

Kinleith Paper Mill, Currie - its Workforce and Effect on the Community in 1880-1881

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Abstract

This paper studies Kinleith Paper Mill, the largest of the three paper mills in Currie, Midlothian, in 1880-1881. Using the Wages Book for the mill, and the Census Enumerator Books, I have analysed the 129 individuals who lived in Currie and worked in the mill, comparing their wages and birthplaces with others in paper making as well as with those in agriculture. Results show that many of the local people chose to work in the mill in preference to the more traditional agricultural jobs. This was not necessarily due to higher wages, but to better working overall conditions.

Aims and Strategy

The aim of this project was to study the effects of a specific industry, paper making, on the rural community around it. A questioning sources strategy was adopted to allow flexibility but hypothesis testing was used for one area of the project.

The parish of Currie lies 6 miles south west of Edinburgh. In the latter part of the 19th century the parish was largely rural, but its location along the Water of Leith had led to the development of mills, particularly paper mills. In 1881, there were three paper mills: Balerno Mill, Balerno Bank Mill and Kinleith Paper Mill, which was the largest of the three. To meet the aims of this project, I have split it into the following three areas:-

1. Producing an overall picture of the parish, Kinleith Paper Mill and the people who worked there
2. Analysing the occupations and wages of the workers in the mill, in comparison with the agricultural workers in the parish
3. Investigating the origins of all the paper mill workers compared with those of the agricultural workers

Work of Other Researchers

Ian Donnachie in Pryce (1994, pp52-54) showed how the Statistical Accounts of Scotland can be used to build a picture of a community. He selected the account for Crossmichael, which gave a detailed breakdown of the occupations of the inhabitants. The Statistical Accounts for Currie, (Nisbet, 1799 and Barclay, 1845) although not as detailed, provide information on the numbers of inhabitants and show the increasing importance of paper making in the parish. I have used these accounts to build a picture of Currie parish.

Golby (1995) shows how the Census Enumerator Books (CEBs) can be used to analyse occupations. In one study by John McKay, (Golby, 1995, pp78-81), the CEBs were used to analyse occupations in a shale oil community. In another, by Michael Drake (Golby, 1995, pp46-49) they were used to analyse domestic servants in Yorkshire. I have used the 1881 CEBs for Currie to build a picture of those that worked in paper making and, for comparison, those in agriculture.

The main research that prompted this project was the analysis of New Lanark and its workforce in 1885, by Ian Donnachie (Golby, 1995, pp71-78). This analysis was of a planned textile community rather than a long established rural community like Currie. However, the source used, the wages book for the main local employer, was the same source available to me for my research. The wages book for New Lanark was for the textile mill and was split into departments and occupations. The analysis showed the numbers working in each department and that the highest paid were the masters and skilled workers. One drawback was that it did not give the names of all the workers and Donnachie suggests that it should be supplemented by other sources such as the 1881 CEBs. Further analysis could then be done to answer questions such as – what was the total population of the village, how many workers had been born in the village, what proportion worked in the mills and what was the male-female ratio? In analysing Kinleith Paper Mill I am luckier since their wages book gives names to all employees and therefore, by linking it with the 1881 census, I can answer these additional questions.

The other key piece of research relevant to this project is that done by Watson (1987) in his analysis of Dalmore Paper Mill. This mill was situated on the River Esk, close to the village of Auchindinny which lies about 5.5 miles south east of Currie. Like Currie, it was a mainly rural setting. Watson's work includes details of wages paid in 1887, the first year for which records exist.

CEBs have been used in many studies to show patterns of migration. The most notable is the work of Ravenstein, published in 1885 and summarised in Pryce (1994), which resulted in his 11 "laws of migration". Grigg (Drake, 1994) reviews both Ravenstein's laws and work done since they were written. The two laws that were relevant to this project were:-

- the major causes of migration are economic.
- the major direction of migration is from the rural areas to towns.

Grigg basically agrees with Ravenstein on these two laws. By using the CEBs and adopting a hypotheses testing strategy, I tested these two laws for Currie.

Sources and Methods

The two main primary sources used in this study were the 1881 CEBs for Currie, as produced on CD-ROM (Church of Jesus Christ of Latter-Day Saints, 1999) and the wages book for Kinleith Paper Mill from May 1875 to October 1880 (National Library of Scotland, MSS 20737). These two sources are evaluated in detail.

Another primary source used was the comprehensive "Returns of Wages published between 1830 and 1886" published in Parliamentary Papers in 1887 (PP, 1887, LXXXIX). This contains statistics on wages from various sources, but is mainly based on returns obtained by circular from the various Chambers of Commerce.

Analysis of 1881 CEBs

The CEBs are an invaluable source of detailed personal information. The original CEBs for 1881 have been microfilmed but the information has also been extracted and indexed (along with all the other parishes in Britain) as part of a project funded and directed by the Genealogical Society of Utah. In 1999, a CD-ROM of this information was produced. Using this CD-ROM for my analysis greatly reduced the time required to extract the relevant data.

Although the CD-ROM hides some of the problems of the original CEBs, they are still important as the transcribers will have faced them. One of the main problems is legibility, with the standard of writing varying dramatically. Some appear to have been completed in pencil that is rapidly fading away, while others have dark check-lines on them that make them difficult to read. The microfilms of the originals also suffer from many pages being duplicated during the filming process.

Many people were illiterate at this time and the enumerator had to complete the schedule on their behalf, with the result that names were often spelled incorrectly.

Transferring the data to CD-ROM adds one more level of transcription that could lead to additional errors.

One of the uses of the CEBs in this study is to extract occupations. This is an area where the accuracy of CEBs is sometimes in doubt. As Golby states (1995, p54) "can we be sure that the householder always bothered to enter the wife's

occupation?". Also, some enumerators were very precise with occupations and others were not.

Analysis of Wages Book

The National Library of Scotland holds the archive of Kinleith Paper Mill. Their catalogue, entry, reference MSS 20671-20751, states that:-

"The archive, mainly financial, of the Kinleith Paper Mill 1866-1954. This mill, on the Water of Leith at Currie, began in 1792 and was operated by Henry Bruce (later Henry Bruce & Sons) from about 1850 to 1966. The archive has survived in a rather fragmentary state. Presented 1967 by A. H. Bruce CBE."

A. H. Bruce was the grandson of the original Henry Bruce.

Item 20737 in this archive is the wages book for May 1875 to October 1880. This wages book is split into two sections: the main wages bill and the rag and esparto sorting wages bill. Each of these is divided into fortnightly intervals.

The main wages bill shows that employees were paid largely on a time basis and for each employee it gives a reference number, employee name, job, number of days, rate per day, total fortnightly wage. A few employees had more than one job and therefore appear more than once in the list.

The rags and esparto sorting wage bill shows that employees were paid mainly by the weight of material sorted, with some also paid a time rate. For each employee it gives a reference number, employee name, weight in cwts, amount to be paid for that weight, any time period to be added, time rate, any deduction, total amount.

This source gives a wealth of information and is assumed to be accurate and comprehensive as it appears to be meticulously kept. It is relatively easy to read.

Methods

Kinleith Paper Mill was situated on the edge of Currie parish, next to the parish of Colinton. Many of the workers at Kinleith lived in Colinton and, to stick with the aims of this project, these workers were not included in the analysis. However, to make sure I traced as many of the workers as possible, I compared the wages book with the CEBs for both Currie and Colinton.

I first created a database of all Currie residents in 1881 by extracting the information from the CD-ROM. A separate database of Colinton residents was also produced for elimination purposes.

Unfortunately the wages book for the exact time of the census has not survived. The closest is that for the fortnight ending 30th October 1880. This was used as the basis for those that worked in the mill.

Nominal record linkage was then used to indicate those in Currie parish that worked in Kinleith Mill. By manually comparing the names in the two sources, any discrepancies in transcription were corrected.

Since it is unlikely that any workers lived in parishes other than Currie or Colinton, those that I could not identify, I assumed had either left in the 6 months between the wages book entry and the census date, or were absent on the night of the census.

The total number of employees from the wages book was 371. Of these, 129 were identified as living in Currie, 194 as living in Colinton and 48 were unidentified.

I also identified those in the Currie CEBs who worked in paper making, but not at Kinleith (or may have come to Kinleith between the final wages book entry and the census date), as well as those that worked in agriculture. Finally I discounted all those that did not have any paid occupation. This final subset of the 1881 census became the core dataset for the project.

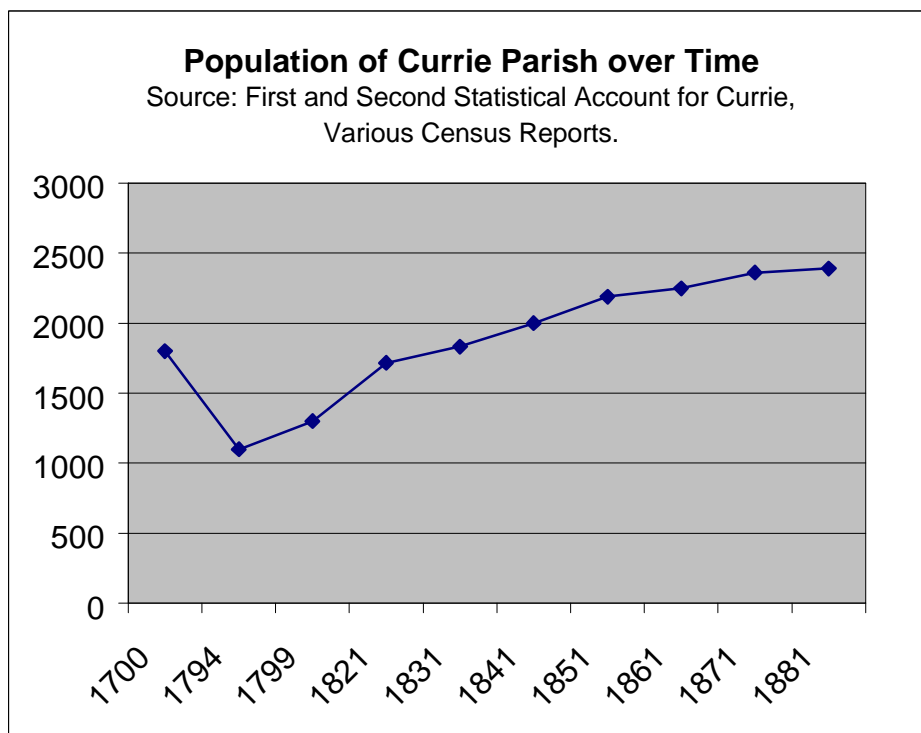
Main Findings

The main findings of this project fall into the three areas outlined in the original aims.

Overall Picture of the Parish and Mill

In the early 1700s, the population of Currie parish was about 1800. By 1794, this had declined to 1100 due mainly to changes in agricultural practices and to the upgrading of the roads allowing the use of carts. A single cart and driver could do the work of several horses and riders.

This decline was turned around by the coming of paper mills. With the Water of Leith for power, a good turnpike road into Edinburgh and a ready market in the flourishing Edinburgh printing trade Currie was an ideal location for these paper mills. The following graph shows the steady population growth up to 1881.



The first paper mill was founded in 1770 and later became Balerno Mill. Kinleith Paper Mill was founded in 1792 and Balerno Bank Mill started in 1805.

Kinleith Paper Mill appears to have been a well-run business. In 1844 it was sold to Henry Bruce and it was linked to the Bruce family until its closure in the 1960s. In 1866, production at the mill was 100 tons per month, growing to 287 tons by 1882. One of the main reasons for this rapid growth was the coming of the Balerno branch of the Caledonian Railway in 1874, with a siding at the mill. Sales in the year up to June 1881 were £119,292 with a profit of £7,030. In today's money, that would be the equivalent to sales of £7.7 million and profits of £450,000.

Of the 2390 inhabitants of Currie in 1881, 1009 were in paid employment, with 243 in paper making and 247 in agriculture. Of the 243 in paper making, 129 were known to be employed at Kinleith Mill, from analysis of the wages book, but the number was probably higher since some will have come to work there in the 6 months between the last wages book entry and the census date. Kinleith was by far the largest single employer, representing over 13% of the working population of the parish.

Of the 129 employees, 31 were living as lodgers or boarders, with 25 of those living in houses provided by the mill. Within the other 98, many families had several people working together, in one case 6 members of the same family worked at the mill. The ratio of male-to-female workers at Kinleith was 48% : 52%.

Occupations and Wages

The jobs taken on by men and women were almost mutually exclusive. The women's jobs were unskilled, whereas the men's varied from the unskilled labourer to the highly skilled machineman. The only job the women and men shared was as finishers, which meant counting the overhauled paper into reams.

Women's Occupations and Wages

As well as finishers, the women worked as rag sorters, esparto grass pickers, on the calenders, which were immense steel rollers used to compress and smooth the surface of the sheet, or as overhaulers, where they checked the quality of the sheets of paper produced.

Grass picking and rag sorting was mainly piece work and the women were paid 14.6p per 10cwt. The amount sorted ranged from 29 cwt to 101 cwt per fortnight, suggesting that some women worked part-time. Table 1 summarises the number of women and the minimum and maximum wages paid in each job. All wages have been converted to decimal currency and are quoted as a full weekly wage.

Job	Number of Women	Minimum Pay	Maximum Pay
Esparto/Rags	39	£0.21	£0.71
Calenders	7	£0.29	£0.39
Overhaulers	17	£0.28	£0.69
Finishers	5	£0.33	£0.70

Table 1: Weekly Wages of Currie-Resident Women Workers at Kinleith Mill – October 1880. Source: MSS 20737

The women working on the calenders were young, aged from 14 to 17, which probably explains their relatively low wage. The overhaulers were all ages, with the youngest and the oldest earning the lowest wages. The finishers were slightly older – the youngest was 19 – and one earned less than half the wage of the others.

Unlike Kinleith Mill, women who worked at Dalmore Mill as finishers and overhaulers were paid piece work rates (Watson, 1987, p68). The maximum weekly wage paid for both jobs was 95p in 1887 (the closest date for comparison). Between 1880 and 1887, the value of the pound dropped slightly, by 7.6% (Tigger, 1999), which means that 95p in 1887 was equivalent to about

103p in 1881. This compares with a maximum of 69p for overhaulers and 70p for finishers at Kinleith showing that if they were prepared to work hard, women could earn more at Dalmore!

The average wage for women working in some paper making jobs in the Edinburgh area in 1880 is given in the Return of Wages (PP, 1887, LXXXIX). This is summarised in Table 2.

Job	Average Weekly Pay
Finishers	0.60
Esparto Workers	0.50
Rag Workers	0.53

Table 2 – Average Rates of Wages Paid to Women Workers in Paper Manufacturing in Edinburgh and Neighbourhood during the year 1880. Source: PP, 1887, LXXXIX

It is difficult to compare the rag and grass workers with the average, as many at Kinleith did not work full time. However, the average pay for finishers at Kinleith was 58p per week which is slightly less than the average for the Edinburgh area.

One of the main alternatives for these women would have been to work in agriculture. The nearest year for which information on agricultural wages for women is available is 1879 in Devine (1984, p116). This show that in the county of Midlothian a women could expect an average of 43p per week, rising to 75p during the harvest. For a young girl, this may be more than the wage at the mill, but the conditions and the prospects would not be as good. As Devine (1984, p119) says:-

“No educated country girl with a spark of ambition and pride about her need toil among the “tatties” for lack of opportunities to better herself in a different branch of employment”

Men’s Occupations and Wages

A summary of the men’s employment and wages is given in Appendix 1.

The men’s jobs were more varied. The highest paid was the millwright, with the foreman as the second highest. This is comparable to Dalmore, where Watson (1987, p66) found that the

“highest paid male workers were not the skilled process workers....., but those whose task was to make sure the mill did not close because of mechanical problems”.

The lowest paid men at the mill were the cutters, with a minimum of only 25p per week. For a full week’s work this is remarkably low – lower than any of the women who were not paid by piece work. Although they all had the same job, some cutters were paid over 4 times as much as others. Interestingly, at Dalmore the job of cutter was done by women.

Table 3 shows the wages for some of the jobs compared with Dalmore in 1887. The Dalmore wage rate is assumed to be the maximum paid, although this is not specifically stated.

	Kinleith (1880)	Dalmore (1887)
Finisher	1.03	1.75
Machines	1.60	1.50
Beaters	1.48	1.23
Carter	0.85	0.86

Table 3 – Comparison of Wages paid to Men at Kinleith Mill and Dalmore Mill.
Source: MSS20737, Watson(1987)

With the exception of finisher, the wages paid were very similar, given the 7.6% drop in the value of the pound between 1880 and 1887.

Unfortunately, the Return of Wages (PP, 1887, LXXXIX) combines most of the men's jobs under the heading of "Paper Maker", with an average wage of £1 per week. At Kinleith, the average over all men's jobs was 96p per week, slightly below the overall average for the Edinburgh area. The only specific job that the Return of Wages covers is for the labourer, where the average is 75p per week, compared to Kinleith's average of 89p.

How does this compare with the wages in agriculture? The average weekly wage for a married ploughman in Midlothian in 1881 was 97p including an amount for allowances (Bowley, 1899). The average at Kinleith of 96p for all paper makers is almost exactly the same. For an agricultural day labourer in Midlothian, the average across both summer and winter rates was 82.5p per week. This is less than the 89p for labourers working at Kinleith.

So, like the women, the men's wages at Kinleith were not much different from those paid in agriculture. It would have been the working conditions, job security and prospects of advancement that would have made all the difference.

Origins

To analyse origins, I have compared the agricultural workers with the paper mill workers from all three mills. Table 4 summarises the results. Note that the birthplace for 9 mill workers was not given in the census.

County of Birth	Paper Mill Workers	%age	Agricultural Workers	%age
Currie	95	40.60%	43	17.41%
Midlothian (excl Currie)	66	28.21%	68	27.53%
Ireland	26	11.11%	28	11.34%
Lanarkshire	11	4.70%	34	13.77%
West Lothian	8	3.42%	25	10.12%
East Lothian	7	2.99%	11	4.45%
Peebleshire	1	0.43%	13	5.26%
Other	20	8.55%	25	10.12%
Total	234		247	

Table 4: Analysis of Birthplaces from 1881 CEBs for Currie

The results show one clear difference, 40% of paper mill workers were born in Currie, compared with only 17% of agricultural workers. How does this fit with the two laws of Ravenstein to be tested, namely:-

- the major causes of migration are economic.
- the major direction of migration is from the rural areas to towns.

On the first point, it was for economic reasons that many agricultural workers were in-migrants. The number of agricultural workers was falling across Scotland, but more in some places than in others. Between 1861 and 1881, there was a drop of 26% in Midlothian, compared to 36% in Lanark and 45% in West Lothian (Census of Scotland 1861,1881). This would explain why substantial numbers of agricultural workers from these two areas were coming in to take up the jobs of the local Currie people who had chosen to work in the mills instead.

At face value, it would seem that Ravensteins second "law" above, does not work. However, without the paper mills to keep them in Currie, it is likely that many of the local people would have moved to Edinburgh.

Conclusions

The aim of this project was to study the effect of the paper making industry on the parish of Currie. An analysis of the 1881 CEBs and the wages books for Kinleith Mill has shown that the industry was a major factor in the continued and sustained growth of the parish. Many of the local people chose to work in the mill in preference to the more traditional agricultural jobs. This was not necessarily due to higher wages, but to better working conditions, a wider selection of jobs and the opportunity for advancement (at least for the men). As a result, more agricultural workers came from outside the parish to cover the jobs done in the past by the local people.

Primary Sources

Census of Scotland (1861), HMSO

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Appendix 1

Job	Number of Men	Minimum Pay	Maximum Pay
Millwright	3	0.81	2.38
Foreman	2	1.75	1.90
Plumber	2	0.92	1.90
Machines	4	0.56	1.60
Clerk	1	1.50	1.50
Beater	5	0.55	1.48
Fitter	1	1.36	1.36
Fireman	2	0.87	1.28
Gas	3	1.23	1.23
Dissolvers	1	1.22	1.22
Cutter	7	0.25	1.14
Breakers	4	0.98	1.08
Finisher	6	0.55	1.03
Gardener	1	1.03	1.03
Boilers	3	0.85	1.00
Siding	1	1.00	1.00
Stores	1	1.00	1.00
Labourer	8	0.85	0.92
Bleacher	3	0.86	0.90
Carting	1	0.85	0.85
E Pans	1	0.85	0.85

Table 5: Weekly Wages of Currie-Resident Men Workers at Kinleith Mill – October 1880. Source: MSS20737