archive Service, Kirklees, Central Library, Princess Alexandra Walk, Huddersfield, HD1 2SU: John Shaws, ruling machine makers, Honley: receipts and corresp rel to accounts 1890-1891 (WYK1480)


Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire, SN15 3QN: PJ Parmiter & Sons Ltd, agricultural implement manufacturers, Tisbury: wage books, publicity material 1910-1983 (3733)

Family business and personal papers

Bath and North East Somerset Record Office, Guildhall, High Street, Bath, BA1 5AW: Langton family, merchants, Cadiz and Bath: papers rel to the will and property of Michael Langton (d 1810) 1750-1811 (Acc 770)

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: Henry Herbert Wills, director, Imperial Tobacco Ltd: journal (1921) with supporting documents and historical notes 1877-1922 (43050)
Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Henry Richards, mason and farmer, Treswithian Downs, Camborne: account book (1871-1922) with family papers, Richards, Odgers, Nicholas and Chinn families of Camborne 1826-1948 (AD1895)

Durham County Record Office, County Hall, Durham, DH1 5UL: John Pease, Quaker industrialist: Pease family and business records with Mounsey other Darlington Quaker records 1761-1999 (Acc 7227)

Institution of Engineering and Technology Archives, Savoy Place, London, WC2R 0BL: J Konarek, employee of Standard Telephones & Cables: papers incl MS notes, reports and diagrams 1924-1967 (NAEST 187)

Jersey Archive, Jersey Heritage Trust, Clarence Road, St Helier, Jersey, JE2 4JY: Thomas Benjamin Frederick Davis, businessman, yachtman and philanthropist: certificates of discharge, corresp and photographs 1884-1934 (JA/1435)

London Metropolitan Archives: City of London, 40 Northampton Road, London, EC1R 0HB: Harold Stanley Kalms, Baron Kalms, Chairman of DSG International: corresp, reports and papers rel to involvement with various organisations and the Jewish community 1946-2006 (B08/201)

London University: London School of Economics Library, Archives Division, Lionel Robbins Building, 10 Portugal Street, London, WC2A 2HD: Arthur William Knight, industrialist: research papers c1930-2003 (KNIGHT)

Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: Sorbo Rubber Co, Woking: scientific records, photographs, and personal papers of Arthur Wrigley, company director c1920-64 (8320)

Tyne and Wear Archives Service, Blandford House, Blandford Square, Newcastle Upon Tyne, NE1 4JA: Miroslav Sigmund, engineer, entrepreneur and inventor: personal papers 1937-2004 (DF.SIG)

West Sussex Record Office, Sherburne House, 3 Orchard Street, Chichester, West Sussex, PO19 1RN: Robinson family, mariners and shipowners, Littlehampton: additional papers and photographs 19th-20th cent (Acc 15194)

Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire, SN15 3QN: Lloyd family, stone and monumental masons, Great Bedwyn: business and personal papers 1848-1960 (3613)

Food, drink and tobacco

Barking and Dagenham Archives and Local Studies Centre, Valence House Museum, Becontree Avenue, Dagenham, Essex, RM8 3HT: Pesci, fish and
chip shop, Barking: accounts and administrative records 1920-94 (ACQ2008/026)

**Bolton Archive and Local Studies Service, Civic Centre, Le Mans Crescent, Bolton, BL1 1SE:** Bolton Market Hall: fish market and slaughter house rent books 1882-1920 (Acc No 2084)

**Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN:** Ashley Vale Biscuit Co Ltd, Bristol: accounts, photographs and papers 1925-1950 (42484/7); Victoria Flour Co Ltd, flour manufacturers, Bristol: records 1945-1981 (43903)

**Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE:** Ranks Hovis McDougall Culinary Brands Division: records of Cerebos Ltd, Middlewich Salt Co Ltd, Henry Seddon & Sons Ltd, Cheshire United Salt Co Ltd and Palmer Mann & Co Ltd 1919-1965 (D 7379)

**Cumbria Record Office, Kendal, County Offices, Kendal, Cumbria, LA9 4RQ:** James Chamley, miller, Patton Mill: order books and note book 1902-1948 (WDB 146)

**East Sussex Record Office, The Maltings, Castle Precincts, Lewes, East Sussex, BN7 1YT:** Robertsbridge mill: records incl John Hilder’s accounts for malt and wheat (1753-70) 18th-20th cent (ACC 9868)

**Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT:** William Raven, miller, Purleigh: account book 1859-1862 (D/DU 1735)

**Hammersmith and Fulham Archives and Local History Centre, The Lilla Huset, 191 Talgarth Road, London, W6 8BJ:** Fuller’s Ltd, confectioners, Hammersmith: notebook of works manager 1904-25 (A2008/13)

**Lambeth Archives Department, Minet Library, 52 Knatchbull Road, London, SE5 9QY:** HW Brand & Co, food manufacturers, Vauxhall: wages books, sales ledgers and reports 1838-1938 (IV/271)

**Lancashire Record Office, Bow Lane, Preston, Lancashire, PR1 2RE:** J Atkinson & Co Ltd, tea and coffee merchants, Accrington: account books, stock books, insurance book and diary 1904-1993 (DDX 2625)

**Liverpool Record Office, City Libraries, William Brown Street, Liverpool, L3 8EW:** Barker & Dobson, confectioners, Liverpool: notebooks detailing recipes c1920-1960 (Acc 6224)

**Perth and Kinross Council Archive, AK Bell Library, 2-8 York Place, Perth, Perthshire, PH2 8EP:** Peter Thomson (Perth) Ltd, whisky merchants: misc records 1897-1974 (ACC08/21)

**Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY:** Gallaher Ltd, tobacco manufacturers and wholesalers,
Ballymena: records with material rel to other tobacco companies, incl annual reports and printed material 1954-2004 (D4443)

Suffolk Record Office, Lowestoft Branch, The Library, Clapham Road, Lowestoft, Suffolk, NR32 1DR: LW Waller, fish merchants, Lowestoft: further records 1968-2007 (1704:L1873, 1891)

Tameside Local Studies and Archives, Tameside Central Library, Old Street, Ashton-under Lyne, OL6 7SG: James Robertson & Sons Ltd, preserve manufacturers, Droylsden: handwritten books with details of jams, photographs 1910-1979 (3595)

Tower Hamlets Local History Library and Archives, Bancroft Library, 277 Bancroft Road, London, E1 4DQ: Verde & Co Ltd, fruit wholesalers, London: records 1903-1962 (B/MIS/30)

Tyne and Wear Archives Service, Blandford House, Blandford Square, Newcastle Upon Tyne, NE1 4JA: John Ross & Son, pickle makers, Newburn: minutes, accounts, etc 1972 - 2007 (DT.ROSS)

Funeral directors and undertakers


Furniture

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: R & W Kift, house furnishers, Redfield, Bristol: records collected by Peter Kift 1916-1959 (43729)

Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: S Goodacre Ltd, furniture manufacturers, Nottingham: directors’ minutes and misc papers 1899-1967 (7468)

Pembrokeshire Record Office, The Castle, Haverfordwest, Pembrokeshire, SA61 2EF: Pembrokeshire Crafts Ltd, furniture designers and manufacturers, Newport: records 1978-92 (DB/65)

Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY: Koninklijke Nederlandse Meubelfabriek H.P. Mutters en Zoon, furniture manufacturers, The Hague: copy records rel to furnishing of Harland & Wolff ships incl the Olympic and Titanic 1907-13 (T3903)

West Yorkshire Archive Service, Calderdale, Central Library, Northgate House, Northgate, Halifax, HX1 1UN: Thomas Simpson & Sons, cabinet manufacturers, upholsterers and carpet warehousemen, Halifax: stock
books 1882-1954 (WYC:1422)

Gas

Barnsley Archive and Local Studies Department, Central Library, Shambles Street, Barnsley, S70 2JF: Barnsley Gas Co: minute book 1844-1895 (A/3201/B)

Cumbria Record Office, Kendal, County Offices, Kendal, Cumbria, LA9 4RQ: Staveley Gas Co: additional records 1867-1912 (WDB 143)

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Falkirk Gas Co: minutes, legal papers 1829-1879 (A1800/F1)

Medway Archives and Local Studies Centre, Civic Centre, Strood, Rochester, ME2 4AU: Rochester, Chatham & Gillingham Gas Co: social club records 1920-77 (DE1179)

Glass, earthenware and pottery

Plymouth and West Devon Record Office, Unit 3, Clare Place, Plymouth, Devon, PL4 0JW: Lee Moor Porcelain Clay Co, Plympton: balance sheet, reports, prospectus and particulars 1850-1962 (G202)

Staffordshire and Stoke-on-Trent Archive Service: Stoke-on-Trent City Archives, Hanley Library, Bethesda Street, Hanley, Stoke-on-Trent, ST1 3RS: WH Grindley & Co Ltd, earthenware manufacturers, Tunstall: pattern books c1880-1930 (SD 1446); Spode Museum Trust: records of the Spode factory and WT Copeland & Sons c1760-2008 (SD1440)


Iron, steel and metal trades

Aberdeen City Archives, Town House, Broad Street, Aberdeen, AB10 1AQ: Glegg & Thomson Ltd, ironmongers and steel stockholders: business and financial includes minute book of the North of Scotland Iron Merchants Stockholders Association 1899-1980 (DD/1189)

Berkshire Record Office, 9 Coley Avenue, Reading, Berkshire, RG1 6AF: Druce family, blacksmiths, of Winkfield: ledgers and day books 1865-1919 (D/EZ 159)

Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE: Monks Hall & Co Ltd, iron and steel manufacturers, steel rollers and rivet manufacturers, Warrington: records
incl minutes, registers, share records, financial records and complaints book 1874-1968 (D 7515)

Clackmannanshire Archives, Alloa Library, 26-28 Drysdale Street, Alloa, Clackmannanshire, FK10 1JL: Robert Melvin Ltd, engineers and ironfounders, Alloa: additional register of directors c1918-1947

Conwy Archive Service, Old Board School, Lloyd Street, Llandudno, LL30 2YG: Dolgarrog Aluminium Ltd: additional records c1908-2000 (CX300)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Perran Foundry, ironfounders and steam engine manufacturers, Perranarworthal: engine plans 19th cent (AD1898); Sidney Egbert Reed, blacksmith, Zelah, St Allen: ledgers 1924-1933 (X1306)


Devon Record Office, Great Moor House, Bittern Road, Sowton, Exeter, Devon, EX2 7NL: Bodley Brothers & Co Ltd, ironfounders and engineers, Exeter: project drawings and corresp 1850-1960 (7252)

East Riding of Yorkshire Archives and Local Studies Service, The Treasure House, Champney Road, Beverley, HU17 9BA: John Shepherdson, blacksmith and ironmonger, Tibthorpe: accounts ledger 1863-1872 (DDX1370)

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Jones & Campbell Ltd, iron founders and stove manufacturers, Larbert: further minutes, catalogues and photographs c1906-1979 (A33)


Glamorgan Record Office, Glamorgan Building, King Edward VII Avenue, Cathays Park, Cardiff, Glamorgan, CF10 3NE: John Williams, ironmongers and ironfounders, Cardiff: company history, minutes, financial papers, product catalogue 1841-1990 (D523)

Highland Council Archives, Inverness Library, Farraline Park, Inverness, IV1 1NH: Alexander Macdonald, blacksmith, Invermoriston: records incl ledgers c1880-1959 (Acc.1746)
Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: Smith Clayton Forge Ltd, Lincoln: plans (55) 1912-1968 (SCF)
Rotherham Archives and Local Studies, Central Library, Walker Place, Rotherham, S65 1JH: WN Baines & Co Ltd, brass founders, Rotherham: employees’ time book 1918-1924 (729-B); Steel, Pech & Tozer Ltd, steel manufacturers, Sheffield: valuation, order book, monthly debit and credit summary 1897-1927 (760-B)
Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Gilbert Marshall Bennett, Chairman of Sheffield Smelting Co: personal papers and corresp 1923-75 (X180); Atkin Brothers, britannia metal manufacturers and silversmiths, Sheffield: pattern and description books for silverware items, costings book and price lists 1836-1955 (SAO); Thomas Bradbury & Sons Ltd, silversmiths and silver platers, Sheffield: pattern and description books 1900-1946 (SAO); WT Flather Ltd, manufacturer of special steels, Sheffield: records incl private ledger and journals, members and shares records, annual returns, legal records and corresp 1884-1957 (X169); Samuel Fox & Co Ltd, steel manufacturers: Stocksbridge Works Victory Club minutes, financial records, membership records, building records 1920-2001 (X184); Joyce R Himsworth, silversmith, Sheffield: drawings, certificates, notebooks, address book of suppliers, press cuttings; family papers including photographs c1960-1990 (SAO); WH Parkin & sons, cutlers, Sheffield: Select Works financial records, plans, photographs, employment records and material rel to Parkin Bros 1900-2006 (X172); Roberts & Belk Ltd, silver platers and cutlers, Sheffield: pattern and description books 1856-1935; private ledgers and letter books 1845-1908; registered designs 1913-1951 1845-1951 (SAO); Turners (Eyre Street) Ltd, nickel silver manufacturers, Sheffield: technical drawings and architectural plans, copyright and patent papers c1927-1979 (X145); Walker & Hall Ltd, silver platers and cutlery manufacturers, Sheffield: pattern and description books, badges and punches, photograph album 1906-1967 (SAO); Thomas Ward & Sons Ltd, cutlery and razor manufacturers, Sheffield: additional corresp and papers rel to patents and trademarks overseas, agreements, licensing and insurance c1922-1944 (X189); Watson Pass & Co, silverware manufacturers, Sheffield: order book 1817-1822 (SAO); Sheffield Assay Office: silversmiths pattern books 19th-20th cent (SAO)
West Glamorgan Archive Service, Civic Centre, Oystermouth Road, Swansea, SA1 3SN: John Player & Sons Ltd, tinplate manufacturers, Clydach: ledgers, stock books and cash book 1910-52 (D/D SCS); West Yorkshire Archive Service, Leeds, 2 Chapeltown Road, Sheepscar,

Jewellery and clocks
Devon Record Office, Great Moor House, Bittern Road, Sowton, Exeter, Devon, EX2 7NL: William Lipscombe Cummings, watchmaker, Thorverton: ledgers 1886-1912 (7325)

Guildhall Library, Aldermanbury, London, EC2V 7HH: Justin Theodore Vulliamy, clockmaker: extracts from daybooks and notebooks 18th cent (Acc 2008/001)

Liverpool Record Office, City Libraries, William Brown Street, Liverpool, L3 8EW: T Brown & Co, jewellers, Liverpool: additional records 20th cent (Acc 6232)

Leather and footwear
Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: J Croggon & Son Ltd, tanners, Grampound: business and family papers 1600-2000 (X1301)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: British United Shoe Machinery Co Ltd, Leicester: directors, board and shareholders minutes, balance sheets and register of members 1899-2004 (DE7546); Hartshorn & Jesson Ltd, boot and shoe manufacturers, Leicester: accounts, training and educational records, advertising material and misc records 1946-1980 (DE7461)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: Stead & Simpson Ltd, footwear and leather goods manufacturers and retailers, Leicester: records incl minutes, advertising material and pension records 19th-20th cent (DE7451)

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: AW Howard, saddler and harness maker, Framlingham: ledger and cash book 1917-1948 (HC490)

Walsall Local History Centre, Essex Street, Walsall, Staffordshire, WS2 7AS: Modern Saddlery (Walsall) Ltd, wholesale saddlers: records 1940-2003
Leisure, recreation and art

British Library, Sound Archive, 96 Euston Road, London, NW1 2DB: All Out Productions Ltd, London: recordings produced for BBC Radio incl broadcasts of ‘Out this Week’ and ‘You can come out now’ 1993-2000 (C1297)

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: Bamboo Club, Bristol: papers 20th cent (43844)


Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG: High Tor Hotel, Matlock Dale: visitors’ registers and other records mid 20th cent (D7013)

Doncaster Archives Department, King Edward Road, Balby, Doncaster, DN4 0NA: Maurice Hart, photographer, Doncaster: negatives, prints, diaries of work commissioned 1963-2007 (DY/HART)

East Riding of Yorkshire Archives and Local Studies Service, The Treasure House, Champney Road, Beverley, HU17 9BA: Holderness Hotel, Beverley: visitors’ book 1883-1899 (DDX1282)


Gwynedd Archives, Meirionnydd Record Office, Ffordd y Bala, Dolgellau, Merionethshire, LL40 2YF: Grapes Hotel, Maentwrog: visitors books 1864-1969 (6534)

Isle of Wight Record Office, 26 Hillside, Newport, Isle Of Wight, PO30 2EB: Gloster Hotel, Cowes: visitors book 1864-87 (AC2008/043)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: Bakers Arms Public House, Leicester: accounts 1925-1931 (DE7434)

Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: George Tokarski, photographer, Lincoln: photographic negatives c1950-2006 (GT)


Norfolk Record Office, The Archive Centre, Martineau Lane, Norwich, NR1 2DQ: Great Yarmouth New Britannia Pier Co: records incl list of shareholders 1900-1957 (BR 344); Palace Cinema, Thetford: cinema
exhibitor’s records and return registers 1933-1954 (ACC 2008/249)

Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY: Cecil Maxwell, photographer, Bushtown: photographs of family and agricultural activities 1919-30 (D4436)

Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Crescent Hotel, Sheffield: account book with AH Smith & Co Ltd, Don brewery 1911-21 (X167)


Wolverhampton Archives and Local Studies, Molineux Hotel Building, Whitmore Hill, Wolverhampton, Staffordshire, WV1 1SF: Henry Gough & Son Ltd, lawn tennis hard court manufacturers, Wolverhampton: financial records, corresp, building plans, papers 1860-1969

Medical and pharmaceuticals

Brent Archive, Cricklewood Library, 152 Olive Road, Cricklewood, London, NW2 6UY: Frederick James Mills, pharmacist and chemist, Willesden: accounts, with notes on optics when a student (1920s) 1946-63 (2/2008)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Unnamed chemist, Fowey and Bodmin: prescription books 1800-2000 (AD1933)

Flintshire Record Office, The Old Rectory, Rectory Lane, Hawarden, Flintshire, CH5 3NR: Hawarden Pharmacy: prescription, poisons and dangerous drugs registers 1921-80 (AN4160); Williams & Son, pharmacist, Mold: prescription book 1885-1915 (AN4154)

Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: WH Hampton, chemist, Gloucester: prescription books 1834-1914 (D2914)

Lambeth Archives Department, Minet Library, 52 Knatchbull Road, London, SE5 9QY: JW Rumsey & Son, chemist, West Dulwich: prescriptions, returns and receipts books c1920-49 (2008/16)

Museum of Science and Industry in Manchester, Liverpool Road,
Castlefield, Manchester, M3 4FP: PZ Cussons plc, toiletries and pharmaceutical merchants and manufacturers, Stockport: records 20th cent (2008.54); Duckworth & Co, manufacturing chemists, Manchester: records incl sales ledgers and product labels 1890-2006 (2006.46)

North Devon Record Office, North Devon Library and Record Office, Tuly Street, Barnstaple, Devon, EX31 1EL: FE Battershill, chemist, Barnstaple and Braunton: prescription books 1924-1941 (A211)

North Yorkshire County Record Office, Malpas Road, Northallerton, North Yorkshire, DL7 8TB: GF Hird, chemist, Northallerton: pharmacy records, prescription books, corresp 1936-83 (ZFI)

Oxfordshire Record Office, St Luke’s Church, Temple Road, Cowley, Oxford, OX4 2HT: T Goodman, chemist, Banbury: prescription books 1817-43 (Acc 5793)

Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX: Boots Co Ltd, pharmaceuticals manufacturers and retailers: Peterborough branch prescription books 1894-1923 (PAS/BOOT)

Plymouth and West Devon Record Office, Unit 3, Clare Place, Plymouth, Devon, PL4 0JW: Unnamed chemist, Plymouth and South East Cornwall: prescription books 1846-1890 (G186)

Powys County Archives Office, County Hall, Llandrindod Wells, Powys, LD1 5LG: Unnamed chemist, Radnorshire: prescription book 1881-87 (R/BI/3); Unnamed chemist, Montgomeryshire: prescription book 1869-98 (M/BI/6)

Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Chemist and druggist, Sheffield: prescription books (2), for chemist possibly named Harrison 1832-1839 (X171)

Sutton Local Studies & Archives Centre, Central Library, St Nicholas Way, London, SM1 1EA: Westlake Pharmacy, Sutton: prescription books 1875-1900 (Accession 760)

Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire, SN15 3QN: Malmesbury (Tower House, Oxford Street) medical practice: records 1904-1933 (3676)

Merchants

Centre for Kentish Studies, County Hall, Maidstone, Kent, ME14 1XQ: Honnors Ltd, corn, seed and coal merchants, Maidstone: records incl financial records, catalogues, photographs and ephemera 1890-1990 (Acc7522)

Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE: DH & T Evans & Sons, general merchants, The
Stores, Pontsian: accounts c1912-20 (DB/68); EE Rees, merchant, The Furnace, Glandyfi: client ledgers c1930-39 (DB/69)

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Harrower, Welsh & Co Ltd, timber merchants and ship brokers, Bo’ness: private letter books, typescript company history 1904-1962 (A1756)

Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: F Hewlett & Sons, sand and gravel merchants, Gloucester: ledgers 1949-1964 (D11368)

Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX: Beaver family, grain merchants, Peterborough: malting book 1911-19 (2008/42)

Plymouth and West Devon Record Office, Unit 3, Clare Place, Plymouth, Devon, PL4 0JW: John Hawker, merchant, Plymouth: corresp rel to the import of timber, oak and elm boards, hemp and wine to Plymouth, from the Baltic ports and Norway 1789-1826 (G165)

Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY: J Ballintine Ltd, timber merchants, Londonderry: records 1903-86 (D4451)

West Sussex Record Office, Sherburne House, 3 Orchard Street, Chichester, West Sussex, PO19 1RN: John Eede Butt & Sons Ltd, timber merchants, merchants, estate agents, Littlehampton: records 1885-1971 (Acc 15270)

Yorkshire Archaeological Society, Claremont, 23 Clarendon Road, Leeds, LS2 9NZ: Hustler, Hardcastle & Wright, coal merchants, Bradford: accounts 1830 (MS1832)

Mining

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: Rio Tinto-Zinc Corporation, mine owners: photographs and papers, incl minutes and ledgers and records of predecessor companies Imperial Smelting Corporation and National Smelting Corporation 1924-1989 (43095)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: William Bennetts, fuse manufacturer, Tuckingmill: records 1872-1912 (X1302); Pendelow Tin Stream Works, St Austell: cost book 1817-1825 (X1308); Tehidy Minerals Co, tin mines, Camborne: additional mining records 1800-2000 (TEM); Wheal Peevor, copper mine, Redruth: corresp reports and plan incl records of Great North Downs Consolidated Mines 1873-1952 (AD1893)
Doncaster Archives Department, King Edward Road, Balby, Doncaster, DN4 0NA: Derek Beard, production manager, Goldthorpe colliery: reports, memoranda, corresp relating to Goldthorpe, Hickleton and Highgate pits c1947-1993 (DD/BEARD)

Durham County Record Office, County Hall, Durham, DH1 5UL: Fredrick William Gleghorn, foreshift overman: records rel to Seaham Colliery 1920-88 (Acc 7133)


Northumberland Collections Service, Woodhorn, Queen Elizabeth II Country Park, Ashington, Northumberland, NE63 9YF: Bedlington Coal Co Ltd: ledgers giving average payments made to workforce at Doctor Pit 1894-1928 (NRO 07564); Woodhorn Colliery: windermans’ diaries 1914-1981 (NRO 07677)

Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: National Coal Board, East Midland Division: South Notts area records c1930-1982 (7453)

Swansea University Archives, Singleton Park, Swansea, Glamorgan, SA2 8PP: AG Lewis, Divisional Insurance Manager, National Coal Board: corresp and papers rel to compensation claims at Newlands Colliery and Cribbwr Fawr Collieries Ltd c1938-64 (2008/22)

Motor car and related industries

East Sussex Record Office, The Maltings, Castle Precincts, Lewes, East Sussex, BN7 1YT: George Brown, coach and carriage builder, Crowborough: financial records 1898-1902 (ACC 10009)

Lancashire Record Office, Bow Lane, Preston, Lancashire, PR1 2RE: Duple International plc, coach builders, Blackpool: records incl minutes, reports and plans 20th cent (DDX 1818)

Manx National Heritage Library, Manx Museum and National Trust, Douglas, Isle Of Man, IM1 3LY: JR Moore Ltd, motor service, Isle of Man: records incl minutes and accounts 1954-84 (MS 11947)

Museum of Science and Industry in Manchester, Liverpool Road, Castlefield, Manchester, M3 4FP: H & J Quick Ltd, automobile engineers and agents, Manchester: records 1914-2000 (2008.10)

Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: Dennis Specialist Vehicles Ltd, commercial vehicle manufacturers,
Guildford: additional records incl vehicle drawings and specification sheets c1930-69 (8343)


Ophthalmics and telescopes


Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: J & S Wylde Ltd, ophthalmic lens manufacturers, Leatherhead: records incl accounts and publicity material 1961-2005 (8311)

Paper and packaging

Bristol Record Office, ‘B’ Bond Warehouse, Smeaton Road, Bristol, BS1 6XN: Amcor Flexibles Colodense Ltd, packaging manufacturers, Bristol: accounts, wage books, plant ledgers, photographs and papers 1951-1960 (43979)

Retail

Aberdeen City Archives, Town House, Broad Street, Aberdeen, AB10 1AQ: Esslemont & Macintosh Ltd, retail and wholesale drapers and warehousemen, Aberdeen: financial and administrative records 1892-1994 (DD/1231)

Bath and North East Somerset Record Office, Guildhall, High Street, Bath, BA1 5AW: Country Market (Bath) Ltd: minutes, corresp and papers 1955-2006 (Acc 727)

Bedfordshire and Luton Archives and Records Service, Riverside Building, County Hall, Cauldwell Street, Bedford, MK42 9AP: Arthur Jones, grocer, Cranfield: account book 1907-1946 (Z835/28); Leighton Buzzard & Luton Co-operative Society Ltd: minutes and papers 1884-1987 (X778)

Centre for Buckinghamshire Studies, County Hall, Walton Street, Aylesbury, Buckinghamshire, HP20 1UU: Milton Keynes Co-operative
Society: records incl minutes, education committee records, staff records 1918-91 (D 275)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: John Daniel, draper, Hayle: records 20th cent (X1268)

Devon Record Office, Great Moor House, Bittern Road, Sowton, Exeter, Devon, EX2 7NL: Howards (Exeter) Ltd, electrical retailers: day books, accounts and ledgers incl predecessor companies 1930-1961 (7291)


Glamorgan Record Office, Glamorgan Building, King Edward VII Avenue, Cathays Park, Cardiff, Glamorgan, CF10 3NE: ET Jones, ironmonger, Tonyrefail: order and sales books, ledgers, suppliers information c1910-32 (DX504)

Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW: Frederick Wright, tobacconist, Gloucester and Cheltenham: deeds and papers rel to Cheltenham premises 1717-1960 (D11384)

Hampshire Archives and Local Studies, Hampshire Record Office, Sussex Street, Winchester, SO23 8TH: CL Knight & son, grocers, confectioners and off licence, Milford-on-Sea: records incl wages books, ration register, Christmas Club book, stocktaking records, photographs and business history c1930-89 (7A08)

Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: Huncote Co-operative Society: minutes 1956-1964 (DE7584); Scott-Nicholl Ltd, hosiers, Shepshed: advertising material, stationery and ephemera c1950-1990 (DE7389)

Lincolnshire Archives, St Rumbold Street, Lincoln, LN2 5AB: Arthur Fountain, hardware dealer, ironmonger and cycle agent, Lincoln: hire purchase ledger 1937-1954 (MISC DON 1450)

London Metropolitan Archives: City of London, 40 Northampton Road, London, EC1R 0HB: Dixons Group plc, electronics retailer, London: records 1937-2007 (B08/200)

Manchester Archives and Local Studies, Central Library, St Peter’s Square, Manchester, M2 5PD: James Fildes, grocer, Manchester: stock book 1858 (2008/2)

Pembrokeshire Record Office, The Castle, Haverfordwest, Pembrokeshire, SA61 2EF: Austin Sayse Lewis, draper: diaries of Pembroke life, with contributions by his relatives 1914-58 (HDX/1771)
Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX: JF Turner & Son, grocers, Peterborough: business and family records c1905-82 (2008/05)

Powys County Archives Office, County Hall, Llandrindod Wells, Powys, LD1 5LG: Lewis Turner, grocer and provision merchant, Garthmyl: accounts 1858-62 (M/BI/7)

Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Adams Butchers, Sheffield: records incl corresp, invoices, day books and commentary on firm’s history 1904-87 (MD7693);

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: W Hewitt & Sons, grocers, Ipswich: financial and misc records 1896-1957 (HC489)

Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: LR Derisley, butchers, West Byfleet: customer ledger and accounts 1929-47 (8339); Redhill Market Co Ltd: minutes, share records, annual reports and accounts, ledgers, deeds 1856-1991 (8328)

West Glamorgan Archive Service, Civic Centre, Oystermouth Road, Swansea, SA1 3SN: Davies & Co, ironmongers, Pontardawe: ledger of accounts with the company c1936-55 (D/DZ 80)


Shipping and shipbuilding

Durham County Record Office, County Hall, Durham, DH1 5UL: J Greenwood & Sons, printers, Seaham Harbour: financial records. 1936-61 (D/X 1648)

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Grangemouth Dockyard Co Ltd, shipbuilders, repairers, marine engineers: photograph albums c1920-1959 (A56)

Glamorgan Record Office, Glamorgan Building, King Edward VII Avenue, Cathays Park, Cardiff, Glamorgan, CF10 3NE: William George Long, shipwright, Cardiff: papers 19th-20th cent (D592)

Glasgow University Archive Services, 13 Thurso Street, Glasgow, G11 6PE: Harrisons (Clyde) Ltd, shipowners, Glasgow: records incl annual reports and accounts, cash books, ledgers, re-structuring files, ship plans,
ship movement books, ship management files, deck log books, engine log books 1956-2004 (ACCN3109)

**Hampshire Archives and Local Studies, Hampshire Record Office, Sussex Street, Winchester, SO23 8TH:** Camper & Nicholsons Ltd, yacht builders, Gosport and Southampton: research papers of Ian Dear in writing company history incl corresp, images and copy documents c2000-08 (123A08)

**Medway Archives and Local Studies Centre, Civic Centre, Strood, Rochester, ME2 4AU:** Medway Navigation Co: additional minutes, accounts and printed material incl map of upper Medway 1739-1975 (S/MN)

**Museum of Science and Industry in Manchester, Liverpool Road, Castlefield, Manchester, M3 4FP:** Paterson Zochonis & Co Ltd, shipping merchants, Manchester: papers and fabric samples c1960-1979 (2007.63)

**National Museums Liverpool: Maritime Archives and Library, Merseyside Maritime Museum, Albert Dock, Liverpool, L3 4AQ:** Ellerman Lines Ltd, shipowners: records incl career papers of William Ford, engineer 1940-1970 (DX/2449); Employers Association of the Port of Liverpool: income and expenditure account ledgers (D/PEA)

**Plymouth and West Devon Record Office, Unit 3, Clare Place, Plymouth, Devon, PL4 0JW:** Associated British Ports: deeds and papers rel to Plymouth 1779-1979 (X60)

**Public Record Office of Northern Ireland, 66 Balmoral Avenue, Belfast, BT9 6NY:** Harland & Wolff Ltd, shipbuilders, Belfast: additional records incl corresp from Lord Pirrie and material rel to London & Glasgow Engineering and Iron Shipbuilding Co Ltd, Glasgow 1902-32 (D4413)

**Tyne and Wear Archives Service, Blandford House, Blandford Square, Newcastle Upon Tyne, NE1 4JA:** Brigham & Cowan (Hull) Ltd, ship repairers: register of members, share and debenture ledger 1911 -1938 (DX1299); William Mathwin & Son (Newcastle) Ltd, coal exporters and ship brokers: corresp, details of staff, reports, minutes, financial records 1867 - 1985 (DT.MATH)

**West Glamorgan Archive Service, Civic Centre, Oystermouth Road, Swansea, SA1 3SN:** Swansea Harbour Trust: tinplate warehouse ledgers 1897-1908 (D/D SHa)

**Solictors**

**Aberdeen City Archives, Town House, Broad Street, Aberdeen, AB10 1AQ:** Paull & Williamson, advocates and notaries public, Aberdeen: cash ledgers c1880-1960 (DD/1410)
Berkshire Record Office, 9 Coley Avenue, Reading, Berkshire, RG1 6AF: Gerald S Hampton, solicitor, Reading: diaries 1922-43 (D/EX 2104)

Cornwall Record Office, Old County Hall, Truro, Cornwall, TR1 3AY: Foot Anstey, solicitors, Truro: business papers 1800-2000

Cumbria Record Office, Carlisle Headquarters, The Castle, Carlisle, Cumbria, CA3 8UR: Wright, Brown & Strong, solicitors, Carlisle: accounts ledger 1891-1897 (DWBS)


Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: Frederick Francis, solicitor, Romford: letter books 1842-1851 (D/DU 2430)

Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR: Russel & Aitken, solicitors, Falkirk: further business records and clients papers 1493-1976 (A664)


Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: Sidney Herbert Clay, solicitors: financial ledgers rel to legal practice based at Retford, Worksop and Sheffield 1931-1945 (7298)

Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX: Buckles, solicitors, Peterborough and Stamford: client papers incl records rel to Peterborough Corn Exchange Co Ltd; Peterborough Gas Co Ltd; Whittlesey Central Brick Co Ltd 1898-1915; Dodsdown Brick Works Ltd 1907; John Evison Ltd 1899-1906; Keeble Bros Ltd 1899; Cope & Willington Land Co Ltd 1903-1906, 18th-20th cent (2008/53)

Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP: Sheffield Assay Office: records of Branson & Bramley, solicitors, rel to Sheffield Assay Office: undertakings by firms; wardens’ oaths 1905-1941; securities 1929-1983; deeds and land certificates relating to Portobello Street (premises of Sheffield Assay Office); cases for the opinion of counsel 1899-1930; objections to trade marks from 1939; pension trust deeds 1833-2002 (SAO)

Somerset Record Office, Obridge Road, Taunton, TA2 7PU: Porter Dodson,
solicitors, Taunton: wages book, deeds and wills 1820-1929 (DD\DP)

Suffolk Record Office, Lowestoft Branch, The Library, Clapham Road, Lowestoft, Suffolk, NR32 1DR: Fosters, solicitors, Lowestoft: deeds 18th-20th cent, account books and notarial copy book 1895-1964 (L1884)

Textiles, carpets and clothing

Barnsley Archive and Local Studies Department, Central Library, Shambles Street, Barnsley, S70 2JF: Shaw Mills, linen manufacturers, Barnsley: records, incl papers rel to Henry Pigott, son of the founder of the mills and Mayor of Barnsley (1884-1886) 1844-1967 (A/3180/F)

Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE: William Cochrane Ltd, hosiers, Chester: records incl minutes, accounts and registers c1900-2000 (ZCR 7380)

Coventry History Centre, Herbert Art Gallery and Museum, Jordan Well, Coventry, CV1 5QP: Liggins & Co, textile manufacturers, Lillington: papers 1874-1985 (PA2726); MH Spencer Ltd, reed and heald manufacturers, Stoneleigh: papers 1887-2000 (PA2738)

Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG: Sir Richard Arkwright & Co Ltd, cotton spinners: wage account books for Lumford Mill, Bakewell 1786-1811 (D6907)

Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG: WG & J Strutt Ltd, cotton spinners, Belper: business and other records c1775-1950 (D6948)

Dundee University Archive, Records Management and Museum Services, Tower Building, Dundee, DD1 4HN: Jute Industries Ltd, jute manufacturers, Dundee: further records incl minutes 1926-1966 (2008/302)

Essex Record Office, Wharf Road, Chelmsford, Essex, CM2 6YT: Crowther Brothers, clothing manufacturers, Colchester: ledger c1928-29, agreement 1938 c1928-1938 (D/F 304)

West Yorkshire Archive Service, Calderdale, Central Library, Northgate House, Northgate, Halifax, HX1 1UN: John Crossley & Sons Ltd, carpet manufacturers, Halifax: directors’ minutes and photograph albums with corresp 1893-1976 (WYC:1410)

Lancashire Record Office, Bow Lane, Preston, Lancashire, PR1 2RE: John Barnes & Sons, cotton manufacturers, Accrington: accident books for Tennyson Road Mill and Waverley Park Mill 1924-1950 (DDX 104); Lostock Hall Spinning Co, cotton spinners, Preston: war records, invoices, receipts and other records 1931-1958 (DDX 2687); Para Manufacturing Co, cotton goods manufacturers, Nelson: account book 1919-1931 (ACC 10314)
Leicestershire, Leicester and Rutland, Record Office for, Long Street, Wigston Magna, Leicester, LE18 2AH: R Rowley & Co Ltd, hosiery manufacturer, Leicester: directors minutes and private ledger 1901-1926 (DE7567)

Museum of Science and Industry in Manchester, Liverpool Road, Castlefield, Manchester, M3 4FP: P Frankenstein & Sons (Manchester) Ltd, waterproof clothing manufacturers: technical papers, scientific journals and photographs relating to the development of a British operational full pressure suit 1950-1960 (2007.25); Tootal Broadhurst Lee Co Ltd, cotton manufacturers, Manchester: papers rel to the development of a chemical treatment to produce non-crease fabrics c1920-1930 (2007.60)

Nottinghamshire Archives, County House, Castle Meadow Road, Nottingham, NG2 1AG: William Brown Carter, lace manufacturer and Methodist lay preacher: diaries, corresp, family and personal papers 1831-1903 (7397)

Oldham Local Studies & Archives, 84 Union Street, Oldham, OL1 1DN: Shiloh plc, cotton and man-made fibre spinners, Royton: minute books and ledgers c1930-1989 (2008/23)

Suffolk Record Office, Ipswich Branch, Gatacre Road, Ipswich, Suffolk, IP1 2LQ: Richard Emms & Co, clothing manufacturers, Syleham: misc accounts 1854-1967 (HC491)


West Yorkshire Archive Service, Leeds, 2 Chapeltown Road, Sheepscar, Leeds, LS7 3AP: John Walton & Son (Calverley) Ltd, woollen
manufacturers: notebook rel to day to day running of Lydgate Mills 1900-1920 (WYL2215)

**Worcestershire Record Office, County Hall Branch, County Hall, Spetchley Road, Worcester, WR5 2NP**: Worcester Association of Glove Manufacturers: minutes 1918-1947 (BA14726)

**Transport**

**Carmarthenshire Archive Service, Parc Myrddin Richmond Terrace, Carmarthen, Carmarthenshire, SA31 1DS**: Gwili Railway Co: minutes and papers 1973-2001 (8022)

**Cumbria Record Office, Kendal, County Offices, Kendal, Cumbria, LA9 4RQ**: Cumbria Railways Association: records incl corresp and plans rel to Settle and Carlisle railway 1866-1881 (WDSo 108)

**Derbyshire Record Office, New Street, Matlock, Derbyshire, DE4 3AG**: Cromford Canal Co: toll receipt and navigation permit book 1838 (D6936)

**Falkirk Council Archives, History Research Centre, Callendar House, Callendar Park, Falkirk, FK1 1YR**: Stirlingshire Midland Junction Railway: corresp, legal papers, parliamentary papers 1836-1855 (A1800/F3)

**Gloucestershire Archives, Clarence Row, Alvin Street, Gloucester, GL1 3DW**: Stroudwater Navigation Co: additional corresp and papers rel to reports and inspections 1953-2002 (D1180)

**National Railway Museum Research Centre, Leeman Road, York, YO26 4XJ**: British Transport Commission: records of British Transport Advertising Co c1930-2006 (2008-7120)

**Peterborough Archives Service, Peterborough Central Library, Broadway, Peterborough, PE1 1RX**: Peterborough Wisbech & Sutton Railway Co: plans c1863-91 (PAS/RP)

**Sheffield Archives, 52 Shoreham Street, Sheffield, S1 4SP**: LD Hadfield (Transport) Ltd, Sheffield: office diaries recording bookings, loads and customers, financial records 1949-1977 (X148)

**Suffolk Record Office, Lowestoft Branch, The Library, Clapham Road, Lowestoft, Suffolk, NR32 1DR**: London & North Eastern Railway Co: misc records rel to goods yards, etc c1930-1989 (L1853)

Water
Hampshire Archives and Local Studies, Hampshire Record Office, Sussex Street, Winchester, SO23 8TH: Frimley and Farnborough District Water Co: Fleet Division ledger 1911-17 (43A08)

Miscellaneous
Ceredigion Archives, Swyddfa’r Sir, Marine Terrace, Aberystwyth, Ceredigion, SY23 2DE: Nantwich Museum: MS collection incl records of Cheshire Dairy Farmers Association, Galloway’s Cash Chemist, Nantwich, and John Harding & Sons, clothing manufacturers, Nantwich 19th cent-20th cent (D 7457)
Glasgow University Archive Services, 13 Thurso Street, Glasgow, G11 6PE: African Lakes Corporation plc, commodity importers, London: minute books, cash books, agenda books, annual reports and accounts, deeds, plantation plans, maps and charts, land sale corresp, staff contract books, steamer and engineering specification books, photographs 1878-1991 (UGC193)
Manchester University: John Rylands Library, 150 Deansgate, Manchester, M3 3EH: Zambesia Exploring Co Ltd: additional records 1891-1928 (2008/015)
Staffordshire and Stoke-on-Trent Archive Service: Stoke-on-Trent City Archives, Hanley Library, Bethesda Street, Hanley, Stoke-on-Trent, ST1 3RS: Pooles Engravers, Hope St, Hanley: sample book of engravings 1886 (SD 1442); Staffordshire and Stoke-on-Trent Archive Service: Stoke-on-Trent City Archives, Hanley Library, Bethesda Street, Hanley, Stoke-on-Trent, ST1 3RS: Prince Minerals Ltd, colour merchants, Fenton: records c1930-1980 (SD 1458)
Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND: Ashley Cook Ltd, laundry and dry cleaners, Horsell: misc ephemera and photographs 1956-94 (8276)
Tyne and Wear Archives Service, Blandford House, Blandford Square, Newcastle Upon Tyne, NE1 4JA: Northern IT Research Ltd, Newcastle upon Tyne: reports, minutes, corresp, financial records. 1980-2000 (DT.NITR)
West Sussex Record Office, Sherburne House, 3 Orchard Street, Chichester, West Sussex, PO19 1RN: Smurthwaite Signs, Worthing: business papers of Mr HW and Mrs KD Virgoe, proprietors 1962-78 (Acc 15092)
From Berle and Means to Chandler, the divorce of ownership from control has been regarded by historians and economists as the hallmark of the modern business corporation. This ambitious book attempts to identify the historical factors that led to this divorce in large British companies. At the outset, Cheffens, Professor of Corporate Law at the University of Cambridge, rejects most of the usual explanations. Before the 1960s, UK company law did little to encourage controlling shareholders to exit their firms (for example, through disclosure requirements or restrictions on insider trading), nor did it offer much protection for minority shareholders, yet the separation of ownership from control was already underway by this time. Contrary to the theory that ‘left-wing’ political regimes are more hostile to widely held companies, Labour governments in Britain during the 1960s and 1970s presided over this process of separation. Nor is there is any clear evidence that companies controlled by their owners were any less efficient than those with highly diffuse shareholdings. Instead of applying a dominant theory, therefore, Cheffens opts to search for the causes of ownership diffusion in a straightforward and sensible way, by examining the factors that drove large block shareholders to sell, and others to buy shares.

Following two chapters that list the generic incentives and disincentives for buying and selling equities, the core of the book is taken up with an historical account of corporate ownership in Britain, divided into four periods, pre-1880, 1880-1914, 1914-39, and 1940-90. Although there were many joint-stock enterprises with traded shares in Britain by 1880, few of these, according to Cheffens, constituted what he calls a ‘modern-style divorce of ownership and control’, as they usually had only had a small, local shareholder base. Hannah’s view that this divorce was the norm in large industrial and commercial companies by World War One is discussed and rejected. By 1914, according to Cheffens, despite the growth in shareownership and the increased trading of industrial shares on London and provincial stock markets, legislative protection of shareholders remained weak, and overseas investments were an attractive alternative for investors. A separation of ownership and control remained the exception in large UK companies outside banks and railways. During the interwar period, changes to tax laws provided greater incentives to companies to expand their ownership base through public issues of shares, while regulatory and market factors reduced the attraction of foreign investments. Despite the growing diffusion of share ownership, however, blockholding remained common in large firms on the eve of the Second World War. After the war, changes in taxation (notably the rising tax burden on dividend income for top earners), declining profits and tighter regulation (notably by the London Stock Exchange of listed companies) encouraged blockholders to sell, while, on the buy side, the rise of institutional investors - pension funds and insurance companies together owned over 40 per cent of the shares of UK public companies by 1981 - provided the demand for shares that allowed individual owners to exit. The growth of shareholding by institutions, however, also opened up the potential for a re-convergence of ownership and control, if the institutional investors had been interested in participating in corporate governance. They were not, however, generally adopting a hands-off approach, and preferring to sell out, rather than press for reform, if they perceived
problems with the management of firms they had a stake in. The rise of the activist shareholder after the turn of the millennium, accumulating stakes in companies with a view to reforming management, occurred just as the pension funds and insurance companies, partly through market imperatives, were beginning to scale back their investment in the shares of public companies. The brief window of opportunity for a new fusion of ownership and control passed with the onset of the credit crunch in 2007, and Cheffens predicts that the divorce between the two will continue to be a characteristic of UK corporate governance for the foreseeable future.

The chronology presented here is fairly conventional. It fits well into the Chandlerian account in which modern managerial hierarchies are said not to have reached most UK big business until the 1960s, although Cheffens is generally careful - and knows his business history well enough - to avoid any normative dichotomies between the ‘laggard’ British family-owned firm and the ‘modern’ managerial corporation. Throughout the book, however, particularly in the chapters on the pre-1914 period, there is a nagging problem of definitions. How large did a shareholder base have to be, and how liquid did a market for a company’s shares have to be, to constitute what Cheffens repeatedly refers to as ‘outsider/arms-length corporate governance’(p.61)? The single majority shareholder obviously lies at one end of a long spectrum of ownership structures, but where is the threshold of concentrated ownership to be placed at any given time? Cheffens explicitly does not employ ‘a single precise definition of an ownership/control split’ (pp.23-4). According to his characterisation, the non-divorce of ownership from control required the participation of the largest shareholders in the governance of their company, locally concentrated shareholdings, and a low liquidity of shares (p.232). Yet if the economic significance of the ownership/control split lies in its impact on corporate governance and business performance, many of the agency problems associated with such a split occurred in the joint stock economy long before the railway era, indeed in most types of enterprise where a small managing group of owner-directors were confronted with a larger body of proprietors, even a few hundred or so, such as in canals, banks, insurance, shipping, gas and water companies. Local shareholdings, a low turnover of shares and the presence of shareholder-directors neither ensured family-style owner control, nor a convergence of manager-proprietor interests, in most of the thousands of joint stock companies that operated in the UK during the eighteenth and nineteenth centuries.

That quibble aside, this is a book with many strengths, including the histories of company law, financial journalism, the growth of equity trading on the stock exchange, the persistence in the UK of the dividend as a share value signal, the changing impact of the tax regime on the propensity to buy or sell shares, and, not least, the rise and fall of the private equity buyout between 1995 and 2007. These are all presented with clarity and authority. Business historians, economists and, I am sure, a much wider readership will turn repeatedly to this volume for a substantive account of the ownership of British business over the past two centuries.

ROBIN PEARSON

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The declared purpose of John Orbell’s book is to help historians of all sorts to locate historical information about a specific business. It aims to provide a route map for use in locating different business archive collections and published histories and to describe and explain the main categories of sources available for research. These are worthwhile intentions and, as readers of this journal will be well aware, ones which the author is eminently qualified to fulfil. This Guide succeeds his work of the same title of over 20 years ago. The structure of the original has been retained, but the text has been completely re-written, extended and updated to reflect the dramatic changes in access to relevant information in the field. Since 1987 there have been, as it were, earthquakes among the archives such as digitisation of sources and electronic formatting of archive catalogues not to mention striking advances in academic business history. There is no sign that such earthquakes will abate, far from it. Orbell is upbeat about all this and welcomes ‘an enormously exciting time for historians.’

The work has a fourfold structure. Logically enough the broad picture of a business is considered first: key information about it and how it may be located. Is the business still extant, where is (or was) its base and what does (or did) it do? The second section goes on to describe the various sources by which any surviving archives of the business may be found. These include hard copy and electronic forms in a variety of different institutions. The third section occupies the greater part (about four fifths) of the main text. It contains a view of the wide range of secondary sources which may help the historian especially where the surviving archives of the business are deficient, as is often the case. The review embraces archives of those who bought and sold from the business, government records, trade association and like records, printed sources, personal records and a disparate mix of industrial archaeology, graphic images, films and ephemera. This large section is followed by a full bibliography, list of useful addresses, and index.

Concealed behind a wrapper of curiously soporific colour is a handsome and well-produced book, clearly laid out with thoughtfully chosen, varied and attractive illustrations. Typeface size was not excessive for your reviewer. Admittedly he is one of a probably small proportion of readers who read the book from cover to cover. It is guessed that most readers will read only selected parts at a sitting.

What are the criteria for weighing up the content of such a book? They will of course be personal, but among them are likely to be found: utility, whether the work satisfies a need; scope, or breadth of coverage; clarity, or ease of use; depth or extent of detail; accuracy and up-to-datedness; judgement, or treatment of inherent strengths and weaknesses of historical sources; and specialist appeal, or usefulness to minority users. Taking these criteria in order we may be sanguine about the utility of the book: there is need for such a work which arises from numerous historians and from the pace of change. The scope of the book is cast quite widely, but not so as to embrace unduly arcane or marginal aspects. In short it seems about right for its market. The next criterion is the important one of clarity. Here it has already been noted that the structure of the book follows a well tried 20 year old model. No problems with that.
The historical researcher with a particular question will soon find the place to look for answers, with many helpful clear sub-heads and a detailed contents list. Logical structure is backed by an equally clear style of expression in the text which is mercifully short on obscurity and ambiguity. From clarity we go on to consider the extent of detail. Of this there is no shortage on the 178 closely typeset pages. Orbell steers a reasonable course between the twin perils of too much, in which the researcher is quickly lost in surplus verbiage and too little when the poor researcher turns away unsatisfied. Moving to the criterion of accuracy and up-to-dateness there are no serious quibbles although the author readily acknowledges that change is rapid so that early obsolescence must beckon. We must hope that the next update of the title will not wait another 20 years. So to judgement, by which is meant the extent to which the book ventures beyond strict adherence to verifiable facts about historical sources and on to pass sound subjective opinion about them. Once again the author strikes a good balance by giving hard information and adding where needed his own opinions as to its reliability, limitations and so on. To take an example at random, the subject of company prospectuses is taken up on pp.115-9. The reader is told among other things how the size and content of typical prospectuses changed over time and where collections of them may be found. In this context significantly, the reader is then warned that earlier prospectuses generally overstated the merits of the business and therefore need to be interpreted cautiously. From this example it is evident that Orbell not merely details the existence of sources, but ventures opinions to guide researchers about their particular strengths and weaknesses. The final criterion above is specialist appeal. Here your reviewer relies on his own direct experience as an historian of the construction industry. In this field Orbell no doubt provides guidance which would greatly help researchers grappling with this vast and amorphous congeries of businesses and one which in earlier times was not much given to making or keeping paper records.

This book called for the communication of a dense mass of information in relentless detail. To do so clearly and without inflicting the pain of monotony on the reader cannot have been easy. John Orbell has succeeded in that difficult task. Not only a difficult task, but a useful one which should exert a wide beneficial influence. Researchers will find more than mere answers to many of their questions; they will also find their historical horizons broadened in constructive and agreeable ways.

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This is an important book on an important subject. Privatisation – the disposal of Britain’s publicly-owned assets, chiefly gas, water, electricity, telecommunications, coal and the railways - was one of the most significant events of the later 20th century. David Parker is one of our leading experts on privatisation, and no-one was better equipped to write this official history, sponsored by the Cabinet Office, which provided access to all (or at least most) of the government’s archival material. The task was immense, and Parker elected to produce his authoritative work of record in two parts. Volume One is concerned with the ‘formative years’ in the process. It begins with a good summary of the origins of the disposal policy in the 1970s. It then chronicles the period when privatisation was aimed at the more obvious candidates for privatisation: first the somewhat anomalous enterprises in the public sector portfolio such as the British National Oil Corporation, British Aerospace, Cable & Wireless, Amersham International, the National Freight Corporation and Associated British Ports; then more challenging targets, businesses where competitive conditions were to prove more difficult to achieve, viz. bus transport, where Parker finds the results to have been ‘uneven’ (p.232) and the first of the major utilities – British Telecom and British Gas. The book ends in June 1987, at the end of Margaret Thatcher’s second term of office. Here, one might argue that the stock market crash (‘Black Monday’) in October 1987 and the subsequent failure of the British Petroleum issue would have provided a more significant break, since they pricked the bubble of speculative expectations about privatisation issues, and marked the end of a period in which easy money could be made through buying assets at discounted prices [cf. ‘Tell Sid’]. Chapters 11-15, which deal with the privatisation of British Telecom and British Gas, are key chapters, highlighting all the familiar issues: the anxiety to sell monopoly businesses while at the same time creating a regulatory environment to protect the public interest; the concern to create the conditions in which utility investment could thrive while establishing something approaching competitive markets; and the efforts to ensure that the flotations were a success without denying the government an adequate return.

As the Marquis de Vauvenargues once remarked, ‘the main fault of all books is that they are too long’, and at nearly 600 pages in a microscopic font this is certainly a long book. Inevitably, it covers the same ground as others have done before (including Vickers and Yarrow, Jackson and Price, and Martin and Parker), in outlining the identification of targets, the process of disposal and the challenge of valuing public sector businesses, and in calculating the government’s proceeds and costs, and the initial returns made by investors. Most of this earlier work was rather mechanistic, with the people and the politics left out, and it is therefore something of a disappointment to find that Parker has not done more to rectify the situation. His account is measured and thorough, but he is not an historian, and this is all too evident at times in his rather bleak treatment, with much of the cut and thrust of the political debate left to others to chronicle. Furthermore, there is no room in his selective bibliography for the work of historians such as Bill Ashworth and Jim Tomlinson, and social scientists such as Massimo Florio, who have made important contributions to the privatisation debate. My own work on the subject (for example in *British Rail 1974-97: From Integration to
Privatisation) might have been utilised, if only to challenge the contention I offered that the attack on British Rail’s subsidiary businesses in 1979-81 was important in helping the first Thatcher administration to firm up its privatisation policy. The author would also have discovered, among other things, that property sales were by far the most important component in British Rail’s asset disposals in the 1980s.

But quibbles aside, David Parker has produced a major work which deserves more attention than it has so far attracted from a society which, in marked contrast to the United States, appears to be more interested in biographies of politicians and celebrities than in serious business and political history. We await with anticipation the expected goodies in Volume Two, which will deal with the more controversial privatisations of water, electricity, coal and the railways, and examine the economic impact of the policy (productivity, performance and investment). Only then will a complete verdict on this official history be possible.

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