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SCOTTISH BUSINESS AND INDUSTRIAL HISTORY

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Scottish Business and Industrial History, formerly *Scottish Industrial History*, is a journal published by the Business Archives Council of Scotland, and has, since 1977, been devoted to the dissemination of original historical research into all periods and facets of Scotland's industrial and commercial past. It publishes articles on business, economic, financial, management or technological aspects, and is also interested in any relevant debates and discussions. Related disciplinary or interdisciplinary studies are also welcome, and both empirical and theoretical approaches are acceptable. Contributions should be sent to either of the Joint Editors, Dr. Alisdair Dobie, Department of Accounting and Finance, University of Stirling, Stirling FK9 4LA (email alisdair.dobie@stir.ac.uk) or Professor Sam McKinstry, Business School, University of the West of Scotland, High Street, Paisley, PA1 2BE (email sam.mckinstry@uws.ac.uk)

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CONTENTS

Editorial

The present edition of the journal brings together four archivally-based papers which are most enlightening concerning Scottish nineteenth century business and the society in which it was rooted.

The first of these is Alan Cameron's fine study of a rural banker, John Alexander of West Linton, Peeblesshire, whose life was central to the smooth financial functioning of the local community, and whose interests across the social and religious fabric of the village and environs in which he lived were an essential social cement. His existence touched on the lives of some more prosperous and fortunate than himself, including Charles Tennant of The Glen, chemical magnate and Charles Cowan, head of the large papermaking firm then spreading internationally and based in Penicuik. But here we also have information on Alexander's family and ecclesiastical connections, which reveal that his Christian faith went through him 'like lettering in a stick of rock', and that this sustained him in all he did, although life was not without its sadnesses in what appears today as a simpler age, but may not have been.

Andrew Eadie's paper on the African Lakes Company is an examination of the firm which followed in the wake of David Livingstone in Central Africa, its purpose being to provide transportation in order to open up trade with the British Empire and for missionary work. To the modern mind, it seems somewhat surprising that missionary endeavor should be linked with trade, but, as the paper shows, this was seen as an essential part of the civilising and Christianising process of the Empire. There are fascinating details here of kit-form steam powered boats being transported overland from western Scottish shipyards to central Africa, of turf wars with other nations for trade routes and finally of the latter days of the African Lakes Company.

Descended from Scottish forebears, Professor Ross Petty of Babson College, Massachusetts, has traced the rise and fall of several important bleach works in the Paisley district across the nineteenth century, an industry about which very little was hithertofore known. These enterprises were an integral part of the local textile industry, which, famously, produced shawls and thread, both trades relying for some time on these works. The author's interest has also extended to the personal lives of their proprietors and associated families, examining how ordinary human lives were played out against this industrial backdrop, including some insights into the possessions, wealth and social habits of those concerned. The advancement of technology rendered these works obsolete by the end of the nineteenth century, leaving little trace, a gap which the present paper now fills.

The Turkey Red dyeing industry is now largely forgotten but was once very important to Scotland, and Julie Wertz's study gives a detailed overview of its rise, fall and scope. A description of the emergence in Scotland of the Turkey Red process, which had its origins in several distant nations and, at times, disputed parentage, is given. The complicated process is itself discussed, stopping short of chemical analysis, but giving a good sense of what was involved. Some major Scottish concerns which used the process are also discussed, including that of the Orr-Ewings of Ballikinrain, whose considerable wealth owed much to it.

JOHN ALEXANDER OF WEST LINTON, VICTORIAN BANKER

Alan Cameron
Former Head of Archives and Central Records, Bank of Scotland

Abstract

Despite the large amount of work and publication on Banking History in the last 30 years, the predominant view of a bank is that seen from Head Office, with very little understanding of the pressures which operated on the local bank branch, particularly those in rural areas. The local Agent/manager tends to appear in the central record only when he is to be promoted, transferred, pensioned off, or very occasionally to be reprimanded or dismissed. The following case is a study in a rural area of the Scottish Borders of the operation of a local branch and its Agent against a background of declining population and prosperity. The character, interests and family connections of John Alexander were a vital element in sustaining Bank of Scotland's business through the second half of the nineteenth century.

Introduction

For several generations of Scottish bankers preparing for the exams of the Institute of Bankers in Scotland, there was one text, along with Wallace and McNeill's *Scottish Banking Law,* with which all were meant to have more than a nodding acquaintance; George Rae's *The Country Banker.* The first edition came out in 1884, and was an expansion of his earlier 1850 work written under the pseudonym of Thomas Bullion. Rae's book is addressed to those who would be or wanted to become branch **managers** in English Banks and who might, eventually in very exceptional circumstances, possibly reach as far as senior Head Office management.[1] The Scottish system was a little different. Branch banking was normally operated by **bank agents** who usually had business interests other than banking. They were in effect semi-independent contractors, subject to inspection and control from Head Office, but in the Victorian period were often the local 'man of business', with wide-ranging interests and responsibilities. In the first generation of Bank of Scotland Agents in the 1770's this had tended to include political management in the interests of the local major landowner. [2] In the bigger branches the Agent might have a professional

manager running the banking side of his business interests, but the agency system was long-lasting particularly in the smaller towns and only finally disappeared in the 1960s.

The West Linton Branch

The area that the Bank of Scotland branch in West Linton serves is roughly 100 square miles of upland and wet heath and moorland, with no land lower than 200 metres in the north-west corner of Peeblesshire, comprising the 3 parishes of West Linton, Newlands and Kirkurd. Under the current system of Agricultural assessment there is no land rated better than 3c, i.e. oats, rye, and a little barley were grown in the past, but today grass, root crops and animals, mostly sheep, are the norm. [3] In the 1840s the Second Statistical Account revealed that West Linton with a parish area of 24,000 acres only 4,000 acres were under cultivation. [4] In the 1861 Census the population of the 3 parishes was 2883 persons. In the 1901 census the population was 1985, and the only population centre was the village of West Linton itself with 512 people in 1861, and 359 in 1901. The drop in population over the 50 year period is of the order of 40%. The questions therefore are; why establish a branch of any bank in the first place, did it ever return a profit on the business to Bank of Scotland, and what sort of Bank Agent could build or even sustain the business against this decline?

The banking business was established in West Linton as a sub-branch of the City of Glasgow Bank in Peebles in the early 1850s. The Agent Walter Thorburn anticipating the difficulties which were arising from the collapse of the Western Bank in 1857, with its knock-on effect to the City of Glasgow Bank offered to bring the whole business to Bank of Scotland, and reckoned that with the sub-branch they would have the whole banking business of Peeblesshire. He was Collector of taxes and distributor of accounts for the County. The business stood at £105,000 of deposits, Average discounts of £5000 and authorised overdrawing (cash credits) of £12,000. Peebles was in a period of expansion, due in large measure to the building of textile factories and the recent opening of the rail link to Edinburgh. In December 1857 it was agreed by the Bank of Scotland Directors that the sub-branch in West Linton should continue on a year's trial with Archibald Alexander as sub-agent at a salary of £80 a year plus £10 rent for premises hire. The bond of security for losses was set at £1,000 and was signed on 31 March 1858 with John Lees, tobacco manufacturer, Edinburgh and William Ford, Wholesale grocer, Leith as cautioners. To put this salary into perspective the clerk in the Peebles branch was on a salary of £60 pa. [5]

There were a number of reasons why in the 1850s and 60s West Linton and district looked like a good banking prospect. There were as yet no banking competitors. There were twelve major landowners in the area, and six were refurbishing or extending their principal local residences in the late 1850s. In one certain case, Newhall, and two other possible cases, Halmyre and Spittlehaugh the Edinburgh architect David Bryce had a hand in remodelling them in the grand Scottish baronial style. [6] This in its turn meant that there was demand for locally quarried stone, brick, lime, wood work, and of course for domestic service. It is notable that the major recorded cash credit in the ledger for the sub-branch at this time is for £1500 for Charles Lawson, quarry master at Deepsyke head, whose output covered coal, stone and lime. [7] The 1861 census describes him as Master Builder (an Ibsen Figure?), employing 64 men, plus 13 men and 4 boys as coal miners. His unmarried 21 year old son James is described as a journeyman stonemason. [8]

The Railway Arrives

The success of the Edinburgh to Peebles railway *(opened in1855)* via Leadburn, which is on the exact junction of Midlothian and Peeblesshire created the possibility of a branch line through West Linton to Dolphinton and thereafter to the West Coast line at Carstairs or Douglas. The Peebles Railway included a number of Directors or shareholders from Linton who were naturally interested in promoting a branch line which might offer the prospect of equal success. The engineering of the line was easy, 10 miles- one cutting, small raised railbeds except over the area of Whitemoss, and one bridge to be built over the Tarf, a tributary of Lyne Water. The proposal was to raise £40,000 in shares of £10 each, and Thomas Bouch the consulting engineer hoped to bring the line into operation for £35,000. The expectation was that the investment would give a yield of 5% to shareholders. The plan was that, as elsewhere, when the line was built it would be operated by the North British Railway Company. [9] The Prospectus was bullish about the future success of the line and the benefits to the neighbourhood. *"In addition to the ordinary traffic in agricultural, pastoral and dairy produce, to be afforded from lands amounting in rental to £30,000 a year, a very valuable water power would be brought into immediate employment ensuring the addition of Manufacturing production. But it is to the transport of minerals the promoters look with confidence for a return much beyond what is necessary to yield a remunerative dividend to shareholders."* The Prospectus then went on to assert *"The greater part of the capital required has already been subscribed for in the district, and the remaining portion is open to public subscription..."* This latter statement is no piece of fluff since an examination of the shareholder list reveals that it was indeed the case. The subscription book was opened in December 1861 and closed two years later.

The Bankers were Bank of Scotland and the Union Bank of Scotland (the latter for reasons which will be explained below). The largest shareholder was the engineer Thomas Bouch who took 200 shares costing £2,000. Below that the major landowners in the District took 100, 60 or 50 shares, and formed the core of the railway directorate. A clear majority of the shareholders, lived within the district and at many of the rest had family or business connections within the area. Although tenant farmers represented the majority of local shareholders mostly taking 5 or 10 shares, there were a number of West Linton artisans who managed 2or 3 shares, notable were Patison Bain the shoemaker with 2 shares, Ebenezer Blacklock the Newlands schoolmaster and James Palmer the Kirkurd schoolmaster with 2 each, and Robert Alexander, flesher with 3. In the case of the schoolmasters we know from other sources that their annual salaries were £40 and £50 respectively. Outsiders included Charles Tennant of the Glen, director of the Union Bank, Charles Cowan, papermaker, of Penicuik, and John Buchan, writer of Peebles (and uncle of the author). The shareholding raised £20,292 and the final cost of construction was actually brought in by the contractor for just over £21,000.

The Directors of the railway opened an account with the sub- branch in 1861 to receive local subscriptions, and from the dates of the entries we can see when cash was called up for railway construction. This is not the whole story, because some of the small shareholders deposited money as and when they could, being allocated shares when the account reached the £10 mark. Given that in 1860 shareholders did not have limited liability for their holding, it indicates confidence of people with modest financial resources in the long-term viability of the project.

By correlating the share-holding information with the Bank of Scotland's ledgers for the sub-branch and the census for 1861 we can build up a fairly detailed picture of who did and did not bank with the Bank locally (See Appendix 1). Of the 77 local shareholders identified 29 had local bank accounts, and a further 19 made use of the Directors' account to save towards shares or to purchase them. The obvious point to make is that the major landowners with one exception did not Bank locally. William Fergusson of Spittlehaugh was Professor of Surgery at Kings College in London, and Surgeon in Ordinary first to Prince Albert and then Queen Victoria. [10] His prime banking connection was with Coutts in Charing Cross, but in 1862 the sub-branch was authorised to draw on all Bank of Scotland branches and Coutts and Co. This permitted the transfer of money between London and the estate and it also held the running account for the estate. The Forbes family of Medwyn were perhaps a special case in that William Forbes was grandson of the Banker Sir William Forbes, whose Edinburgh Bank had been absorbed into the Union Bank of Scotland in 1849. [11] This explains both the fact of the Union Bank appearing as Bankers to

the Railway Company and the nominal shareholding of Charles Tennant of the Glen, one of the Directors. [12]

Customers and Business

The Forbes family continued to view the Union Bank as 'their Bank'. At Macbie Hill House, George Beresford spent most of his life as a soldier, and in 1861 was resident at Curragh camp in Ireland. The Earl of Wemyss and March owned extensive landholdings in Peeblesshire, primarily at Barns, Drochil and Flemington, but also had major landholdings in East Lothian and elsewhere in Scotland. Charles Alexander of Whitfield who was a Bank customer farmed 1100 acres at the east of the parish. This was land which had been won from bog by drainage, lime from Deepsykehead, and careful crop rotation to build up fertility over the previous 40 years. Similarly the Brown family, father and son at Kippet and North Slipperfield with 3,600 acres were primarily managing a sheep run, of the type created by the Highland Clearances, on the Western edge of the Pentland Hills. Their crops were hay and beets for winter feed.

At the other end of the scale the 1861 census reveals that within West Linton Parish itself 149 houses out of 309 were single roomed, more than half in multi-occupation. These inhabitants were unlikely to provide the Bank with customers. The core of the Bank's customers were to be found among the substantial tenant farmers, merchants and artisans of the area; not a huge constituency.

The Bank inspectors had used the fact of the railway from Peebles to Edinburgh to demand a change in reporting practice from a weekly to daily return ***'to obviate irregularities'*** unspecified. The sub-Agent in West Linton was required to take a gig to Leadburn in daylight hours to meet the train carrying the information. Once the Dolphinton-Leadburn railway was in place this was a simple 20 minute journey in each direction. [13] In 1862 the Inspectors felt that fortnightly visits to Romanno Bridge and Blyth Bridge were unnecessary. The sub-Agent, Archibald Alexander pointed out that this was when a significant part of his banking business was done. The matter was dropped when the figures given below were supplied.

On the other hand an average of 8 to 9 transactions a day does suggest that business was a leisurely matter which left the Agent ample time for his other activities, provided the branch was available during the normal banking hours each day. [14]

March 1862			June 1862		
Place	No.	Value	Place	No.	Value
West Linton Transactions	142	£6,988	West Linton Transactions	156	£5,728
Blythe Bridge	50	£2,005	Blythe Bridge	64	£ 2,232

By 1880 the optimism of 1861 had evaporated. The first two years of the railway's operation did not produce the returns expected to the shareholders. The company's target income was £6.50 per mile per week, a monthly total income of £280. The best that was achieved was £167 between 1864 when the line opened and 1866. One problem was the lack of a through line to the Western main line from Carlisle to Glasgow. A plan drawn up in 1864 under a new Railway Company and operated by the North British to extend the line from Dolphinton to Douglas and the West Coast main line foundered under opposition from the Caledonian Railway Co. Finally In 1866 the Leadburn-Dolphinton line was sold to the North British Railway company at par. The Caledonian built a branch from Carstairs to Dolphinton, but would not link to the Dolphinton-Leadburn railway, so there were two stations a mile from the hamlet of Dolphinton and anyone, or goods wishing to go from West Linton to Glasgow had to transport them 200 metres between the stations. [15] Another factor was that the major building work wound down during the course of the 1860s as projects were completed. This is reflected in the reduction of Charles Lawson of Deepsykehead's cash credit from £1500 to £500 in 1864. There was steady building of houses and re-building of farmhouses and cottages throughout the century, but nowhere was it on the scale of the early 1860s. When Charles Lawson died in 1872 his business seems to have died with him. His son James continued as a Master Mason and builder, but other aspects of the business seem to have been sold or abandoned. Similarly the promised development of coal and other mineral resources did not happen. The coal seams at Macbiehill outcropped, and were both narrow and of moderate quality. Before 1860 they had been developed by shallow pits and horizontal addits. The 1860s saw the opening of deep pits with much larger outputs in Midlothian which were served by mineral lines from the very start, and therefore the supposed economic advantage for the Macbiehill mines disappeared. The mines met local need for a further 50 years and beyond, but were too small and insignificant to merit inclusion in the 1947 Nationalisation of the coal mining industry. [16] The final and most important factor in the stagnation of the banking business after 1880 was the decline in farming prosperity which is usually dated from 1875 when wheat began to be shipped from the Americas and frozen meat from Argentina and Australia. It is also from 1875 that the attractions of

emigration begin to loom large in Peeblesshire. It is instructive to compare wages in Queensland Australia offered to emigrants in an advertisement which appeared in the local newspaper with the wages actually achieved by labourers and female servants at the Peeblesshire hiring fair in 1876.

Peeblesshire Advertiser **29 January 1876**	**Peeblesshire Advertiser** **14 October 1876** **Report on Peebles Hiring Fair**
Free Passages granted by the Government to Female Domestic Servants of all kinds who are free to engage with whom they please at the best wages they can get. Wages --£25 to £50 a year all found **Free Passages** given to agricultural labourers whether married or single. Wages-- £30 to £50 a year all found	**Female Servants** for indoor work £8.10/- to £9.10/- for 6 months (i.e. £17-£19 pa) **Lads** £8-£9 for 6 months (i.e. £16-£18 pa) **Agricultural Labourers** £20-25 pa if single £25-£30 pa if married.

On the face of it the margin of benefit between emigration and staying in 1876 seems relatively small, but with downward pressure on agricultural wages during the rest of the 19th Century the margin increased markedly with the additional difference that it was likely that a reasonably energetic and fit young labourer would in a very few years be his own master. It is important to state that female servants, lads, and unmarried labourers 'lived in', in the latter two cases in farm bothies. Married labourers would have a cottage and some allowances in kind in addition. The price was that the wife was a 'hind' available for agricultural duties, such as weeding, singling beets or sowing and harvesting at the behest of the employing farmer.

John Alexander

John Alexander, the subject of the rest of this paper inherited the Bank branch from his father, Archibald Alexander in 1866, as part of the general family business in West Linton. He remained agent until 1911 when he retired, and it is perhaps important to state that throughout the period Bank of Scotland's business was carried on in premises which were owned by the Alexander family, and on which it paid rent. The phrase 'family business' is used quite deliberately because both the immediate and wider family had been part of West Linton for at least four generations. Family tradition, training and personal

conviction meant that religion was embedded in John Alexander's personality like the lettering through a stick of seaside rock. The generations had been stalwart supporters and attenders of the United Presbyterian Church in West Linton, which had its origins in the Erskine Disruption of the Established Church of Scotland which took place in 1731. Among the 17th Century generations members of the family had been rebels and 'out' during the Covenanting years, so, there was a long tradition of religious non-conformity. [17] The family were teetotallers and in 1857 the boys persuaded their father Archibald to stop stocking any alcoholic products in their provision merchant business. The banking and grocery business were separated by an internal door, which was never locked. A core part of the family's commitment was to the physical and moral improvement of the village in which they lived. Two examples of this from the1860s are that the Family were the instigators of, and major investors, in a village gasworks which provide street lighting, and were also heavily involved in the provision of fresh water from the spring now known as 'Rumbling Tam'.

After attending the village school for eight years John was apprenticed at 16 to a general merchant in Dalkeith with the intention of learning the grocery business, where in family tradition he started a both a Sunday School and a Band of Hope. His elder brother, James was already apprenticed to learn banking in Peebles under the Thorburn family. [18] At this stage the family plan was that James would return to West Linton eventually to take over his father's sub-Agency, and John would take over the merchant business. This master plan foundered in 1864 when James became ill and died, and Archibald Alexander's sister Barbara decided to retire from the routine of shop-keeping. John was recalled from Dalkeith to take over. We know a good deal about him, his personality and relationships (mostly non-business), because in 1864 he began to keep a diary, which was kept fully until the death of his first wife in 1872 and thereafter as an annual memorandum. [19] Later that same year, and by way of replacement, the third of Archibald's children, Richard was approved by the Bank as an apprentice in Peebles Branch (he stayed with the Bank for the rest of his career eventually being appointed in 1890 as Bank of Scotland Agent at St. George's Cross branch in Glasgow). [20] On 5th April 1866 West Linton was made a full branch of the Bank and John was approved as co-Agent. By way of preparation for this change the Bank of Scotland had sent Mr. Henderson of the Strathaven branch through to West Linton in November 1865 as clerk to remain until the Agents ***'had a competent knowledge of the books'*** and the Bank's procedures. Later in the summer of 1866 Andrew Rutherford, son of the Free Church minister in Mountain Cross was taken on as the branch's first apprentice. [21]

John Alexander aged 38, courtesy of Lloyds Banking Group Archives

1866 was a dramatic year for John, not only did he meet and marry Elizabeth Brown, daughter of a Biggar provision merchant and freechurchman in September, but in December of that year Archibald Alexander died, and John became the focus and leader both of all the family businesses and head of the family itself. His diary entry '***little did I think when starting on my married life I was so soon to be called upon to stand forward and fill dear Father's place. However perplexing it was at the time it now seems to have been the arrangement of the All-Wise, who was so fitting me for the battle just before calling me to the conflict..'.*** All the evidence indicates that he lived for certain a life of duty, obligation and responsibility, but it was also a life which had very

strong family affections. His first wife Elizabeth and His Mother, Janet were both confidantes and sounding boards and strong influences on his actions and interests. In December 1871 his diary reveals his personal financial situation. His income for the year was £280, of which his banking produced half and his expenditure £210. This included a tithe of £28 for charitable and religious purposes, a practice which he records he began as an apprentice in Dalkeith, and which he maintained until his death in 1922. The marriage produced two surviving children, but after Elizabeth's death in 1872 from bovine tuberculosis (possibly the result of milk drinking), his Mother's influence predominated. [22] He and his children moved in with his Mother, a situation which continued until 1876 when he married for a second time. [23]

After 1866 the Banking business continued to grow, but since the branch ledger information stops in 1869 specific detail about customers or indeed who they were becomes fragmentary. In 1867 the Bank made very clear that they saw that the prime function of the Branch was deposit taking and did not wish to encourage discounting or the supply of cash credits or overdrafts. [24] At the same time the Bank confirmed John as sole Agent at a salary of £120.00 a year, with an allowance of £10pa for coals with commission of 5/- per cent on yearly deposits above 25,000. It was however noted in 1872 that there was not sufficient work in the branch to justify the employment of more than one clerk, and indeed for the rest of John Alexander's period of Agency to 1911 there was either a clerk or an apprentice, but never both. In 1880 he was instructed by the Bank to discontinue his practice of making remittances to customers on his own security. This latter practice, with variants, has been one with which inspection teams struggled well into the second half of the 20th Century. Agents were reluctant to 'disoblige' long-standing and good customers in temporary difficulties, but it could result in consequences for the Bank, which required drastic action on the retirement or death of the Agent. [25]

The weekly returns to Head Office are complete for the whole period of John Alexander's stewardship of the business between 1866 and 1911, and show some interesting features. For this essay the returns have been sampled only at random intervals. It was not a spectacular business, and the writer has found no evidence of seasonal variation which might have been expected in a farming community dependent upon twice yearly livestock sales. Between September 1870 and the same month in 1885 lending rose from a weekly average of around £1900 to £4,200. Up to 1872 roughly £490 of this consisted of operations on Charles Lawson's cash credit. By 1884 there were no cash credits, which had been replaced by overdrafts. By far the largest proportion of lending throughout the period was on current bills. By 1905/6 total lending had dropped to a weekly average of around £1000. Money lodged, on the other hand shows a steady if unspectacular growth over 50 years. The weekly balances on current accounts

show remarkable consistency standing at between £3,500 and £4,500 throughout. Money lodged as deposit receipts on the other hand grows from £18,000 in 1870 to £34,500 in February 1906, and had reached £37,000 two years earlier. [26]

The Bank of Scotland's weekly returns from branches make it quite clear that West Linton was not the least of its businesses; -at least 13 of the branches consistently returned less. The inspectors' 1867 instruction that the purpose of the branch was deposit taking seems to have been carried out. The expenses of the branch were modest. In 1867 the Agent's annual salary was £120.00, the apprentice in his third year was paid £15, lease of the premises in West Linton £10 a year and an allowance of a further £10 for heat and light; a grand total of £155 for the year. No commission was paid on deposits because they had not reached the £25,000 threshold. In 1906 the Agent was paid £160 and the clerk £60 a year. In addition John Alexander must have earned around £50 in addition as Commission on deposits. Premises cost £40 made up of £30 annual rental and £10 (unchanged) in allowances; in total expenses for the branch of £330.

Later Years

John Alexander was 60 in 1897 and suffered a minor stroke a year later. [27] He remained as agent for a further 14 years, but the Procedure books of the Bank indicate no excitements and only one difficulty during these years. In 1902 A. J. Gibson the teller was asked to resign for 'irregularities'. This was never public knowledge and no further comment appears in the Bank record. Clearly it was not sufficient to merit the adverse publicity to the Bank of a public prosecution. At this stage the larger question of whether the branch was profitable for the Bank requires more research than has been undertaken for this paper, and also the accounting criteria used for calculation. By current methods of assessment of profitability it was almost certainly not. But, with having a presence in a rural locality which provided a source of deposits for investment elsewhere, Bank of Scotland seems to have been content. When John Alexander finally resigned the Agency in 1911 he was given a retiring pension of £125 a year, and the Bank appointed William Forbes of Head Office in his place at a salary of £200 a year.

Throughout John Alexander's Agency the Bank worried, but could do little, about the fact that the provisions business ran alongside the banking one, separated only by a door. [28] Credits to grocery customers in large houses who paid their bills quarterly or half-yearly was always felt likely to produce conflicts of interest, and there is also evidence of small scale charitable loans to those in need and worthy from the shop accounts. For most of the 1870s the business was handled jointly by John and his brother Archibald as a co-

partnery. This was dissolved in 1881 and Archibald became sole proprietor, much to the Bank's satisfaction, if a matter of unease to the rest of the family. [29]

It is tempting to conclude that Banking occupied a lesser part of John Alexander's life than his other charitable and social interests. At his 40th birthday in 1877 he was appointed a Justice of the Peace for Peeblesshire, and the announcement of his appointment in the ***Peeblesshire*** noted '*This is the first time the honour has been conferred on any party out-side the landed proprietors of the neighbourhood....*'. Some flavour of his wide-ranging interests in and around West Linton at this time can be got from simply listing the other public and business offices he held. [30]

Business

- Agent for Bank of Scotland
- Agent for the Caledonian Insurance Company
- Postmaster
- Sub-distributor of stamps
- Grocer and general Merchant
- Chairman and Treasurer of the Linton and District Savings Bank
- Trustee for various private and family Trusts
- Treasurer of the Linton Gas and Light Company

1. Public Offices
   - Chairman of the Parochial Board
   - Delegate to the Peebles Poor House
   - Chairman of the School Board
   - Treasurer of the School Board
   - Treasurer of the Somervail School Board

   (Before the 1877 Act there were two schools in West Linton which were amalgamated into a single school by 1880. John Alexander's role was key in achieving this 'improvement')
2. Private Interests
   - Elder of the United Presbyterian Church (also Presbytery Elder)
   - Preses of the Congregation and Treasurer, Trustee and Session Clerk
   - Sabbath School Teacher and Treasurer
   - Founder and President of the Band of Hope
   - Secretary of the Total Abstinence Society

Banking Developments

In 1878 the Scottish banking world was shaken by the fraudulent collapse of the City of Glasgow Bank. This had many consequences, primarily for the

shareholders, but it resulted in banking caution which lasted for several banking generations. [31] An impression, and for the moment it has to be that is that for the West Linton branch there was no opportunity for expansion or diversification. In the first place the cartel agreement among Scottish Bank Managers meant that pursuit and capture of other Banks' customers was actively discouraged. But, in truth this was not really an issue because the banking relationships of the major landowners were long-established and most unlikely to change, and among the tenant farmers and local artisans those who favoured Bank of Scotland were already customers, and the remainder were unlikely to change their minds.

For the most part the major farm tenancies continued in hands of the families who had the farms because the leases were long-term. What is notable is that the number of labourers per farm was reduced by about 20% during the course of the 1880s with a consequent reduction in farm output, but with increasing emphasis on animals, particularly beef and dairy cattle. The impression is that farm income declined and with it the margin of profitability. This left little room for profitable lending on any scale, and the careful oversight of accounts to look for problems was a more important task. The one bright spot was the establishment of a creamery near Dolphinton Station which meant that its milk, cream, butter and cheese could be sent either to Edinburgh or more usually to the Lanarkshire industrial towns and Glasgow. At this stage of enquiry we have little idea of the destination of the displaced labourers, but a reasonable guess is that most found their way either into the expanding Border towns or to Edinburgh or Glasgow. If the parish contributions to statutory poor relief represents a reliable guide there is little indication of increased pauperism. The Census returns on the number of habitations in the parish of West Linton tells its own story, a drop of about 26%.

1871	**1881**	**1891**	**1901**
309 occupied	250 occupied	236 occupied	258 occupied
41 unoccupied	71 unoccupied	52 unoccupied	2 unoccupied
2 building	2 building		
Total 352 houses	Total 333 houses	Total 288 houses	Total 260 houses

The large majority of the houses disappearing during the course of the 50 years were the single room dwellings, and the evidence is that some of this change was housing units being amalgamated into larger ones. Within the village itself thatch gave way to slate, and both water supply and drainage were improved by local initiative, in which John Alexander played a leading part.

Changes and Stresses

In the 1880s John's personal life changed. Once again he had to take over the family business in 1883 which had been running down since Archibald had become sole proprietor in 1881. Archibald died in 1885 and he had been bed-ridden and in physical decline for nearly two years. If not exactly the black sheep of the family, his weaknesses of character and irregular habits were clearly seen as the cause of his decline, for which he had paid a terrible and painful price. Compassion for his suffering and affection for him are certainly revealed in the relevant diary entries, but the moral of 'the wages of sin.' were starkly demonstrated and understood. [32] For the next few years the banking business coasted, run essentially by the clerk, while the provision side of the business was rebuilt. A further blow was the death of his Mother, Janet in 1894 which removed his main business confidante. [33] It is from his brother's death in 1885 that the diary becomes mainly a memorandum of deaths in the parish of friends, customers and family, including a significant number of those who appear in the first ledgers of the branch.

The diary also reveals a farming bankruptcy in 1896. John Watson of Blythbank and Bordlands ran to South Africa, and in the roup which followed a dividend of 7/11 ¼ per pound was paid to the creditors. [34] In 1893 John Melrose builder who had been responsible for many of the physical changes in the village in the 1880s noted in the earlier paragraph committed suicide, again as a bankrupt.[35] There was also a steady trickle of younger men and families to the colonies, a trickle which included his own son Archibald in 1904 [35] and largely to Canada and the US.

Concluding Reflections

On the face of any assessment John Alexander is a classic Scots rural banker of the Victorian era: - earnest, scrupulous, high-minded, but dominating his local environment; a man of many interests and energy in the 1860s and 70s and committed, like his father before him to 'improvement' of his village and its surroundings. The moral compass of such men and women is largely lost to us, and their motivations often misunderstood and misinterpreted through ignorance, or deliberate pursuit of a particular historical philosophy. What can be said is that, even in families who were in 'comfortable' circumstances, death was a companion which could skew and change the best-laid plans for the future. It is hard to escape the conclusion the death of his brother Archibald in 1885, almost certainly as a consequence of youthful folly, powerfully reinforced an underlying pessimism about life itself. It is from this date that the Diary becomes simply a record of major local events, elections (Like most non-

conformist Scots he was a Gladstonian Liberal), and the steady disappearance of friends and family members.

Perhaps the more modest moral to be drawn from this example is that no Bank can out-perform the environment in which it operates, and that in a long period of economic stagnation for the major 'industry' of an area, it requires all the skill, caution and care which the banker can apply to bring the situation safely through. In a rural part of Peeblesshire the profitable and wise lending opportunities were after 1866 few and far between, a situation fully understood both by the Bank Inspectors and ultimately by the Treasurer and Directors. Whether this makes the West Linton branch of the Bank of Scotland a typical rural bank branch is questionable, but what it does demonstrate is that within the framework provided by inspections and instructions there needed to be considerable freedom of action to allow the Agent to adapt the business to the particular and changing circumstances of the locality in which the bank operated.

Acknowledgements

This paper began as a part of a larger local history project on pre-1914 West Linton by members of West Linton and District Historical Association. Particular thanks are due to Mrs Mary Fullbrook, John Alexander's great granddaughter whose deposit of a photocopy of John Alexander's Diary 1864-1914 with the Village Archive provided the starting point for this study. Thanks are due to Jane Oliver who transcribed some very tricky handwriting, and to Chris Atkinson and Rae Montgomery whose willingness to share their knowledge of the local history and railways of the area is exemplary. Thanks also to Lloyds Bank Group Archives for permission to use the photograph of John Alexander. It comes from an album of photographs of the Bank's Agents and senior staff made around 1875. My work in the archive was made both pleasant and easy by staff members Seonaid MacDonald, Sian Yates, Amanda Noble and Rosemary Moodie for which many thanks.

Appendix 1

B of S Customers 1857-75	Address	Profession	Shareholder in Railway
Aitken, Grace	W.L.	Draper	
Aitken, William	Manse, Carlops	Minister	£15
Alexander, Archibald	Main Street, W.L.	Merchant/Banker	30,40,40,40,10,
Alexander, Archibald and sons	Main Street, W.L.	Merchants	
Alexander, Barbara	Main St. W.L.	Grocer	
Alexander, Charles	Whitfield	Farmer-1100 acres	
Alexander, Helen	W.L.		
Alexander, John	W.L.	Banker	15, 20,20,20,5,
Alexander, Margaret	W.L.	Merchant	
Alexander,Robert	W.L.	Flesher	3,4,4,1,
Alston, David	Hyndfordwell, W.L.	Land Steward	
Alston, Hugh	Patieshill, Mid.		
Bain, Archibald	W.L.	Shoemaker	4,1,
Bell, Thomas	W.L.	Wood Merchant	
Black, John	New Mill	Farmer	£7.10/-,10,10,10,10,£2.10/-
Blacklock, Ebenezer	Schoolhouse, Newlands	Teacher	4,
Bonthron, Andrew M.D.	Dalziel Cottage W.L.	Doctor	
Brodie, William	Rutherford	Farmer/ret.	
Brown, Alexander	W.L.		
Brown,James	Kippet	Farmer	
Brown, Robert G.	Greenock, Renfrewsh.	Potter/manufacturer	
Brown, Robert	W.L.	Baker	
Brown, Thomas	N. Slipperfield/Kippet	Farmer	15,20,10,20,10,20,10,20,10,5,
Caird,James Rennie	Blyth Bidge		

Charteris, James	Manse, Newlands	Minister	
Chrichton, James	Medwyn Mains,W.L.	Farmer 242 ACRES	
Coutts, David	W.L.	Teacher	
Craig, James	Scotstoun, Newlands	Farmer	
Davidson, Elizabeth	W.L.	Grocer	
Donaldson, Thomas	Kittleyknowe, Carlops	Farmer	
Elder, Thomas	Sunnyside,	Farmer	
Fergusson, James	Broomlee, W.L.		
Fergusson, Sir William	Spittalhaugh	Surgeon/landowner	200,240,(100)
Fleming, George	Damside	Farmer	
Forbes, Robert	Medwyn	Wood Merchant	
Forrester, Alexander McColl	Manse, W.L.	Parish Minister	37,10/- ,50,50,50,50,
Forrester,John & Alex. M.	W.L. Parochial Board		
Forrester, John W.S.	Edinburgh	Writer	
Gibson, John	Lochurd, Kirkurd	Farmer	
Gordon, James	Edinburgh/Halmyre	Writer	
Gordon, Mrs C.M.	Halmyre		
Gordon, Richard esq.	Halmyre	Landowner	162,
Hall, George	Kamehouse		
Henry, John	W.L.	Baker	
Hicks, Rev James	St. Mungo's Rectory		
Hebden, Caroline Hester	Broomlee House		
Hogg, William	Broomlee Lodge	Farm Steward-300 acres	
Hope, Elizabeth	Romanno		
Hunter, William	Backwater/Tarfhaugh	Farmer 95acres	£4.10/- ,6,6,6,6,£1.10/-
Inch, Alexander	S. Slipperfield	Farmer-800acres	
Ireland, George	W.L.	Merchant/grocer	
Johnston, John	Romanno Bridge	Merchant	4,
Kennedy, George	Romanno House,	Romanno	

	Newlands	House, Newlands	
Lawson, Charles	Deepsykehead, W.L.	Builder, Quarryman	15, 20,20,20,5,
Laidlaw, William	W.L.	Master baker 1 employee	
Lewis, William	Halmyre Deans		3,4,4,4,4,1,10/-
Lillie, George	W.L.	Farmer	
Lindsay, Alexander G.	Dolphinton	Coal Agent	
Lindsay, Thomas	Flemington Mill	Farmer	10,10,10
MacIntosh, James	Lamancha		
McKenzie, Jane sen.	Dolphinton		
McNeil, Alexander	Bordlands, Newlands	Farmer	
Marshall and Laird	W.L.	Joiners	
Marjoribanks, John	Garvald	Farmer	10,10,10,10,£2.10/-
Martin, Alexander	W.L.	Merchant	
Mitchell, James&Mary	Romanno	Grocers	
Morgan, William	W.L.	Merchant/draper	15, 20,20,20,20,5,
Morgan, William	Parish School Assessment	Parish School Assessment	
Napier, Robert	Carlopshill W.L.	Farmer 500 ACRES	
Newbiggin, Joseph	Dovecot Farm	Farmer	
Noble, William	Blythe Bridge	Merchant	3,4,
Newlands Savings Bank			
Palmer, James	Kirkurd	Teacher	4,1
Paterson, Robert	Paulswell	Farmer	
Paterson, William	Scotstoun	Farmer	10,10,10,£2.10,
Philips, Mary	West Linton		
Provisional Direstors of Leadburn-Dolphinton Railway	Provisional Direstors of Leadburn-Dolphinton Railway		
Rae, William	Broomlee Station	Stationmaster	

Renwick, Thomas	W.L.		
Ritchie, Archibald	W.L.	Joiner	
Ritchie, Simon	Blythe	Farmer	20,20
Robb, George	Noblehouse	Farmer	
Rutherford, Andrew	B.of S. W.L.	Bank Apprentice/Clerk	
Rutherford, Rev. Robert	Mountain Cross	Minister	
Sanderson,James	Blythebank		£7.10/-,10,10,10,10,£2.10/-
Slater, Elizabeth	Broomlee House		
Small, James	Linton Bank/Medwyn	Farmer/Overseer 95acres	
Smith, James	Rutherford	Farmer 100 acres 4 la.	£4.10/-
Smith, Janet	Rutherford	wife of James	
Somerville, John	Dovecot	smallholder	
Spittalhaugh Account			
Spittalhaugh Account			
Stoddart, Thomas	Whitefield	Farmer	
Tennant, George	West Mains, Castlecraig	Steward/Farmer	2,
Todd, David	Macbie Hill		
Todd, Robert	Romanno Bank	Merchant/Flesher	
Thom, James	Grange, W.L.	Farmer	£7.10/-,10,10,
Thomson, James	Cottage Farm	Farmer 300 acres	£2.10/-
Thomson, Robert	W.L.	Baker	
Thomson, Thomas	W.L.	Master Baker	£7.10/-,10,10,10,10,£2.10/,10
Tweeddale, William	Howison Hall	Farming own land 28 acres	
United Presbyterian Church W.L.	United Presbyterian Church W.L.		
Veitch, James	Carlops(Allan	Miller and	

	Ramsay)	Innkeeper	
Veitch, Robert &sons	Carlops	Millers	
Wardropp, William Allan	Garvald	Landed Prop.	200,240, 370,
Watson, Helen	Romanno/Dolphinton		
Watson, John	Ingraston	Farmer 500acres	20,15,20,20, 20,5,
Watson, James	Mendick	Farmer 110 acres	
Watson, James	Romanno Bank	Flesher	
Webster,Andrew	Rutherford Castle		
West Linton Parochial Board			
W.L. and District Savings Bank			
Wilson. Peter	Noblehall		
Railway Shareholders non-Bank customers			
Bain, James	West Linton	Bailie shoemaker	4,3,4,4,4
Bain, Patison	West Linton	shoemaker	3
Borthwick,John?			32.10,
Cleghorn, Richard			100,50
Core,David	West Mill	Farmer	4,4,4,4,4,1,
Johnston, James	Blythebridge	Blacksmith	4,3,4,4,1,
Kay, John	Haughhead	Farmer	£7.10/-,10,10,10,£2.10,
Ketchin, Simon	Blythe		20,15,10,20,5,
Melville, David	Castlecraig		£100.00
Melrose, Robert	Stoneypath Farm	Farmer, 600acres	4,3,4,4,4,4,
Muir, William	Robinsland	Farmer, 150 acres	6,4.1,6,1,
Noble, George	Noblehouse		50
Noble, William	Blythebridge	Grocer	£3.00
Rough, Helen			20,15, 5,
Rough, William			20,
Sanderson,Thomas			2.10,
Sanderson,William			10,7.1,10,10,10, 2.10,
Tennant, Robert	W.L.Village	Farmer,110	2,1.1,2,

		acres	
Thorburn,James			10,17,10,10,

[1] Rae, George, *The Country Banker: His Clients, Cares, and Work. From an Experience of Forty Years, 8th ed.*, John Murray, London, (1890)

[2] Saville, Richard, Bank of Scotland. A History 1695-1995, Edinburgh University Press, Edinburgh (1996) especially chapter 8

[3] *The Third Statistical Account of Scotland, Counties of Peebles and Selkirk,* Collins, Glasgow 1964, Parish of Newlands, pp 155-6; Parish of Kirkurd, p139, Parish of West Linton pp 212-3.

[4] *the New Statistical Account of Scotland Volume 3,* Blackwood, Edinburgh (1845),pp159-60

[5] Lloyds Banking Group Archives, Bank of Scotland Peebles Branch Procedure Book, GB 1830 BOS/9/1/2/253, see entries for 1857- 30 July 1858. Branch Procedure books are an invaluable source of contemporary information which record matters which the inspectors or the Bank Board decided were of specific significance to a branch, and which had to be noted by each inspection team as part of the audit process.

[6] There were 12 'big houses' within the three parishes of West Linton, Newlands and Kirkurd, and one New Hall, which was in Penicuik parish, but whose interests were in the township of Carlops part of West Linton parish. The houses were Castlecraig and Netherurd in Kirkurd parish, Macbiehill, The Whim, Halmyre, Callends, Lamancha, Borelands, and Rommano House in Newlands Parish, Garvald, Medwyn, and Spittlehaugh in West Linton. More detailed information about some of them can be obtained from *Peeblesshire; An Inventory of Ancient Monuments, Vol 2,* Royal Commission on Ancient and Historical Monuments of Scotland, Edinburgh (1967)PP 280-331. ,and Cruft, Kitty, Dunbar John and Fawcett Richard, *The Buildings of Scotland, Borders,* Yale University Press, London (2006) under the three parish entries.

[7] Lloyds Banking Group Archives, Bank of Scotland West Linton branch customer ledger 1857-1864, GB 1380 BOS/10/120/1, see under entry for Lawson, Charles.

[8] Scotlands People 1861 Census under West Linton, Deepsyke Head. Charles Lawson was 49 at this time, married and with 5 children.

[9] The information contained in this paragraph is taken (wholesale) from a pamphlet prepared by Messrs Montgomery and Atkinson to accompany an Exhibition commemorating **THE 80TH Anniversary of the Closure of the Leadburn-Dolphinton Railway 1864-1933** held in April and October 2013. Copies of original material are held in West Linton Village Archive, which was created and is managed by West Linton and District Historical Association. WL 255. Original information is held at the National Records of Scotland GB234 BR/LLD.

[10] William Fergusson was created a baronet in 1866. On 24 Jan 1862 Archibald Alexander sub-Agent was permitted both to remit and receive money direct from Coutts in London, and draw on all other BoS branches. This was a step towards the creation of an independent branch, but more immediately streamlined the Fergusson account, and made it easier to pay for the improvements at Spittlehaugh.

[11] Cameron, Alan, *Bank of Scotland 1696-1995, A Very Singular Institution,* Mainstream, Edinburgh (1995) *pp71-75, 150-151.*

[12] During construction of the line there was an accident at Leadburn when some trucks broke away and crashed into the Edinburgh-Peebles train. Among the dead was Charles Tennant's second son, who was 7 years old. The incident is reported in the *Peeblesshire Advertiser* on 30 October 1863.

[13] Lloyds Banking Group Archives, Bank of Scotland, Peebles Branch Procedure Book GB 1830 BOS/9/1/2/253 26 Jan. 1862

[14] *Ibid.* 12 August 1862

[15] See note 9

[16] Oglethorpe, Miles K., *Scottish Collieries*, RCHAMC, Edinburgh(2006) PP204-5

[17] Gunn, Clement, *Book of Linton Church Peeblesshire,* Allan Smyth, Neidpath Press, Peebles, (1912) PP119-127,132-142 . The Session Minutes of 1657 record James Alexander as one of the elders, and although there are no minutes between 1661 and 1696. James's son is believed to have joined the Covenanters who met the Government forces at Rullion Green in 1668. GB1234/CH2/1304/1

[18] Lloyds Banking Group Archives, Bank of Scotland, GB1830 BOS/9/1/2/253 1864 October.

[19] Most of the following personal and family detail is taken from John Alexander's Private Diary, which is unpaginated, and references are therefore given as diary,.. date. The first few pages contain a summary of his life and activities up to 1864.

[20] Lloyds Banking Group Archives, Bank of Scotland, West Linton branch procedure book, GB 1830 BOS/9/1/2/282 22 December 1866

[21] *Ibid.* 5 April 1866 and 15 August 1866

[22] Scotlands People, Statutory Deaths 1872 773/0011

[23] The marriage took place in Edinburgh on 26 July 1876, see Scotlands People Statutory Marriages 1876 685/02 0263

[24] Lloyds Banking Group Archives, Bank of Scotland, West Linton branch procedure book, GB 1830 BOS/9/1/2/282 19 January 1867

[25] *Ibid.* 23 January 1880. This was part of an on-going worry by the Bank Inspectors about any cross-over between John Alexander's banking and grocery businesses.

[26] This information is abstracted from the Branch Weekly States , i.e. the returns made to H.O. by every branch. These are complete. Lloyds Banking Group Archives, Bank of Scotland GB 1830 BOS/4/8/3/16 which covers the years 1870-2, GB 1830 BOS/4/8/3/23 for the years 1884-6, and GB1830 BOS/ 4/8/3/32 for 1904-6.

[27] He was given leave of absence from July- End of October 1898 due to a 'slight attack of a paralytic nature' according to the Procedure book entry.

[28] The door between the Bank and the Shop was permanently closed from now on, and the Bank began to look to purchase freehold premises for its business. This was achieved in 1923 when it bought Lyne Villa as the Bank House and build the present office in the garden. Lloyds Banking Group Archives, Bank of Scotland, West Linton branch procedure book GB1830 BOS/9/1/2/282

[29] See note 25

[30] Diary January 1877

[31] Checkland, S.G., *Scottish Banking, A History 1695-1973,* Collins, Glasgow and London(1973) PP469-478. For the impact of the crisis on Bank of Scotland see Saville (1996) PP 420-425

[32] Scotlands People Statutory Deaths 1885 14 October 773/00 0017. The cause of death is given as ***Locomotor Ataxia***, a painful progressive degenerative loss of limb and other functions over a period of 3 years. It is usually associated, although not exclusively, with tertiary syphilis. Certainly the Diary entries would seem to support this conclusion.

[33] Scotlands People Statutory Deaths 1894 13 November 773/00 0017

[34] Diary 13 November 1896

[35] Diary 29 August 1893 Archibald sailed from Greenock in the 'Columbia' bound for Toronto, Diary 16 April 1904

THE AFRICAN LAKES COMPANY: SIGNIFICANT EVENTS AND PEOPLE IN ITS HISTORY, 1878 TO 1893

Andrew Eadie
Ballast Trust, Johnstone

Abstract

This paper examines the African Lakes Company that was established in Glasgow by Scottish businessmen shortly after the death of David Livingstone. The company's aim was to establish trade and commerce in the area of Lake Nyasa and to assist in stopping slavery which was largely associated with the ivory trade. This was to be achieved by developing water borne transport systems to improve contact with the local tribes and encourage trade, together with providing transport for the missionary stations. Local difficulties, particularly with defence against the Arab slavers, led to cash flow problems. Cecil Rhodes and the British African Corporation stepped in with cash injections and sought to benefit from the treaties between the African Lakes Company and the local tribes.

Introduction

The African Lakes Company was initially established as the Livingstonia Central Africa Company on 21st June 1878 with its registered office in Glasgow. At the first meeting on 25th June it was reported that the company was originally planned to be called the Central African Company but that this had not been possible, no reason was given for the change. The name of the company was changed to the African Lakes Company on 21st June 1881. Following on from an agreement with the British South African Company made in 1890 the African Lakes Trading Corporation was registered on 31st July 1893. The following year the company changed its name to the African Lakes Corporation and the company continued trading until it went into liquidation in 2004[1]. The African Lakes Company was wound up on 15th September 1893.

David Livingstone had called for legitimate commerce to eliminate the slave trade in Africa. With his exploration of the African interior he was able to present through his lectures and books that the area to the north of the Zambesi was suitable for agricultural development. Within two years of his death at Ilaya in 1873, a mission station was established by the Free Church of Scotland at

Livingstonia at the southern end of Lake Nyasa. Shortly afterwards one was established by the Church of Scotland to the south of the lake above the Muchison Cataracts on the River Shiré at Blantyre. Lake Nyasa, now also known as Lake Malawi, is 1400 miles from the coast and 400 m. above sea level.

The development of commerce in the area around Lake Nyasa depended on improved means of transport as without this the high transport costs made only the carriage of ivory viable and this was using slaves. The first objective of the Livingstonia Central Africa Company was to provide navigation of the rivers and lakes of Central Africa that communicated with the Indian Ocean by the Zambesi River. With this in place the company could develop the trade and resources of the country and encourage "legitimate traffic amongst the natives" [2]. In addition the company aided the church missions with the transport of their goods. The London Missionary Society in 1882 contracted the company to transport their steamship up the Zambesi and Shiré and then onto Lake Tanganyika where it was to be based.

The Company and its Promoters

One of the main promoters of the company was James Stevenson (1823 – 1903) of Largs who became the first chairman. He had been involved in the Glasgow chemical manufacturers Stevenson, Carlile & Co. before retiring to Largs and was a generous supporter of the Free Church [3]. Others included John Stephen (1835 – 1916), shipbuilder, of Alexander Stephen & Sons, who was also on the Foreign Mission Committee of the Free Church, James S. Napier and James White both merchants in Glasgow and James "Paraffin" Young (1811 – 1883) who had a lifelong friendship with Livingstone.

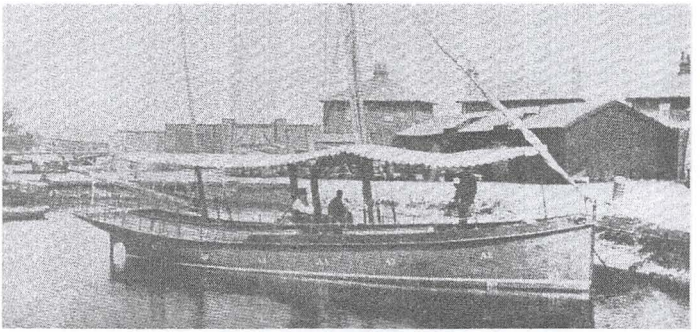
The company appointed two brothers, John William Moir, aged 27 years, and Frederick Lewis Maitland Moir, aged 26 years, as the company's managers in Africa [4]. Their father was Dr John Moir, a physician in Edinburgh who was also a shareholder in the company; all were members of the Free Church. Prior to their appointment the brothers had worked on Sir Wm. Mackinnon's scheme to construct a road from the Zanzibar coast to Lake Nyassa. After succeeding to complete 20 miles of road the project was abandoned due to the lack of government support [5].

The Moir brothers arrived at Quilimane, a Portuguese town with a customs post, on the Mozambique coast at the mouth of the river Quaqua in September 1878. It was possible to sail up the Quaqua in small boats to Vicente that was about 70 miles up the Zambesi from the delta. The Portuguese Government had opened

up the navigation on the Zambesi to all nations and had encouraged the formation of the company with a low transit duty of 3% but this was not confirmed by any treaty [6].

From the early meetings of the company's directors one priority was to organise means of transport. The company arranged to hire the steamer "Ilala" from the Free Church's Mission Committee and engaged crew in Scotland to go out and operate the steamer. The company subsequently purchased the steamer from the Mission in 1882 [7].

Vessels



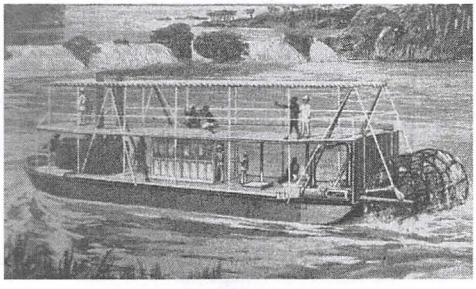
"Ilala" on the Thames, bolt-assembled before being dismantled and shipped to Africa

Bortwick, A., *Yarrows, the First Hundred Years: Yarrow & Company Ltd, 1865 – 1965.*

The "Ilala" was built for the Livingstonia Mission on Lake Nyasa by Yarrow & Co., on the Isle of Dogs, London with money raised in memory of David Livingstone. The vessel was completed in ten weeks at a cost of £1600 [8]. The pre-fabricated vessel was a schooner-rigged craft 55 feet (16.8 m.) long, 10 feet (3 m.) beam and a draught of 5 feet (1.5 m.) with two boilers and a pair of inverted engines. The vessel was shipped in pieces to Africa following re-assembly she was sailed from Chinde on the Zambesi delta to Katunga on the Shiré where she was dismantled and carried in 700 sections to Matope for re-assembly again and launching on the Upper Shiré. This was required to bypass the Murchison Cataracts north of Katunga.[9]. All the natives available were

engaged to carry the vessel and the price was six yards of unbleached calico to each man for carrying a load not exceeding 50 lbs. (23 Kg.) for 60 miles. The "Ilala" entered Lake Nyasa on 12th October 1875.

In 1878 a rear paddle steamer was being built by Yarrow & Co. for the Mission for use below the Murchison Cataracts. At a meeting between the Livingstonia Mission and the company it was agreed that the company would takeover the steamer as its own property [10]. Subsequent to this the company paid £750 to Yarrow and reimbursed £350 to the Mission that had previously been paid to Yarrow. The "Lady Nyasa" was the first commercial steamer to run between Chinde on the Zambesi delta and Katunga on the Shiré and the maiden voyage took place in March 1879 [11]. However there were serious problems navigating in the large shallow area of the Zambesi delta. The company's annual report for the year ending 31st December 1884 mentioned that shipment to the interior still required "costly overland carriage" from Quilimane. This carriage was to Vincente on the Zambesi. Although no drawing or image of "Lady Nyassa" survives it is likely that she was similar to "Le Stanley", made to the order of H. M. Stanley when he was exploring the Congo and shown below.



"Le Stanley"
Bortwick, A., *Yarrows, the First Hundred Years: Yarrow & Company Ltd, 1865 – 1965.*

With these vessels the Moirs' responsibilities were to manage the company's line of navigation from Quilimane to Livingstonia and also to Tete further up the Zambesi. Traffic was to be carried on with the natives together with establishing depots and circumnavigation of Lake Nyassa [12]. The voyage along the Zambesi and then up the Shiré to Katunga took about seven days. At Katunga a ten foot wide road climbed gradually for 35 miles to Mandala and Blantyre and then

descended for 30 miles to Matope. Native porters carried the goods. The steamer Ilala was then used to complete the journey up the Shiré and on to Lake Nyassa.

Operations

The Moirs initially went to Livingstonia but within a short time the main station of the company was at Mandala near Blantyre. Mandala was the name the native Africans gave John Moir owing to him wearing spectacles, the first man they had seen with spectacles. The climate at Mandala with its hilly position was healthier for Europeans than at Livingstonia which was in a malarial area. Mandala House that survives to this day, was built in 1882 with living quarters on the first floor and offices on the ground floor. By 1888 the population at Mandala had reached 1600 [13].

Early in 1879 the company decided to send a party under the command of the surveyor and civil engineer James Stewart and with one of the Moirs, to go over the plateau from Lake Nyassa to Lake Tanganyika and meet up with a party from the London Missionary Society [14]. The survey led to the construction of a road between Lake Nyassa and Tanganyika but James Stewart died during its construction in 1883 [15]. The road that would be called the Stevenson Road, owed its inception to James Stevenson who personally contributed significantly towards its cost. The aim was to penetrate the slave districts west of Lake Nyassa opening the region up for commerce. The distance to Lake Tanganyika was about 200 miles.

The company commenced discussions with the London Missionary Society in 1881 and this eventually led to the company transporting their steamer in 400 sections to Lake Tanganyika in 1883. The road to Lake Tanganyika gradually rose to a large plateau, near Maliwandu 40 miles from Lake Nyassa where there was a Free Church Mission Station and the proposed London Missionary Station at Zombe was about another 150 miles. The 1888 map in appendix III shows the areas covered by of the various missions and the other mission stations at Karena and Mpala on Tanganyika and Bandawe and Dikomo on Nyassa. In June 1881 the company changed its name to the African Lakes Company Ltd that was a more appropriate name considering the area over which the company traded [16]. At the same meeting it was agreed to increase the companies nominal capital to £100,000 divided into 2000 shares of £50 each.

In 1883 the company interviewed Henry Drummond who lectured on natural science at the Free Church College and arranged to send him to Africa to survey the botanical and geological resources of the Zambesi, Shiré and Nyasa district. The company paid his passage out and home together with his board and

travelling expenses in Africa but he did not ask for any salary [17]. His report was presented at a director's meeting in May 1884 and he subsequently wrote in 1888 a book 'Tropical Africa' in which he mentioned that he had found a reported coal deposit near Lake Nyasa to be unsatisfactory [18]. Later in the 1880s Professor Drummond became one of the directors of the company.

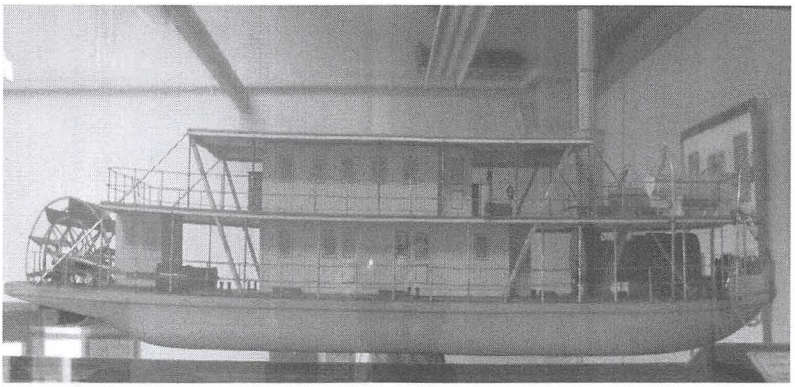
The Company decided in 1885 to divide its operations into two spheres, the first ranged from Matope on the Shiré to Lake Tanganyika with its centre at Chiringé under the management of Fred Moir with six assistants one of whom acted as a travelling trader and supercargo. The second sphere was from Quilimane on the coast to Matope with its headquarters at Mandala under the control of John Moir with the same number of assistants [19]. By 1890 the company had trading posts at Quilimane, Vicente, Karonga, Mandala, Matope, Katunga, Fife and Abercorn near Lake Tanganyika [20]. In 1891 whilst staying at Quilimane, the largest of the trading posts, a lady in a party of six travelling up to Nyasa described it as having 'commodious premises' [21].

Later Developments

At the end of 1884 John Stephen agreed to draw up plans and specifications for a new steamer to replace the Lady Nyassa [22]. In 1881 a telegram had been received from Africa to say "steamer useless..." and she could carry no more than 6 tons. By 1886 its poor goods carrying capacity was becoming an embarrassment and to fund a new steamer and other "pressing requirements" a call was made on the shareholders for £10,000 additional capital. The company placed an order with John G. Kincaid & Co. of Greenock in April 1886 to build the galvanised stern wheel paddle steamer. To cope with the shallow waters of the Zambesi the ship had a draught of only 33 inches (0.84 m.) when fully loaded [23]. The steamer was faster and could carry 10 times the cargo together with "considerable accommodation" for passengers [24]. The vessel was named the "James Stevenson" and was 85 feet (25.9 m.) long, breadth 21 feet (6.4 m.) and 4 feet (1.2 m.) depth as shown on the plan drawing. A further paddle steamer (Ship No.101) of similar size called "King" was built and designed by Kincaid for trading on the Zambesi in 1889 and a ship's model of this steamer survives at the Ballast Trust in Johnstone.

The company was able to declare its first dividend of 2.5 % at the company's AGM in 1887 for the year ending 31st December 1886 with having made a profit of £551 in that year and a balance of £346 from the previous year [25]. Initially it was expected that ivory would be the only means of profit and the balance sheet for 1886 showed that the company had sold £3,400 of ivory in that year. The company's balance sheet for 1884 showed that a coffee plantation had already

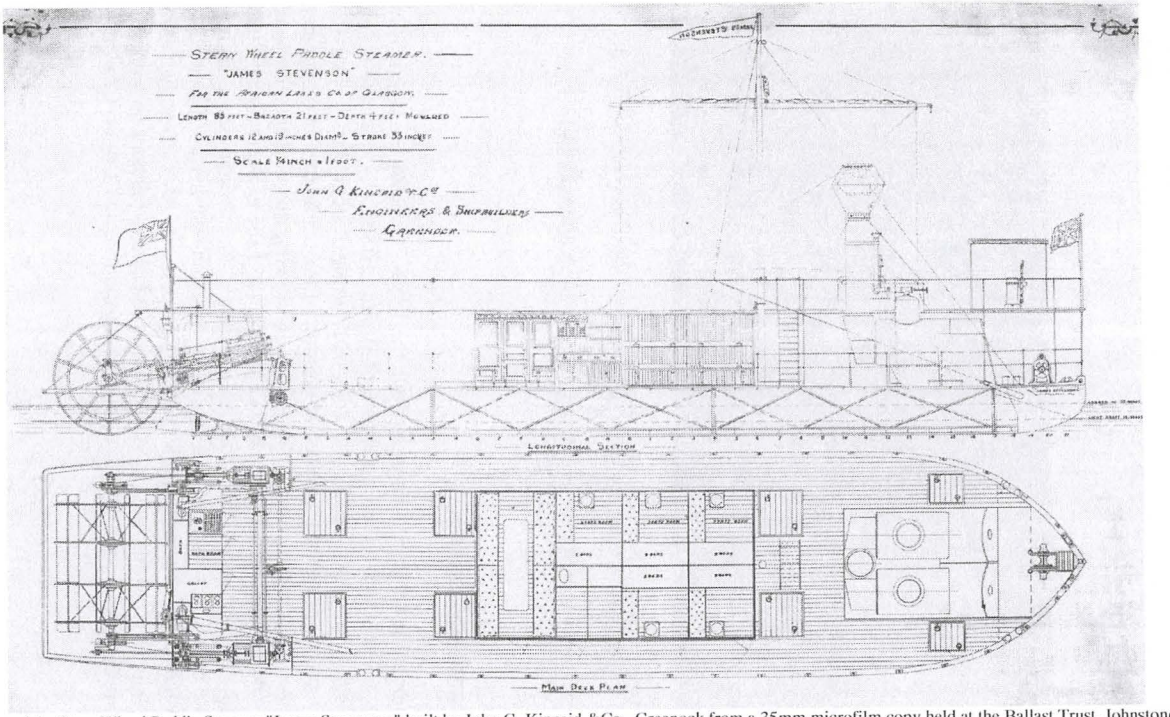
been established. Other commodities had also been found that could profitably be exported, for example ground nuts and Strophanthus seed (known locally as Kombe) used as a heart drug.



Stern Wheel Steamer "King" built & designed by John G. Kincaid & Co. Greenock
(Image reproduced by kind permission of Andrew Eadie)

Treaties and Agreements

The "Scramble for Africa" had developed in the 1880s started by the Belgians in the Congo and this led to the Conference of Berlin in 1884 – 5, attended by all the European countries. Fred Moir, who had returned from Africa, and the company secretary, went out to Berlin at the start of the conference in November with a further visit by the secretary in 1885 [26]. Following this visit the company agreed to send a deputation to see Lord Granville, the Liberal Secretary of State for Foreign Affairs under Gladstone, requesting him to establish a British Protectorate over the Nyassa area. At the same time John Moir was instructed to secure ownership of the company's land and property in Africa together with getting as many native chiefs as possible to sign over their rights of sovereignty to the company with a view of then transferring them to the British Crown [27].



Plan of the Stern Wheel Paddle Steamer "James Stevenson" built by John G. Kincaid &Co., Greenock from a 35mm microfilm copy held at the Ballast Trust, Johnstone
(Image reproduced by kind permission of the Ballast Trust)

Between 21st April and 24th August 1885 John Moir negotiated 23 treaties ceding sovereign rights to the African Lakes Company Ltd by over 40 of the Nyasaland Chiefs from the Shiré area up to the Stevenson Road. The first treaty was with Ramakukan, head chief of the Makolo, and one of the articles he agreed to was to hand over the road from "Katunga's to Mandala and Blantyre and thence to Matope on the Upper Shiré and the country on the sides of the road" [28]. For signing the treaty amongst the items Ramakukan received was "1 good percussion gun" and two pieces of cloth, each of length 8 fathoms (~ 14 m.), every month if he fulfilled all that was agreed and remained a "good friend" of the company. At the same time John Moir secured 20 petitions to Lord Granville from 37 of the African Chiefs "for the Queen of England to take under protection my country and my people and my property" [29].

The Berlin Act signed on 26th February 1885 dealt primarily with trade and the neutrality of territories in the Congo Basin, and the slave trade. However it was also agreed in which regions of Africa each European power had the right to "pursue" the legal ownership of land, free from interference by any other. Germany had already started going into districts in East Africa beyond the territories under the control of the Sultan of Zanzibar in 1884. The African Lakes Company in 1885 was concerned about a Portuguese expedition from the Mozambique Coast moving towards Nyassa. In his report of 1885 along with the treaties and petitions John Moir states that he told some of the chiefs that they "must do all in their power to prevent the Portuguese slave-traders from passing the cataracts".

The slave traders were concerned by the advancement of the Europeans towards their slave trading areas in Central Africa. The company started to really be affected by slave traders by the end of 1887. The slave routes across Central Africa are shown on the map in Appendix II, coloured in red, and the section from the map below shows how the company was in the thick of it in the Nyassa area. The Arabs set up camps at commanding points on the routes and also stayed in the villages of the more powerful native chiefs.

In 1887 the Arab slave traders entrenched themselves in bulletproof stockades on the Stevenson Road. They moved towards Lake Nyassa attacking the natives and after burning several of their villages had threatened the company's trading station at Karonga. Those at the station built a stockade and awaited reinforcements. The company sent an armed relief party of four Europeans and 11 natives up the lake by steamer that arrived on 4th November and prevented an attack by the Arabs [30].

The Arabs attacked the station at Karonga in April 1888 and during the encounter Fred Moir was shot in the arm. He returned to Mandala and his brother John who had also been shot some months earlier took his place [31]. The shot had shattered Fred's right elbow and after months of suffering he decided to return home. The company created a large force of armed men and persuaded Captain F. J. D. Lugard who was on holiday in the area, to take command of the force. This force of 20 Europeans and 300 natives attacked the Arab stockade on 10th June but the force found the stockade stronger than expected. They were forced to retire with five natives killed and many wounded including Captain Lugard [32]. A garrison was left at Karonga until a piece of artillery could be brought up.

Fred Moir returned to Scotland and was present at a meeting in August to discuss the affairs in Africa. The directors authorised the purchase of a 7lb muzzle loading gun and this was bought from Armstrong & Co. in September and the African managers purchased a breech-loading gun in Natal [33]. The Portuguese authorities at Quilimane caused additional problems for the company by refusing to allow the importation of ammunition.

Finances and Legalities

With all these problems by the time of the AGM in October 1888 no accounts had been received for 1887. Maintaining an armed force at Karonga was a drain on the company's fund and there was severe disruption to the company's trade. All trade at the north end of Nyassa had stopped and goods including calico were accumulating at Mandala. In June 1888 the Bank of Scotland had raised concerns about the company's overdraft.

In May 1889 the company was looking to increase the staff in Africa and Mr Moir was to look for suitable assistants to repel the Arabs at the north end of Lake Nyassa who would then trade for the company. Eleven new men were engaged of who three were to be capable of handling artillery. [34] In June the company received a proposal from Cecil Rhodes regarding purchasing a peaceful agreement with the Arabs if possible. It would be satisfactory "if the Arabs could be cleared out of the country in return for £500 or perhaps up to £1000". [35] In a letter to Cecil Rhodes from the company dated 14th August, mention is made that he had agreed to purchase 100 shares in the company for £5000 and details about a proposed amalgamation of the African Lakes Company with his company if it was granted a charter [36]. This company was the British South Africa Company. In October it was recorded that a cheque for £5000 had been received from the "Central Search Association" in London. [37] In May 1890 the Stevenson Road was reported as having been re-opened and was

safe for men and goods. [38] The reopening had been achieved with the help of Henry H. Johnston who had recently been appointed as British Consul in Mozambique.

At the same time as the company were experiencing problems with the Arab slave traders, problems with navigation on the Zambesi started with the Portuguese authorities. The Portuguese had made treaties with France and Germany in 1886 that recognised the rights of Portugal to exercise influence in the area between her possessions of Angola and Mozambique. Portugal tried to introduce a regulation of 1887 that all ships in the coastwise or river trades had to be Portuguese owned. This led to the "James Stevenson" being detained in January 1888 and was only released when it was promised that she would be registered under a Portuguese owner. The Marquess of Salisbury, who had become the Conservative Prime Minister and also Foreign Secretary in July 1886, had become involved from June 1887 [39]. The agreement between Britain and Germany relating to Africa and Heligoland that included the Nyassa and Tanganyika Plateau was signed in Berlin on 1st July 1890. John Moir, who had arrived back in Scotland in June 1890, was concerned that the Stevenson Road was to act as the boundary with the German territory and wrote a letter to the Glasgow Herald. Following the publication of the letter the directors stated that in future any letter must be approved by the Board of Directors and the company's name was not to be mentioned [40].

On 10th July 1890 the company's steamer "James Stevenson" and its crew were arrested on the Shiré at the mouth of the Ruo by the captain of a Portuguese gunboat on orders of the Portuguese governor on the Shiré. The steamer had left Chilomo above the mouth of the Ruo after discharging all her cargo for her return to Vicente. The master and crew were sent down to the coast as prisoners where the British Vice-Consul at Quilimane became involved. The steamer was kept under guard at the mouth of the Ruo and was released by the Portuguese on 28th August 1890 [41]. The company initially was looking for a claim of £4900 from the Portuguese but this was reduced to £1450 and received the support of the British Government.

There was further difficulty in November 1890 when the steamer was flying the British flag in Portuguese waters between Vincente and Chilomo and when the master initially refused to lower the flag a Portuguese gunboat threatened to open fire. The *modus vivendi* [agree to disagree] entered into by Britain and Portugal agreed that no vessel flying foreign flags on the Zambesi would be interfered with. The master and crew of the "James Stevenson" were again threatened with arrest. The company had stores waiting to be transported up from Vicente for the London Missionary Society at Lake Tanganyika and four different stations of the Livingstonia Mission at Lake Nyassa. Stores were also

waiting for the Blantyre Mission and the Buchanan Brothers who were coffee plantation owners. Fred Moir was looking for assistance from the British gunboats on the Zambesi at Chilomo. Initially the master was arrested and put in gaol but was released on the orders of the Portuguese Governor at Quilimane who subsequently declared the steamer and crew under arrest. He issued further orders that no one was to supply fuel or food to any British vessel or gunboat. The problems were finally resolved with Portugal in June 1891 with a treaty ratifying the spheres of influence. Throughout all this time there was frequent correspondence between the Portuguese government in Lisbon and the Foreign Office [42]. It would appear that the Portuguese on the ground had been acting on occasions on their own initiative.

Sketch map relating to the "African Settlement" included with two letters (one by John W. Moir "Manager African Lakes Company Ltd, Edinburgh") in the *Glasgow Herald* 20 June 1890.

The British Protectorate over Nyasaland Districts was announced by the Foreign Office on 14th May 1891. In July 1891 two gunboats, H.M.S. Herald and Mosquito, sailed up the Zambesi and Shiré [43]. Henry H Johnston was appointed

HM Commissioner-General for Nyasaland and was responsible for the defence and administration of the protectorate leaving the African Lakes Company to develop its business of transport and trading operations.

The approach by Cecil Rhodes to the company in June 1889 has already been mentioned. The British South Africa Company (BSAC) received its royal charter on 19th December 1889 following a petition to Queen Victoria by persons that included the Duke of Abercorn as President, the Duke of Fife as Vice-President and Cecil Rhodes of Kimberley, in the Cape Colony as one of the directors [44]. The company's principal field of operation in Southern Africa was to be to the north of British Bechuanaland and to the west of Portuguese East Africa. The initial share capital of the company was £1 M. The royal charter gave the BSAC significant benefits such as rights to make treaties and to establish a police force. Cecil Rhodes, the main instigator behind the petition, had become very wealthy with his diamond and gold mining interests and in 1890 became Prime Minister of Cape Colony. His ambition was the expansion of British rule in Southern Africa.

By the late 1880s the African Lakes Company (ALC) had a shortage of capital. Although the nominal capital of the company had been increased from £20,000 to £100,000, in October 1888 the subscribed capital was only £31,050 with £28,451 paid up [45]. The problems with the company cash flow were amply demonstrated in October 1890 when the secretary presented the balance sheet and statement for 1888. Over £12,000 was due to be paid on bills at home and over £8,000 of goods had been sent out with only £3,500 having been received back from Africa [46]. Prior to this in October 1889 it was minuted that the company accounts had to be "judicially altered". Then at the AGM in November 1890 it was reported that the war with the Arab slave traders had cost the company to the end of 1888 over £8,000 but towards this nearly £3,400 had been contributed by the Nyassa Anti-Slavery and Defence Fund. This fund had been set up by some of the shareholders to raise money to fight the Arabs; one was James Stevenson who had contributed £1,000 [47].

Whereas the ALC directors were looking for Rhodes and the BSAC to invest in the ALC it is reasonable to assume that Rhodes was wishing to use the treaties the ALC had secured with the African chiefs to advance British rule. The ALC also understood Rhodes political influence as early in 1890 a telegraph was sent to him in South Africa asking him to telegraph his Parliament friends to support movement against Portugal [48]. In February 1890 proposals for the amalgamation of the two companies started to be drawn up and an exchange of shares between the companies had also commenced. By March 1890 the ALC directors wished to maintain control of affairs, as they did not want shareholders to sell out to "parties unlikely to take an interest in the missions and welfare of the district" [49].

An agreement was finally reached to amalgamate the two companies on 29th April 1890 [50]. The timing of the merger would take place when the two companies considered it expedient to do so and then the ALC would be wound up. The BSAC agreed to issue each shareholder in the ALC with 50 BSAC shares for each ALC share transferred to the BSAC. The agreement specifically mentioned "the existing facilities and means of communication and transport afforded to the Missions should be continued and maintained" [51]. The BSAC agreed to pay towards the cost of the administration of the country to the north of the Zambesi and in September 1890 the ALC decided to ask for the promised payment of £14,000 [52].

Surviving records of the ALC show that in January and February 1890 the company had bought over 2,000 sq. miles of land at the north west of Lake Nyassa with further land being bought adjacent to the Shiré in March and April [53]. The African chiefs were paid in goods that primarily were cloth and calico. At a meeting in July 1890 following a letter of the previous day received from the British South Africa Company it was agreed to telegraph the following:

> "*Buy as hard as you can all the lands West Nyassa Shore, Highlands Upper Shore same manner as we have bought land North Nyassa under Johnston's direction expenses Cawston*".

George Cawston, stockbroker and financier, was the most active of the BSAC's London based directors [54].

From an interview with John Moir, reported in the Scotsman in July 1890, speaking about the agreement with the BSAC he said that the management of the Nyassa district would be reserved to a committee in Glasgow [55]. By 1892 the ALC must have started to become concerned with the way things were going with the BSAC as in June 1892 the ALC raised a legal action against the BSAC to prevent the BSAC from calling a shareholders meeting. The BSAC had asked for a meeting of the shareholders and the ALC believed that the BSAC wanted to call an extraordinary meeting and, by virtue of the number of shares the BSAC had acquired, pass a resolution to wind the ALC up [56]. The BSAC claimed that there was no truth in the rumour and the ALC was refused an interdict.

In attempting to obtain the interdict the ALC considered that the terms of the agreement to amalgamate the companies had not been fulfilled. This may have related to the arrangements for supporting the Missions. At a launch of a steamer in Glasgow for the Church of Scotland's African Mission in July 1892 Alexander L. Bruce mentioned that the alliance with the BSAC had not proved

so helpful as anticipated [57]. He also announced at the launch that two steamers were going to be ordered by the ALC to help with the transit service on the Zambesi from the Chinde mouth of the Zambesi. All this no doubt led to the compromise of what came to pass in 1893 when the African Lakes Company was re-constituted under the title the African Lakes Trading Corporation with an increased capital and wider powers.

The African Lakes Trading Corporation (ALTC) was registered in Glasgow on 31st July 1893 [58]. The initial directors were Alexander L. Bruce, who was married to one of David Livingstone's daughters, William Ewing and John Stephen, who were both ALC directors, and the company secretary was Fred Moir. Then on 4th August 1893 an agreement was made between the ALC, the BSAC and the new ALTC. The ALTC acquired the transport and trading business of the ALC together with its property and land and the ALC transferred the rights the company had acquired from the African chiefs to the BSAC [59]. The ALC had at least 14 estates that were transferred to the BSAC [60]. The BSAC agreed to use its influence to persuade the HM Commissioner to use the ALTC to carry goods and materials for the administration. The prospectus issued by the ALTC on 19th August 1893 offered 125,000 £1 shares in the new company with 10s being paid on application and the balance when decided by the directors. 25,000 shares had already been allotted to the BSAC [61]. The additional capital was required to further open up and develop the country and provide additional steamers as and when required on the rivers and lakes. It was stated that the directors would aid all Christian Missions and continue assisting with the suppression of the slave trade and preventing the sale of spirits to the natives.

Winding Up

The African Lakes Company Ltd was wound up at an EGM held in Glasgow on 15th September 1893 bringing 15 years of pioneering and trading during very difficult times to a close under this name [62].

Whilst those in Glasgow provided the financial support and oversaw the running of the company without the two Moir brothers managing the operation in Africa, it is doubtful whether the company would eventually have been successful. It is a fitting tribute to the brothers that the African Lakes Corporation decided on the following wording for a memorial plaque to them in 1945 [63]:

> *"In honoured memory of John William Moir, CMG, 1851-1940 and Fred Lewis Maitland Moir, J.P., 1852-1939 the first Joint Managers of the African Lakes Company Ltd and who inaugurated in Africa (Nyasaland*

and Northern Rhodesia) that Trading and Transport Company in 1878. It was founded by several gentlemen in Glasgow in response to David Livingstone's call for legitimate commerce to eliminate the slave trade and its horrors. As pioneers the brothers Moir rendered unique service to Central Africa by their high principles and unstinted labours."

Whilst Fred remained in Scotland following his return, ultimately becoming Chairman of the corporation, John remained in Africa until he retired.

Despite Livingstone's failed Zambesi expedition in the 1860s to reach Lake Nyasa by boat, in 1875 the Free Church of Scotland established a mission station at the southern end of Lake Nyasa and by October had a vessel on the lake. Being ardent members the Free Church and also successful businessmen the founders of the African Lakes Company realised the importance of providing support to the missions. From the 1870s to WW2 the main attraction for capital flowing into Africa was mining and this company was perhaps unique in being the only transport and trading company established with humanitarian objectives rather than just making money. It was the lure of the underground riches that swept Cecil Rhodes northwards and the "Scramble for Africa". Although the African Lakes Company received financial assistance from Rhodes and the British South Africa Company, the company managed to remain independent and to carry on with its founding aims. The company was a major player in the fight against the Arab slavers in the 1880s led by the Moir brothers. With the British Government creating a protectorate over the Nyasaland District in 1891 the company was able to return to developing its business of trading and transport. In 1907 the Nyasaland Protectorate was created and following independence in 1964 it became Malawi.

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FAMILY FABRIC: THE HAMILTON & ROBERTSON FAMILIES' 19TH CENTURY SCOTTISH COTTON MUSLIN BLEACHWORKS

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Abstract

This case study illustrates the human side of business history by examining three family-operated bleachworks surrounding the Stanely reservoir, near Paisley, in 19th century Scotland. While firm operations and managerial succession is documented, this paper also attempts to include the personal lives of these families and their workers, which inevitably affected business operations.

Introduction

Recent scholarship has examined the 18th and 19th century Scottish cotton industry and cotton factories in Renfrewshire, Scotland, to explain their place in the industrial revolution and within the contemporary Scottish economy and trade patterns.[1] Indeed, one commentator suggests that the Scottish cotton industry was a "silent spring" that stimulated the Scottish industrial development in other industries such as construction, chemicals and machinery even as the Scottish cotton industry declined.[2] Another describes the Renfrewshire cotton industry as Scotland's first industrial region.[3] Such regions have been described as industrial clusters or networks because they consisted primarily of numerous small firms that specialize in one aspect of the production process. Raw cotton was imported from the newly independent American colonies that were no longer subject to colonial trade restrictions. It had to be cleaned, bleached, spun into thread, woven into cloth and then the cloth was bleached and perhaps printed and packaged for sale. Cotton industrial clusters such as those in Renfrewshire and elsewhere attracted firms because of the opportunity to participate in the cluster which provided stable opportunities even as particular firms entered and exited.[4] While this macro view of the industry is important, it tends to overlook the efforts and struggles of the people who operate the businesses that are such an important part of history.

Labor history studies have examined the lives of workers. [5] But only recently has business history recognized the importance of family business history including case studies.[6] Nowhere is the human aspect of the industrial revolution more apparent than in family businesses.[7] Family businesses must deal with both the business matters such as technological innovation, industry growth and decline, and the development of new forms of business along with family issues such as the death or migration of family members and other personal questions. Most importantly, unless the firm is going to liquidate upon the death or retirement of the founder, the businesses must develop a system for passing control from the founder(s) to those most interested and capable of running the business in succeeding generations. The decisions made by family members to address all of these matters are an important thread in the human fabric of textile history.

This paper explores the humanity of the industrial revolution with a case study of the three cotton muslin (a plain woven fabric) bleachworks surrounding the Stanely Reservoir in the Paisley Abbey district of Renfrewshire, Scotland that were run predominantly by two families: Blackland Mill (and Haircraigs) predominantly operated by the Hamiltons, Lounsdale operated first by the Hamiltons and then by Robertsons and Foxbar (including Midfield and Causeyend) operated by the Robertsons. That firm specialized in thread bleaching for J & P. Coats and Company rather than cotton muslin bleaching, so it won't be discussed further.[8] This case study suggests that family relationships played an important yet currently unrecognized role in the success of such firms over the evolution of the Scottish cotton industry in the 19th century.

Firm Origins

The story of these firms in the 19th century properly begins in the latter 18th century. In 1782, Semple notes that a six acre bleach field was operated by William Wilson at "Blackliemiln," a two acre bleach field at Causewayend (later attached to the Foxbar bleachworks) was operated by James King, and John Craig operated the six acre "Lownsdale" bleach field. In addition, Alexander Robieson operated a bleach field described as "near Millarston" (which could be Foxbar) "about six acres; being part of the field carried on by him, as having about four acres more from three other heritors, viz, Messer, William and John Orrs and Miss Margaret Millar, niece to the late Mr. George Miller, grocer in Paisley."[9] Semple also notes that Adam Hamilton, thread-maker and bleacher operated in Burnfoot on the west side of the river Calder.[10] In contrast to this contemporary description, John Tait's 1782 Glasgow Directory lists only Robert Dennison and William

Wilson as bleachers in Paisley and the latter is listed as located on Gauze Street in Newtown rather than Blackland Mill.[11] Adam Hamilton & Sons later would claim a 1780 start date, but it is not clear when they would move to Blackland Mill.[12]

Various tax rolls at the end of the 18th century often provide location (and occasionally occupation) information for the person being taxed as illustrated in Table 1 below.

Table 1 Tax Roll Information

Name	Information	Tax Roll
John Craig	Lounsdale (1 horse Oct. 1787)	Horse Tax Rolls 1785-1798, Vol. 7 E326/9/7/84.
John Craig	Lounsdale (1 two wheel cart Oct. 1791)	Cart Tax Rolls 1785-1798, vol. 12 E326/7/12/216.
John Craig	Lounsdale (1 dog Aug. 1797)	1797-98 Dog Tax Roll, vol. 2 E326/11/2/85
Robert Craig	Lounsdale (1 two wheel cart Sept. 1789)	Cart Tax Rolls 1785-1798, vol. 8 E326/7/8/212.
Adam Hamilton	Bushes (2 horses Nov. 1797)	Farm Horse Tax 1797-98, vol. 11 E326/10/11/175
James King	Causeyend (1 two wheel cart Sept. 1789 & Sept. 1790).	Cart Tax Rolls 1785-1798, vol. 8 E326/7/8/213; vol. 10 E326/7/10/219.
William King	Bleacher of Blackhall (1 horse Oct. 1787).	Horse Tax Rolls 1785-1798, Vol. 7 E326/9/7/84.
Alex Robertson	Foxbar (1 two wheel cart as of Sept. 1790 & Oct 1791)	Cart Tax Rolls 1785-1798, vol. 10 E326/7/10/218; vol. 12 E326/7/12/216
Alex Robertson	Foxbar (1 dog Aug. 1797)	1797-98 Dog Tax Roll, vol. 2 E326/11/2/85.
Alex Robertson	Foxbar (2 horses Nov. 1797)	Farm Horse Tax 1797-98, vol. 11 E326/10/11/174

Historical Tax Rolls from National Records of Scotland[13]

The cost of setting up a bleach field was significant. John Shaw estimates that a small field such as Blackland Mill, established in 1776, would cost between £150 and £400 to set up. A large field could cost ten times that amount. These costs included constructing both a boiling house and drying house and buildings to house machine such as a washing mill, beetles, rubbing boards and a calendar

along with keives for boiling and tubs. While a Board of Trustees was established in Edinburgh in 1727 to financially encourage the development of manufacturing and it did grant stipends to bleach fields, it was reluctant to support fields in Renfrewshire because bleaching became well established there without much government financial support.[14]

Research reveals only one surviving founding story of these bleachworks. According to an unpublished family history, Alexander Robertson reportedly obtained the original lease of Foxbar property from Elizabeth Ross, Countess of Glasgow in 1783. Alexander's wife, Jean Good, may have assisted in establishing the lease because her family had a close relationship with the Ross family of Hawkhead. Her ancestor William Good was the gardener to Lord Ross of Hawkhead.[15] According to the family history, the lease was for 45 years at a duty of £70 per annum:

> With the use and priviledge (sic) of the water from any part of the said Countess's grounds where it can be collected to run through the lands of Foxbar in order to supply the bleachfield to be made by the said Alexander Robertson in the said lands.[16]

The family history also indicates that a second lease was agreed to in 1796 that enlarged the Foxbar holdings (as well as extended the length of the lease).[17] This 1796 lease also is described in an 1839 Disposition and Will of Alexander Robertson's grandson Matthew Robertson. This source simply indicates Alexander obtained a 99 year tack (lease) in 1796 from George Ross, Earl of Glasgow for the Foxbar property for the purposes of establishing a bleach field.[18] The property apparently included a farm of James Lee and farms at Causeyend and Perriston. This will is silent about any lease before 1796.

While there is no comparable origin story for the Blackland Mills and Lounsdale bleachworks, Adam Hamilton Sr., husband of Elizabeth Mcilroy, appears to have started in Burnfoot and acquired Blackland Mill from William Wilson after 1782. Occasional Paisley Low birth records for his children mentioned his occupation. In 1776 Adam Sr. is described as a weaver but by 1787 he is identified as a bleacher. His son Adam Hamilton Jr. acquired Lounsdale from John Craig in 1822.[19]

In the period from 1770 – 1790, more linen was produced in Renfrewshire than cotton.[20] Alexander Robertson, Adam Hamilton and other early 19th century bleachers likely first learned about bleaching linen which is generally darker and more difficult to bleach than cotton.[21] Bleaching linen originally took from 6 to 8

months involving the boiling of the cloth in water or a weak alkali (called "bucking"), then spreading the cloth over large tracks of land to bleach it in the sun ("crofting") and then "souring" the cloth with sour milk. These processes were repeated until the linen was sufficiently whitened. By the second half of the 18th century, sulphuric acid ("vitriol") was used to shorten this process to about 4 months.[22]

In the *Old Statistical Account of Scotland,* Robert Boog reported in 1793 that there were ten cotton bleaching fields in the Paisley vicinity employing about 300 people including 240 women.[23] So an average bleach field probably employed about 30 people, 24 of which were women. By about 1796, cotton became king in Renfrewshire exceeding the production of silk and reaching more than three times the production of linen.[24] By this time, these three firms likely were specializing in the bleaching of cotton muslin. The location around Stanely was ideal for bleaching because the river flowed from the moorland "where igneous bedrock and peat mosses guaranteed lime-free water."[25] A typical crofting bleach field is pictured below.

The Transition from Crofting to Factory in the Early 19th Century

There is a gap in (surviving?) commercial directories for the Paisley area, but in an 1820-22 Scotland directory, William Wilson is not listed and Adam Hamilton & Sons are operating Blackland Mill and Haircraigs bleachworks. John Craig & Sons are operating "Lownsdale." James King is not listed nor is Causeyend, but William "Robinson" is listed as a bleacher at "Foxburgh" and Ross "Robinson" as a bleacher in Midfield.[26] William and Ross are two of the three surviving sons of firm founders Alexander Robertson and Jean Good.

By 1820, Foxbar founder Alexander Robertson (age 92) had retired from actively running the firm and had moved to property close to Foxbar. In April 1820, "Alexander Robertson, the senior, near Machie's Mill" and others including "Craig's at Lownsdale," Thomas Robertson (the youngest son of Alexander Robertson and Jean Good) "at Foxbar [cottage]" and "Robert Rowan at Millarston(e) " were visited by radicals protesting poor working and housing conditions and seeking arms. When they got to the Foxbar House, Ross Robertson and son Matthew initially refused but eventually agreed to supply pistols after first discharging them into the air. Meanwhile Ross' son Alexander had been summoned by the bleach field watchman and when Alexander heard gun shots from the house and some responses from the crowd, he fired into the crowd,

apparently killing Adam Cochran and injuring a second man who later died after fleeing to New York.[27]

The next few days, a "vast assemblage" gathered at Foxbar threatening to burn the house and bleach fields despite the presence of the military. The Glasgow Courier noted there was "no doubt the intention to produce fear in the minds" of the Robertson family.[28] This appears to have been successful because Alexander left his family and migrated to Upper Canada (Ontario), initially settling in Ancaster, outside of present day Hamilton. John Parkhill's first person account of this incident published in 1857 noted "[t]he family of Foxbar long lamented the sad and melancholy catastrophe for it broke the peace at once of a very pleasant family."[29]

About thirty months later in December 1822, according to his will, Adam Hamilton Jr. took over the lease on Lounsdale from John Craig.[30] John Craig appears to have been a relative. According to Paisley Abbey records, Adam Hamilton Jr.'s daughter Janet had a middle name of Craig apparently named after the wife of an Alexander Hamilton who might be a brother of Adam Hamilton Sr. Thus according to an 1825-26 commercial directory, Adam Hamilton was at "Lonnsdale" and Adam Hamilton & Sons at Blackland Mill. Ross is the only Robertson listed as a bleacher (with his last name spelled correctly). His brothers Thomas (at Foxbar) and William (at West Foxbar) are listed as "Esq." –meaning they were gentry of sufficient means that they did not work.[31]

William Robertson never married. Robert Tannahill wrote a story in 1807 entitled "The Soldier's Return" about a young woman pursued by an older bleacher named "Muirland Willie" but the woman eventually marries a young soldier who returns from the war. David Semple claims the bleacher character was "unmistakenly" based on William Robertson so perhaps a similar event occurred in his life.[32] In contrast to this lonely story, William's brother Thomas Robertson married Janet Thomson and had three children but sadly they lost all three between 1814 and 1818 at ages 17-19. It would seem that the broken hearts of these two brothers may have caused them to lose interest in running the bleachworks.

Thus, it appears that Ross Robertson at Foxbar, John Craig at Lounsdale and Adam Hamilton Sr. at Blackland Mill were largely responsible for transforming their crofting-based bleach fields to bleaching factories –from bleach fields to bleachworks. The use of crofting fields for bleaching guarded at night by watchmen was coming to an end in 1820 when the radical protests occurred. At the turn of the century, Charles Tennant first created a liquid of chloride of lime to replace sulphuric acid and then he patented a method of creating a dry powder of

chloride of lime that proved quite popular in bleaching. Thus by 1824, large fields were no longer used for solar bleaching and drying of cotton. Cotton bleaching generally involved chemicals rather than crofting.[33] The various steps of bleaching were accomplished in various machines and other pieces of equipment dramatically increasing output and the speed of bleaching to about a week.[34] This created both profits for the 50+ textile bleach fields in Renfrewshire and the need for low cost employees, generally girls, to move the cloth from station to station.[35] Newspaper stories explain how Ross Robertson at Foxbar had to deal with situations derived from both of these considerations.

The financial success of bleach fields put their owners at risk for theft. About 2:00 AM Sunday morning June 14, 1829 at West Foxbar, the home of William Robertson Esq. and his sister Elizabeth, neither of whom ever married, three men of Irish origin broke in and demanded money and valuables. The two elderly occupants were no match for the burglars. William was struck five times and his sister once. They were tied up while the thieves escapes with 5 silver table spoons, a silver divider, 5 Britannia metal spoons, a black silk plaid, a bottle of rum, a musket, a bank note and the pocket change. William eventually freed himself and then sought help at his brother Ross's house.[36] Two of the men were captured, confessed and were hung in front of the New Jail in Paisley on October 29, 1829 in front of a large crowd with many visitors from Glasgow, where a holiday from work was being celebrated. As the large crowd suggests, this execution, the first in 32 years, was an important event in Paisley.

In February 1832 another important event occurred --cholera broke out in the Paisley area. Ross Robertson ordered the workers' houses cleaned and whitewashed, hoping to avoid an outbreak at Foxbar. However, this alarmed the Highland girl workers so they wanted to leave for home. Ross induced most of them to return to work, but the word reached the Highlands and three men traveled down to escort girls home. Seventeen girls actually crept out one night and reached the town of Renfrew. While waiting for a Highland steamboat to take them home, Ross and the police overtook them. The girls were brought back to Foxbar and their "guides" were compelled to give security for their promise of non-interference in the future.[37] Housing a large number of women may also have led to problems with men, but I have only found one such newspaper report concerning an incident at Lounsdale in 1870.[38] Thus, these family businesses had to address situations that combined business and personal matters in order to keep operations going.

Succession and Shifting Management

The various incidents discussed above would pose important and probably unexpected challenges for any family or family business. Every family business faces decisions about who is in charge, the role of other family members and when and how those roles will change. The first succession issue among these firms occurred with the death of Adam Hamilton I in December 1826 at the age of 73 in Haircraigs, connected to Blackland Mill. His estate was valued at £5,624.[39] His will identifies six surviving children, five sons and a daughter Elizabeth who went on to die unmarried in a private asylum in 1852.

Succession within firms may be tracked using commercial directories, which, unfortunately for Paisley in the early 1830s were somewhat hit or miss. Fowler's Commercial Directory for 1829-1830 makes no mention of the Hamiltons or Robertsons as bleachers anywhere. However, the 1830-31 directory follows the 1825-26 listing with Adam Hamilton II individually as "of Lownsdale" but also identifies the firm "Hamilton, Adam & Sons" as bleachers at Lownsdale. John Hamilton (Adam I's son) and James who is probably a cousin of John and the son of Alexander Hamilton (likely the brother of Adam I) and Janet Craig are listed as an apparent partnership at Blackland Mill with only John listed with a house at Blackland Mill. This looks like Adam II may have been running both locations as part of a single firm with the help of other family members at Blackland Mill. Curiously, the only Robertson bleacher listed (probably incorrectly) at Foxbar is "Charles."[40]

The 1832-33 directory lists Robertson, Ross & Son as bleachers at Foxbar. It continues the "Lownsdale" listing as before but this time lists Alexander and John (sons of Adam I) as bleachers at Blackland Mill and both have separate home listings there as well.[41] A May 1832 Notice in the Edinburgh Gazette announces the dissolution of copartnership between William Hamilton and his younger brother Adam, both sons of Adam II, at Lounsdale with William paying off the debts.

The 1834-35 directory adds William Hamilton (Adam II's eldest son born in 1803) to the Lownsdale listing along with Adam, but does not mention the firm name. The individual listings for Alexander, Hugh and John all living at the house at Blackland Mill are unchanged as is the listing for Ross Robertson at Foxbar. However, the apparent Hamilton partnership at Blackland Mill is now listed as John, the son of Adam I, and Hugh, the eldest son of John's brother George Hamilton, the merchant. A John Hamilton Jr. is now listed as a bleacher with his

home at Haircraigs (which was listed with Blackland Mill in the 1820-22 directory).[42] This John may be another cousin born in 1791, brother of James, but called Jr. to distinguish him from his older cousin John born in 1784 to Adam Hamilton I.

While occasional shifts in personnel undoubtedly did occur, some of these apparent shifts seem more likely caused by omissions and errors in these early directories. But every family firm must eventually face the question of who succeeds the firm founder or current manager. Alexander Robertson, the founder of Foxbar, stepped aside while still alive to let his sons and particularly Ross take over running the family firm. In December 1835, Ross died at the age of 66 without a will so that the Foxbar bleachworks faced its second succession to the generation of the founder's grandchildren. Ross' estate was valued at £3113.[43] The family seemed to agree that the business now would fall to Thomas, Ross' brother and the last surviving son of company founder Alexander Robertson. However, rather than run the bleachworks, Thomas agreed on August 5, 1836 to allow Ross's second son Matthew run the business in partnership with his cousin Matthew Arthur for £100 annually.[44] The two younger partners started business together on 18 September of that year.[45]

The 1836-1837 Directory lists Mathew Robertson as a bleacher at Foxbar and Causeyend and Mathew Arthur as foreman at Foxbar and Causeyend. Mrs. Ross Robertson and Thomas Robertson also are listed as living at Foxbar.[46] According to a newspaper notice, Adam Hamilton, son of George Hamilton, merchant in Hamburg, died at Blackland Mill in January 1837.[47] This Adam may have been the son of George, a son of Adam Hamilton I. The 1836-37 directory only lists the firm of Adam Hamilton & Sons at Blackland Mill with the individual Adam Hamilton (and son William) at Lounsdale. Alexander and John are at the house at Blackland Mill. Hugh Hamilton has moved to the house at Hair Craigs and there is no separate listing for John Hamilton Jr.

The next directory clarifies that Matthew Robertson (and Mrs. Ross and Thomas) lived at Foxbar, but Matthew Arthur lived at Causeyend. Matthew Robertson also was listed as a Justice of the Peace.[48] The 1838-39 Directory also continues to have the individual bleachers Adam and John Hamilton at Lounsdale and Alexander and John Hamilton at the house at Blackland Mill. Hugh Hamilton, the bleacher, is no longer listed.[49] An 1837 directory for all of Scotland lists Adam Hamilton and Sons at Blackland Mill, Matthew Robertson at Foxbar and Ross Robertson (Matthew's eldest son born in 1827) at Midfield that is part of the Foxbar – Causeyend complex. There is no listing for any bleachers at Lounsdale and no

listing of individual Hamilton family bleachers.[50] At this time, a popular encyclopedia indicated there were seven extensive bleachfields in the Paisley area.[51]

When Matthew Robertson took over the family business in 1836 with his cousin, he was married with five children. He had married Elizabeth Hamilton in March 1826, just over a year after her mother had died.[52] She was born in Paisley Low Church in March 1802; the eldest daughter of Adam Hamilton II Esq. and his wife Mary Wylie. Adam Hamilton not only operated the Lounsdale bleachworks, but also was a wealthy landowner -- one of less than 50 people in Paisley who earned more than £50 annually in rent from his landholdings.[53]

Unfortunately, just as Matthew Robertson's career was taking off, he was stricken with consumption (tuberculosis) at age 39 and died on March 8, 1839. Matthew was the third Robertson to manage the bleachworks and the first to pass it on in a will His will left the business to his oldest son Ross, then only 12 years old (if Ross wants it), to be run with Matthew Arthur with a life estate for the dwelling house and garden at Foxbar to his widow, Elizabeth Hamilton and any unmarried daughters. His estate totaled £1772.[54]

Thus in the first Scotland census taken in June 1841, Matthew Robertson's widow and children, Thomas Robertson and his wife Janet, Ross Sr.'s youngest son John Robertson who is a calenderer (a person who finishes and folds cloth) and Ross' unmarried daughter Margaret along with Matthew Arthur and family are all living at Foxbar.[55] Lounsdale Works lists Elizabeth Hamilton's father Adam II (age 60) with his son John (age 22 –cotton yarn manufacturer) Adam's daughter Janet Griffin (age 20 should be 23 according to birth records), her husband Alexander Griffin and their 1 year old daughter Mary Griffin are listed together. Just above this family unit appears three unrelated people, probably servants and then Adam's son William (listed at age 35 instead of 38) and what appears to be his family: Margaret age 25, Mary age 11, Margaret age 10, Jessie age 8, and Adam age 6.[56] At Blackland Mill, the census lists Alexander Hamilton (probably Adam II's brother), age 50, John Hamilton, age 32 and George Hamilton, age 20 (both probably sons of Adam II) --all bleachers of muslin.

The 1841-1842 Directory is consistent with the Census for Lounsdale listing Adam and William individually as bleachers at Lounsdale and for Blackland Mill listing the firm of Adam Hamilton & Sons and Alexander and John as living at the house at Blackland Mill with George individually as the bleachworks manager. Mathew

Robertson & Co. is listed at Foxbar with Mrs. Ross Robertson and Thomas Robertson listed individually.[57]

Working Conditions

During this same general time period, Parliament became concerned with its prior decisions to exempt textile bleach and dye works from the provisions of the Factory Acts that regulated working hours for women and children in textile factories. At the time of the original exemption, some bleach and dye works still practiced crofting and they successfully argued they were not factories. Parliament authorized several commissions to examine and report on employment practices in certain textile related industries including bleaching. These reports provide a window into the practices of the three Stanely area muslin bleachworks. The 1842 report contained the following employment figures by age and gender:

Table 2:

Firm	18+ M / W	13-18 M / W	<13 M /W	Total Employees
Blackland Mill	17 /153	5 / 18	4 / 10	207
Lounsdale	6 / 82	3 / 29	- / 1	121
Foxbar	7 / 60	3 /40	- / -	110

Data from the 1842 Parliamentary Report

The three Stanely area bleachworks were the largest in Paisley based on number of employees (Brown & Polson of Paisley had 56 employees and Gibb and Thomson of Paisley had 25 employees) and among the largest in Western Scotland (of nineteen firms listed only Kirktonfield in Neilston with 376 employees and Auldehousefield in Pollockshaws with 234 employees were larger).[58]

Matthew Arthur, manager of Robertson & Co. was interviewed about the working conditions of the Highland girls who boarded and worked at Foxbar. Only about half could speak English and new girls were hired based on recommendations from existing workers, so they tended to come from the same communities. Matthew noted that they tried not to hire girls below the age of 14, because the work was arduous, standing all day in temperatures between 80 and 100 degrees. Cloth was boiled, steeped in lime and bleach, and washed repeatedly over an 18 hour period. The work day began at 5:00 AM and ran until 7:00 PM with 45 minutes for each of

two meals and two ten minute breaks. They stopped at 3:00 PM on Saturday and had Sundays off to attend church.

Dr. Kerr, the physician for Robertson & Co. testified that the girls were generally healthy, would send some money home to their families and save some of the rest to buy household furnishings. After a few years, they returned home to get married and younger girls were brought in.[59] This may sound oppressive by today's standards, but the argument can be made that living in dormitories and working in bleachworks was a choice that allowed greater wealth and freedom for mill girls than remaining with their families performing uncompensated chores until marriage.[60] Similar information was presented by workers from Blackland Mill and Lounsdale. At Blackland Mill, they worked from 5 am to 6-7 pm with an hour for breakfast and another hour for dinner. In Lounsdale, they worked from 5:30 am to 8 pm with 45 minutes each for breakfast and dinner.[61]

The Robertsons Manage Lounsdale (for a while)

The 1845-46 Directory still lists Adam and William Hamilton at Lounsdale and the firm of Adam Hamilton & Sons at Blackland Mill with Alexander and John Hamilton listed at the house at Blackland Mill. Again the firm of Matthew Robertson & Co. is listed at Foxbar along with Thomas and "Misses" individually.[62] However, one year later, things would be shaken up by the March 1847 death of Adam Hamilton II, Esq. whose name (or that of his father) continued as the company name (and sons) at Blackland Mill. He left an estate of £2662 in personal property and a lot of land, including the bleachworks at Lounsdale. He left the bulk of his property initially under the control of six trustees: his brother Alexander Hamilton, his two eldest sons William and Adam Hamilton, his son-in-law Matthew Robertson and William Giffen, a merchant in Paisley.[63] Since Matthew Robertson predeceased him, Matthew's eldest son Ross appears to have replaced him as evidenced by his signature on the settlement inventory.

Unfortunately for the firm, 18 months later Adam's eldest son William died in September 1848.[64] William had co-operated the Lounsdale bleachworks with his father Adam and was the only bleacher listed for Lounsdale in the 1848-49 Directory.[65] This led to efforts to lease the "mansion house of Lounsdale" described as containing a dining room, living room, parlour, six bedrooms, kitchen , laundry, wine cellar, water closets and gas service. The property also included a coach house, stable, office and walled garden.[66] The firm, apparently called William Hamilton and Company, continued with Alex L Cameron and W.

Houstoun, with the latter withdrawing in August 1849.[67] According to the 1851 census, Lounsdale employed 16 men and 184 women. Its foreman was 26 year old Alexander L. Cameron, a master bleacher from Inverness.[68] He is listed as the foreman of the William Hamilton & Co. bleachworks at Lounsdale in the 1851-52 directory where the late William Hamilton is no longer listed.[69]

This apparent stability was short-lived. On 16 July 1851, Alex Cameron extinguished the heating fires in the women's houses at 10:30 p.m. instead of allowing them to burn all night as had been the tradition. The next day, the women struck work despite a clause in their employment contract that required three days' notice before striking. Cameron obtained a warrant from a Justice of the Peace and had three women arrested for trial. Other workers and bleachers took great interest in the trial where the women claimed Cameron had first breached their employment contract by extinguishing the fires so they were justified in the immediate strike.[70] By October 1851, the entire bleachworks, including the dwelling house and company goodwill were available for rent and the following month, the machinery and equipment of the bleachworks were advertised for sale at auction.[71] This opened an opportunity for new management at Lounsdale.

Perhaps the most obvious place to turn would be the Hamiltons at Blackland Mill. The 1851 Census also reported John Hamilton Esq. age 55 and George Hamilton age 34 at Blackland Mill along with Alexander Hamilton age 68 who was running the company store. George is identified as the nephew of John and as born in Glasgow rather than Renfrewshire like his uncle. All three were listed in the 1848-49 directory with George as manager of the Adam Hamilton & Sons firm at Blackland Mills. However by the 1851-52 Directory Alexander is no longer listed. They may have been busy because there is no indication they were interested in Lounsdale.

The Robertsons, on the other hand, were another matter. Living at Foxbar per the 1851census were Elizabeth Hamilton, Matthew Robertson's widow, with her sons, Ross (age 25), Alexander (age 21) and Matthew (age 19) and daughter Mary along with a couple of servants. Thomas Robertson and wife Janet also were there in another building with their two servants. Matthew Arthur had moved on to Crofthead Bleachworks in Neilston. Matthew Arthur was last listed with the Foxbar firm in the 1848-1849 commercial directory.[72] The 1851 Census enumerator reported that Foxbar employed 10 men and 140 women. It referred to Elizabeth Hamilton's occupation as "Liferenter and Annuitant Master Bleacher."[73]

Elizabeth Hamilton Robertson appears to have interest in Lounsdale. Her eldest son Ross (now one of several trustees for Adam Hamilton II's estate) was only a year younger than Alexander Cameron. The first step of her plan was the dissolution of the copartnery of Matthew Robertson & Co. between Ross Robertson and Matthew Arthur in May 1849.[74] The next step was the organization of a new business for her three sons. Thus in the 1851-52 directory, Matthew Robertson's sons: Ross, Matthew and Alexander are listed as bleacher, manager and clerk respectively, at Foxbar.[75]

The third step appears to have occurred by 1852, with Ross, Alexander, and Matthew Robertson paying £5,500 to Adam Hamilton II's trustees to be able to occupy and operate the Lounsdale property. They obtained this money by bond, secured by the Lounsdale property itself. Indeed, the Lounsdale property appears to be used as security for a number of loans by them at this time.[76] The 1853-54 directory lists Alexander as living in Lounsdale and his brother Ross at Foxbar and Matthew at both locations, but all of the same firm: Matthew Robertson & Co.[77] At some point by 1857, Elizabeth was able to move into her childhood home at Lounsdale with her eldest son Ross who became a Justice of the Peace (perhaps taking over the term of his late father).[78] The Lounsdale house was larger having 13 rooms with at least one window compared to Foxbar house with only 8 windowed rooms.[79]

The 1853-54 Directory also lists George Hamilton as manager of the Adam Hamilton & Sons bleachworks at Blackland Mill with George's uncle John individually is listed as living at Blackland Mill.[80] George proved his value by obtaining two patents: # 2514 for "improvements in spreading or distributing starch, gum and other semi-fluid matters;" and # 2025 a provisional patent granted for "improvements in the treatment or finishing of textile fabrics."[81]

Table 3:

Firm	**Men** Employed	**Boys** Employed	**Female** Employed	**Total** Emp.	**Hours**	**Time for Meals**	**Total hours**	**Stove Temp.**
Blackland Mill	30	12	300	342	6 to 7	1.5	66	90-100 100-105
Lounsdale Foxbar	30	30	390	450	6 to 7	1.5	64	80-90 90-100

Data from the 1854-1855 *Parliamentary Papers*[82]

A snapshot of the operations of these bleachworks (Blackland Mill and the combined Lounsdale/Foxbar firm operated by the Robertsons) is available in the 1854-1855 Parliamentary Report as summarized in the table above.

While both firms increased the number of employees by about 50% since the prior report, the Lounsdale Foxbar combination overtook Blackland Mill and Auldehousefield to take the number two spot (based on employees) for Western Scotland bleachworks.[83] As the table shows working hours were reduced somewhat in response to government enquiries about whether working conditions in the bleaching industry should be regulated. These firms prospered in part because the sheer volume of the industry meant that textile firms could find bleachers to meet their specific needs of the moment. Rather than form relationships with particular bleachers most textile firms simply inquired to several bleachers and placed orders with those who could finish the work in a timely fashion. Because unbleached cotton was a commodity, a large order could be subdivided among several bleachers to ensure timely completion.[84]

The subject of this Parliamentary Report continued to be whether the employment conditions provisions of the Factory Acts should be extended to bleach and dye works. In 1853, this topic was discussed by labor and the managers of finishing firms with the former petitioning the latter to reduce working hours to 60 hours per week. Some firms were in favor of 60 hours per week, but many like M. Robertson & Co. would only agree if all the firms agreed. When asked whether they would object to an act of Parliament imposing uniform regulation, Adam Hamilton & Sons agreed not to object, but Matthew Robertson argued that heat from the stoves at his works were moderate at 75-90 degrees and women were only in the hottest part of the works for just 10 minutes at a time. Therefore, the shortening of hours was not needed for this works.[85]

In the middle of this working conditions debate, Ross, the eldest son of Matthew, died in March 1858 (age 31), leaving a personal estate valued at £2,994. Interestingly the estate records describe him as the sole partner of M. Robertson & Co. and he left everything in control of his mother, Elizabeth Hamilton.[86] The business notice announcing Ross' death also reassured customers that the firm of M. Robertson & Co. would continue with Alexander Robertson at Lounsdale and Matthew Robertson at Foxbar.[87] Within a year, the firm was trying to rent Foxbar Cottage, consisting of three rooms and a kitchen with two attic rooms (former home of William and Elizabeth Robertson as opposed to Foxbar House).[88] Thus by the 1861 Census (April 7-8), Elizabeth's son Alexander, age 30, had joined her at Lounsdale (he would marry Anna Andrews in July 1861[89]), with two children of

the late Charles Robertson, a brother of her late husband Matthew Robertson. Foxbar was left to her youngest son, Matthew (Jr.) (age 27), his 24 year old wife Jane and their 4 month old daughter Elizabeth Carole. At this point Foxbar bleachworks appeared to house about 168 workers compared to only 73 at Lounsdale.[90] Blackland Mills reportedly employed 230 people. George Hamilton age 45 is listed as the head of household with his young wife Elizabeth, age 27 and their 4 year old son George.[91]

Given the decline of employees at Lounsdale during a time when muslin bleaching output was increasing, the Adam Hamilton II trustees probably were not pleased. According to newspaper notices, they attempted to sell the entire Lounsdale property, buildings and business starting in February 1865, reducing the price to £5,600 in May, to £5,300 in July and down to £4,800 in September 1865.[92] At some point before May 1867, Matthew Robertson & Co. dissolved. Matthew continued as a bleacher in Foxbar and Alexander became an accountant in Glasgow. [93] At roughly the same time, the Lounsdale Bleaching Company was acquired by William Pollock and Adam Curie.

Matthew Robertson still had the Foxbar bleachworks. According to a newspaper account, on Saturday 11 July 1868, Matthew Robertson took his employees on their annual excursion by ship to Arrochar where they enjoyed a band, dancing and singing and "substantial refreshments" for two hours. The music, dancing and singing continued on the ship ride home.[94] Blackland Mills workers had enjoyed a similar ship outing two years earlier so they may have been common but not always reported in the news.[95]

Cotton Industry Struggles

Such festivities may have celebrated recent improvement in the industry. W.H. Marwick suggests that the financial crisis of 1857 was the beginning of decline in the Scottish cotton industry. This was immediately followed by the cotton famine caused by the U.S. Civil War.[96] Overproduction of cotton muslin led to ruinous price competition and then raw cotton imports from the U.S. to Scotland dropped from 172k cwt in 1861 to 7k cwt in 1864. This led to unemployment throughout the cotton industry. While imports from the US recovered to 26k cwt by 1867, other sources of raw cotton allowed cotton manufactures exports (as opposed to spinning and exporting yarn) rose to a record £5 million in value and 206 million yards.[97] Thus, there was good reason for a festive excursion by boat in 1868.

As cotton imports dropped and cotton-related businesses struggled to stay afloat, bleachworks also had to adjust to the 1860 Bleach and Dye Works Act that extended the provisions of the existing Factory Acts to bleach and dye works. This restricted the working day to 12 hours on weekdays and 9 hours on Saturdays. One controversial provision of this act was the "making up lost time" provision that allowed works to extend hours an extra two hours to 8 pm on full work days and 4:30 on Saturdays (a break was typically granted for tea before the extension started). The act did not fully define allowable reasons for making up lost time and some felt this provision was being abused by some firms. So this led to further hearings in 1868-1869.

In those hearings, Donald Stewart, manager at Adam Hamilton & Sons, testified that it would be better simply to strike the clause from the Act. He admitted that his firm did make up time lost from breakdowns, which were infrequent. He noted they only made up one hour per day and only for a few nights in a row and never on a Saturday. Matthew Robertson stated they never wanted to work past 6 pm to make up lost time, but that rarely they made up time when lost by accidents. He noted that Foxbar employed about 300 persons, mostly women, girls and boys and that their employees did not want to work overtime.

William Pollock, the new manager at Lounsdale, stated they only made up lost time in times of distress, such as the cotton famine. He also noted his firm generally used steam for power, but had water power as a reserve power source. Occasionally, they would make up for lost time caused by flooding from the water source but their workers did not want to work overtime either. He stated that Lounsdale employed 280-300 people and would like to employ 12 year old girls, rather than waiting until they turn 13, so they can get used to the moderate heat (95-90 degrees).[98] He appears to have quickly expanded Lounsdale up to capacity, but he also noted that the number of people employed in the bleachworks had decreased in the past 10 – 12 years while production per employee had increased. Curiously, in March 1868, he ran a small classified ad seeking to rent the lands of Lounsdale with no information as to whether this included the business and buildings.[99]

The 1871 Census (April 2-3) finds Matthew Robertson back at Foxbar, employing 254 women, 23 men and 23 boys. He lived with his mother and daughter Emma Jane, aged 4. Lounsdale was run by William Pollack, master bleacher, and is said to have employed 230 women, 16 men and 30 boys. Unfortunately, the Census does not indicate the number of workers employed at Blackland Mill, but does indicate George Hamilton (age 55), his wife Elizabeth (age 37), their son George

Jr. (age 14) and their daughter Mary R.D. (age 10) lived there.[100] Blackland Mill was the more stable of these firms and so received a credit rating in 1877 of 2, from a scale from 1-5, with 1 being excellent and 5 being a sham or fraudulent. A score of 2 was labeled "good" in the report. The Foxbar firm's rating of 2 ¾ was not as good but still in the "good" category. The Lounsdale firm was not rated. The Foxbar rating may have been affected by the prior year's dissolution of copartnership between Matthew Robertson and John C. M'Culloch, the latter presumably offering capital to the firm.[101]

During this time, the government also appointed a commission to look into river pollution. Sometime around 1871, Adam Hamilton & Sons and the Lounsdale Bleaching Company both presented information about their operations. The former employed 220 people to bleach 400 tons of goods yearly valued at £135,000. The company used 94,000 lbs of bleaching powder, soda ash and Irish lime, 20,000 lbs of soap and 35,000 pounds of liquid acids. The works were powered by steam, running at 40 horse power produced by 2500 lbs of coal. However, the works also dumped liquid refuse into the river Glen and Stanely Burn, which joined the Cart, a tributary of the River Clyde. The firm blamed most of the pollution on other works upstream from its location. The Lounsdale firm on the Caldren Burn, an affluent of the Cart and tributary of the Clyde, stated that it consumed 4.5 million gallons of water yearly. It produced goods valued at £100k and used 1600 tons of coal to produce about 16 horsepower. Both works used the excrement of their workers as field fertilizer.[102]

The push for still better working conditions continued. During government hearings in 1876, both Mr. Pollock[103] of Lounsdale and Mr. Hamilton of Blackland Mill testified. Most of the bleachworks represented in the hearings worked a 60 hour week, but Blackland Mill had its workers work only 57 hours per week. Workers at typical bleachworks such as Lounsdale started at 6 am and work until 9 am for their first 45 minute meal break. They resumed at 9:45 and worked until 2 pm and take a second 45 minute break. The day finished by working from 2:45 until 6pm. This was the regular 10.5 hour work day during the week. On Saturdays, the work day stopped at 2pm. At Blackland Mills one hour was given for meals instead of 45 minutes. This extra time allows some workers to go home for meals. There also was some discussion of women's barracks with Blackland Mill largely eliminating them (except for one house with 30 women) and Lounsdale insisting on continuing their use since most of their workers are from the Highlands or Ireland and have no place to live nor from which to get meals without barracks. Lastly, the topic of child labor was discussed with both firms complaining that it was difficult to get young workers. The firms also argued that

some widows needed to have their children work to support the family, so bleachworks provided relatively unique part time positions for young children.[104]

The final Commission report to consider working conditions in the bleaching industry received a petition in 1876 from the Lounsdale Bleaching Company, M. Robertson & Co. and eight other firms complaining about lax and uneven enforcement and the lack of resources that constrained the Glasgow factory inspector from effectively policing the many firms within his jurisdiction. The petition requested that any change to existing law should call for more effective enforcement in order to truly obtain the working conditions benefits called for by the existing acts.[105]

Two Firms Dissolve

One fear of any business or residence during the 19th century was fire. For example, a thunderstorm in January 1834 caused lightening to strike one of the stalk vents at Blackland Mill igniting a gas line. Fortunately a worker turned off the gas valve preventing what probably would have been a devastating fire.[106] Similarly a spring thunderstorm in 1854 led to many lightning strikes including the leg of a foundry worker and the roof of the home of John Hamilton at Blackland Mill. Bleaching workers removed most of the furniture from the home (the furniture was insured) and when the fire company arrived the workers helped them save the ground flat.[107]

More significantly fire gutted the Lounsdale bleachworks --twice. The first occurred in December 1880, over three years since the Lounsdale "country villa" was again advertised for rent.[108] The fire was first spotted at William Pollock's house but it quickly spread to other buildings so that about two thirds of the bleachworks burned down. The loss was estimated at about £20,000 out of a total bleachworks value of £30,000. Insurance coverage totaled only £9,000. This fire put about 300 people out of work.[109] The next month William Pollock announced that he had sold the firm to his sons and no longer had any interest in it.[110] The next month, another ad was run seeking a partner to replace the senior partner that was retiring, so perhaps he had not yet left the business.[111]

The second fire occurred in April 1882, just as the bleachworks was about to become fully operational again. Again several buildings were destroyed but the women workers managed to save their personal belongings out of the women's houses. Total damage was estimated at £7,000 but only partially covered by

insurance. This put about 100 women and 50 men out of work.[112] The stress of two fires in less than 18 months may have killed the owner, William Pollack, who died six months after the second fire in December 1882.[113] In the 1881 census, he was living at Lounsdale with his wife and five children. The family remained at Lounsdale for many years with Lounsdale Bleaching Company listed in the 1882-1883 directory but not later. The 1882-1883 also lists several of the Pollock sons and their waste company and chemical company.[114] Alexander and Robert Pollock are listed as bleachers living at Lounsdale in the 1883-1884 directory.[115] An advertisement in the 28 July 1883 *Manchester Times* offered the firm for rent but presumably there were no takers.[116] After that time, there is no further listing for bleachers at Lounsdale or the Lounsdale Bleaching Company.

The year 1881 also was significant for the Robertson family. Elizabeth Hamilton Robertson, family matriarch, died that year in nearby Dumbarton. In the 1881 census, Matthew is living at a bleachworks at Fernhill in Argyll. He has a new wife, a 29 year old Irish woman named Lillias and also had two children, Caroline age 20 and Ernst age 5. Caroline is the same age as Elizabeth Carol who was listed in the 1861 census. Two years prior to this, he filed for a patent for an invention of "improvements in airing textile fabrics in the finishing process." Matthew Robertson lists himself as "of Foxbar" in the June 1879 patent.[117]

The 1881 Census also listed about 200 workers in the Foxbar, Midfield, Derry, and Causeyend Women's Houses, but it is not clear which of these worked at Foxbar, and for whom, and which worked at Lounsdale for William Pollock.[118] Since the census does not list anyone as being in charge of Foxbar, it is possible Matthew still controlled the bleachworks even though he was living in Argyll. Watson's Paisley Directory of 1882-83 still lists Matthew Robertson of M. Robertson & Co. as living in Foxbar. Perhaps Matthew returned to Foxbar for most of the 1880s or perhaps he kept an office there to take orders for his bleachworks in Argyll.

In the 1885 Valuation Rolls, the Earl of Glasgow is listed as the owner of Foxbar with Matthew Robertson & Co. listed as owner/occupier and Matthew Robertson himself listed as tenant/occupier. Seventeen men with last names other than Robertson were also listed. Similarly, the 1885 Valuation Rolls list Adam Hamilton & Son as tenant/occupier of Blackland Mill house, bleachfield and lands (H & R Brown was listed as the tenant occupier of the Dyeworks). George Hamilton personally is listed as the owner of all the Blackland Mills properties including the Dyeworks. The Lounsdale properties are listed as owned by the Trustees of the late William Pollock, with the tenant being the Lounsdale Bleaching Company but with no Hamiltons listed as living there.[119]

In 1887, Foxbar was sold to Charles Bine Renshaw, son of Charles Renshaw, chair of the A.F. Stoddard Company, a carpet manufacturer.[120] In 1900, Foxbar (or some part of it) was sold to the Paisley and Barrhead Railroad.[121] It seems likely that the muslin bleachworks closed during this period. The 1888-1889 directory was the last to list M. Robertson & Co. as bleachers at Foxbar.[122] By the 1891 census, Renshaw's foreman, who happens to be named James Robertson (not closely related to the Robertson bleachers), is listed as occupying Foxbar cottage. Foxbar House itself is occupied by Francis Deans, postmaster.[123] In the 1891 census, Matthew Robertson, wife Lillias and son Ernest have returned to Renfrewshire from Argyll. He is listed as a manager of bleach workers in Newton Mearns, living at Tofts Cottage.[124] Charles Bine Renshaw remembered Matthew Robertson as a "good horseman" who "cut a respectable figure in the hunting field."[125]

It appears that the primary set of buildings for Foxbar bleach works was converted to Foxbar Scouring Works by the A.F. Stoddard Company. Scouring cleans the thread used for carpet just as bleaching cleans cotton muslin. Foxbar Scouring Works was valued in 1917 and 1928. The first valuation notes the buildings were serviceable and in fair condition, covering an area of just over 2000 yards to 2700 yards, depending on whether "extra flats" were included. The value of the land, water rights and buildings was calculated at £50,150. The buildings were built from brick or stone with slate or tarred felt. In 1927, the value of equipment, engines, boilers, belts etc was estimated at £1065/8/6. The purposes of the various buildings as identified in the 1928 valuation were given below, above the 1928 diagram of buildings.[126] The 1917 description of each building, if different, is given in parentheses and measurements are approximate.

1. Dwelling House, domestic wash house, lavatories; (Gateman's Office & Dwelling House); 20ft x 10 ft.
2. Steam Boiler House with Lancaster boiler worth £125; 40 ft x 65 ft.
3. Sulphur House (Stoves) containing sulphur burning boxes; 40 ft x 100 ft
4. Scouring House containing several large machines worth £393/18/0; 105 ft x 24 ft
5. Electric Switch House (Small Engine House) containing an Ellison Switch and other equipment worth £175/8/0; 10 ft x 20 ft
6. Yarn Airing House & Stove (Drying House); 35 ft x 10 ft.
7. Yarn Drying Stove (Stove) containing heating pipes etc. worth £184/12/0; 25 ft x 35 ft.
8. General Store containing bench, scales and weights etc. worth £29/2/6; 20 ft x 40ft.

Thus by 1890, two of the three Stanely area cotton muslin bleaching firms had dissolved. Adam Hamilton and Sons continued until the turn of the century as a family venture. An 1899-1900 directory listed the firm with its first telephone number (No. 70) as bleachers, dyers and finishers. George Hamilton was at Blackland Mill and George Jr. was listed as being with the firm but living at Whiteleigh.[127] In 1900, it became part of the Bleachers' Association Ltd. –a consolidation of about 60 UK bleaching and finishing firms.[128] By the time of the1904-1905 directory, the firm had been re-formed as a limited liability company and George Sr. was no longer listed.[129] In 1908, Adam Hamilton & Sons Ltd was acquired by the Bradford Dyers Association (suggesting it was doing more dying than bleaching at this point) and it ceased production in 1957.[130]

Conclusion

History barely notices the rise and fall of the numerous family firms like the three bleachworks in this case study. Modern family business research suggests that only about 30% of all family businesses survive past the first generation.[131] Similarly, a study of 19th century Stockport businesses found that in cotton manufacturing, roughly 25% of the firms survived at least until ten years after the death of the firm founder.[132] A mere 10-15% of modern family firms survive to the third generation.[133] This modern statistic is consistent with the so-called "Buddenbrooks" effect that asserts historically that the third generation in family firms in Britain was more interested in gentrification than running the business and this thesis is considered an explanation for British economic decline.[134]

While William and Thomas Robertson demonstrated their interest in gentrification, other family members stepped up to operating the Foxbar firm. The Robertson firm survived through four generations and an even larger number of full or partial changes of control. The final manager of the firm, Matthew Robertson, continued bleaching after the firm was dissolved when he was in his late 50s. The Lounsdale works arguably only survived three generations as Adam Hamilton II began sharing management responsibilities with his son only to have the son die shortly after he did. However, the name of Adam Hamilton as a bleachworks (later a dyeworks) lasted almost 180 years and the Blackland Mill bleachworks survived for several generations as a family firm, significantly outlasting the other two firms studied here.

Thus, these firms appear to have above average survival rates. However, this sort of macro-observation is too common in historical analysis. This paper argues that the human stories also should be included within the subject of history. For example, the business history literature for the 19th century seldom mentions the role of women in starting or running a business (such stories are referred to as "invisible or hidden").[135] This study suggests that Jean Good, wife of firm founder Alexander Robertson may have been instrumental through her family contacts in obtaining the needed leases for land suitable for bleachworks. Even less "invisible or hidden" is the story of Elizabeth Hamilton Robertson who may have helped her husband Matthew Robertson operate the Foxbar bleachworks but was clearly instrumental in assisting their sons in both operating Foxbar and obtaining the right to run the Lounsdale works.

The people in this case study struggled with business difficulties (e.g., managing employees, obtaining credit and financing and the cotton famine) but also strove to take care of their extended family. Census records show that often unmarried daughters and young nieces and nephews of deceased siblings were living at the business location and probably participating in the family business to the extent they were able. Indeed, Margaret Robertson, an unmarried daughter of the first Ross Robertson, lived at Foxbar for over 80 years. These families also faced the same sorts of personal problems that confronted people generally in 19th century Scotland such as sickness, fire, crimes and even an insurrection. Some family members examined here lived long and successful lives while others died prematurely or were less successful at bleaching whether because of less interest or capability or prior tragedy that led to less desire to be successful. In any event, the lives of these textile families are as colorful as the cloth that was ultimately produced and sold in 19th century Scotland.

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[1] A. Cooke, *The Rise and Fall of the Scottish Cotton Industry, 1778-1914—'The Secret Spring'* (Manchester: Manchester University Press 2010); S. Nisbet, *The Rise of the Cotton Factory in Eighteenth-Century Renfrewshire* (Oxford: Archaeopress –Publishers of British Archaeological Reports 2008).

[2] Cooke, *The Rise and Fall,* p. 205.

[3] S. Nisbet, 'The Making of Scotland's First Industrial Region: The Early Cotton Industry in Renfrewshire,' *Journal of Scottish Historical Studies,* 29, no. 1 (2009), 1-28.

[4] J. Wilson and A. Popp, *Industrial Clusters and Regional Business Networks in England 1750-1970* (Aldershot: Ashgate Publishing 2003).

[5] In this particular context, see e.g., W. Gordon, 'Highland Daughters, Lowland Wage: The Migration of Single Women from the Scottish Highlands to Abbey Parish, Paisley, c. 1851,' *Scottish Labour History Society Journal,* 32 (1997), pp. 23-39; W. Gordon, *Mill Girls and Strangers: Single Women's Independent Migration in England, Scotland and the United States*

1850-1881 (New York: State University of New York Press 2002) and W. Gordon, 'Research Note: 'What, I pray You, Shall I do with the Balance?' Single Women's Economy of Migration,' *International Review of Social History,* 50, no. 1 (2005), 53-70.

[6] A. Coli, 'Business History in Family Business Studies: from Neglect to Cooperation?' *Journal of Family Business Management,* 1, no. 1 (2011), pp. 14-25.

[7] A. Colli, *The History of Family Business 1850-2000* (Cambridge: Cambridge University Press 2003), p. 23.

[8] W. Gordon, 'Highland Daughters,' p. 30.

[9] G. Crawfurd (1710), W. Semple (1782) and G. Robertson (1818), *The History of the Shire of Renfrew* (Glasgow: Grimsay Press 2003) pp. 413, 415. The operation of a bleachfield "near Millarston" could actually be at Foxbar although the origin story below suggests that Foxbar was started in 1783.

[10] G. Crawfurd et al, *The History of the Shire*, p. 314.

[11] J. Tait, *John Tait's Directory for the City of Glasgow* (Glasgow: The Grimsay Press 2003, originally published in 1783) pp. 81, 89.

[12] *The Statist,* Vol. 49, July 7 to Dec. 29, 1900 (London: The Statist) pp. 102-102.

[13] These various tax rolls are available and often transcribed at http://www.scotlandsplaces.gov.uk.

[14] J. Shaw, *Water Power in Scotland 1550-1870* (Edinburgh: John Donald Publishers Ltd. 1984) pp. 237-240.

[15] W. M. Metcalfe, *A History of Paisley 600-1908* (1909 Glasgow: Grimsay Press Reprint 2004) p. 509. While gardener sounds like a menial occupation today, the fact that it is proudly listed on his gravestone and that the 1695 Poll Tax that indicates William Good had two "prentices" suggests it was a position of responsibility.

[16] C. L. R. Robertson, *A Very Pleasant Family: An Account of some of my Ancestors* (typed manuscript March 1978).

[17] Robertson, *A Very Pleasant Family.*

[18] SC 58/42/12 p. 274 (Matthew Robertson's Disposition and Testament in 1839). However, George Ross was 13th Lord Ross of Halkhead and died in 1754. His daughter Elizabeth Ross married John Boyle, the 3rd Earl of Glasgow who died in 1775. Their son George Boyle was the 4th Earl of Glasgow in 1796 and became Lord Ross of Halkhead in 1815. .

[19] SC 58/42/17 pp. 278-297

[20] S. Nisbet, *Cotton Factory,* p. 36

[21] E. Baines, Jr., *History of the Cotton Manufacture in Great Britain,* London: Fisher, Fisher & Jackson 1835), p. 250.

[22] A. Cooke, *The Rise and Fall,* p. 125; E. Baines, Jr., *History of the Cotton Manufacture*, pp. 246-247.

[23] J. Sinclair, ed., *The Statistical Account of Scotland,* vol 7 (Wakefield, EP Publishing 1795), p. 851.

[24] S. Nisbet, *Cotton Factory,* p. 36

[25] S. Nisbet, *Cotton Factory,* p. 32.

[26] Pigot & Co. *New Commercial Directory of Scotland, Ireland and the four most Northern Counties of England for 1820-1822* (London: J. Pigot & Co 1920), pp. 218-219.

[27] *Glasgow Herald* 7 April 1820, p.1; *Glasgow Courier* 6 April 1820, p.2; P.B. Ellis & S. Mac a'Ghobhain, *The Scottish Insurrection of 1820* (Edinburgh: John Donald Publishers 1970), pp.

155-56; J. Parkhill, *Ten Years' Experience of a Betheral's Life* (Paisley: Paisley Herald 1859), p. 111.
[28] *Glasgow Courier*, 6 April 1820, p.2.
[29] J. Parkhill, *The History of Paisley* (Paisley: Robert Stewart, 4, Cross) p. 62.
[30] SC 58/42/17 pp. 278-297
[31] Pigot & Co., *Commercial Directory for 1825-26,* pp. 623-624.
[32] R. Semple (ed.), *The Poems and Songs of Robert Tannahill* (Paisley: A. Gardner 1874).
[33] S. Higgins, *A History of Bleaching* (London: Longmans, Green and Co. 1924), p. 99.
[34] S. Higgins, *History of Bleaching,* p. 107-109.
[35] E. Baines, Jr., *History of the Cotton Manufacture*, pp. 250-253; A. Clow & N. L. Clow, *The Chemical Revolution: A Contribution of Social Technology* (London: Batchworth 1952), p 196.
[36] Precognitions (recorded testimony) AD/14/29/238.
[37] J.W.C., *The Town of Paisley Historical Sketch* (Paisley: Dailey Express1878) p. 179.
[38] *Glasgow Herald,* 12 March 1870, p. 6
[39] SC 58/42/6 pp. 126-138.
[40] G. Fowler, *Fowler's Commercial Directory of the principal towns and villages in the upper ward of Renfrewshire for 1830-31* (Paisley: G. Fowler, Bookseller 1830-1831) pp. 36, 62. Charles Robertson, the son of the bleachworks founder Alexander Robertson, died in 1765 at the tender age of 4 years old. The other family possibility is Charles, the son of Ross, who was born in 1811. But it seems more likely that he was asked to place the listing in the Directory and the editor confused the first names rather than Charles was placed in charge of the bleachworks ahead of his father and older brother Matthew.
[41] G. Fowler, *Fowler's Commercial Directory for 1832-33,* pp. 35, 62.
[42] G. Fowler, *Fowler's Commercial Directory for 1834-35,* p. 40.
[43] SC 58/42/8 pp. 238-239.
[44] Matthew Arthur was actually a second cousin to Matthew Robertson because his mother Jean Robertson Arthur was a first cousin to Ross Robertson.
[45] SC 58/42/12 p. 274, 276.
[46] G Fowler, *Fowler's Commercial Directory for 1836-1837,* pp. 16, 72.
[47] *Paisley Advertiser* 26 Jan. 1837 p. 1.
[48] G. Fowler, *Fowler's Paisley Commercial Directory for 1838-1839,* pp. 16, 74, 98.
[49] Ibid 42-43.
[50] Pigot & Co., *National Commercial Directory for the Whole of Scotland* (London: J. Pigot & Co 1837), pp. 717, 720.
[51] *The Penny Cyclopedia* , Vol. 17, London: Charles Knight And Co.
[52] *Paisley Advertiser,* 13 Feb. 1825, p. 3; 4 March 1826, p. 4.
[53] *New Statistical Account of Scotland Vol. 7* (Edinburgh: William Blackwood and Sons 1845) p. 255.
[54] SC 58/42/12 pp. 275-77.
[55] Reel 559, 5th Enumeration District, pp. 8-14.
[56] Id. at pp. 1-8. 559/00005/00007
[57] G. Fowler, *Fowler's Paisley Commercial Directory for 1841-1842,* pp. 42,43, 77.
[58] *Parliamentary Papers, Appendix to the Second Report of the Commissioners for Enquiring into the Employment of Children [Trades and Manufactures], part II.* 1842[432]XV p. I26.
[59] *Parliamentary Papers, Appendix to the Second Report* pp. i26-i27.

[60] W. Gordon, *Mill Girls and Strangers* (2002).
[61] *Parliamentary Papers, Appendix to the Second Report,* pp. 125,128.
[62] G. Fowler, *Fowler's Paisley Commercial Directory for 1845-1846,* pp. 40, 41, 73.
[63] SC 58/42/17 pp. 278-297.
[64] *Renfrewshire Advertiser,* Sept. 1848.
[65] Fowler, *Fowler's Paisley Commercial Directory for 1848-1849,* p. 42.
[66] *Glasgow Herald,* 19 Feb. 1849, p. 1.
[67] *Glasgow Herald,* 31 Aug. 1849, p. 3.
[68] 1851 Census, Paisley Parish, Ref. 573/3, Enum. Book 8, p. 4.
[69] G. Fowler, *Fowler's Paisley Commercial Directory for 1851-1852*, pp. 24, 42.
[70] *The British Banner,* 23 July 1851, p. 11.
[71] *Glasgow Herald* 24Oct. 1851, p. 1 and *Glasgow Herald* 17Nov. 1851, p. 8.
[72] G. Fowler, *Fowler's Paisley Commercial Directory for 1848-1849,* p. 16.
[73] 1851 Census, Paisley Parish, Ref. 573/3, Enum. Book 8, pp. 9-17.
[74] *Edinburgh Gazette* 15 May 1849, p. 501.
[75] G. Fowler, *Fowler's Paisley Commercial Directory for 1851-1852*, pp.76-78.
[76] Renfrew Sasine Abridgements #s 1471-74, filed between October 21 and November 8, 1852.
[77] G. Fowler, *Fowler's Paisley Commercial Directory for 1853-1854*, pp.76-78.
[78] Henshelwood's Directory of Paisley 1857-1858 pp. 64-65, 134.
[79] 1871 Census, Paisley Parish, Ref. 559(2), Enum. Book 4, pp. 6-18.
[80] G. Fowler, *Fowler's Paisley and Johnstone Commercial Directory and General Advertiser 1853-54* (Paisley: G. Fowler Publisher 1851), p. 43.
[81] *The Repertory of patent inventions* (London: Alexander Macintosh 1854) p. 286; *The London journal of arts and sciences* edited by William Newton (London: William Newton & Son 1856) p. 258. This may also be the George Hamilton who was an elder of the South Church in Paisley in 1843. Free Church of Scotland, *Acts of the General Assembly of the Free Church of Scotland Convened at Edinburgh May 1843* (Edinburgh: Free Church of Scotland 1843) p. 13.
[82] *Parliamentary Papers,* Report of the Commissioner (London: George Edward Eyre and William Spottiswoode 1855).
[83] *Parliamentary Papers,* Report of the Commissioner, p. xxvii.
[84] *Parliamentary Papers,* Report of the Commissioner, p. xi.
[85] *Parliamentary Papers,* Report of the Commissioner, pp. xxii-xxv.
[86] SC 58/42/25 pp. 635-641. For a newspaper death notice see *Caledonian Mercury* 26 March 1858, p 3.
[87] *Edinburgh Gazette* 18 Nov. 1859.
[88] *Glasgow Herald* 4 March 1859, p.7.
[89] *Glasgow Herald* 20 July 1861 p. 3.
[90] 1861 Census, Paisley Parish, Ref. 559(2), Enum. Book 5, pp. 3-20.
[91] 1861 Census, Paisley Parish Ref. 559(2) E.D.3, Household 57, line 1.
[92] *Glasgow Herald* 17 Feb. 1865, p. 3; *Glasgow Herald* 26 May 1865, p. 3; *Paisley Herald and Renfrewshire Advertiser* 1July 1865, p. 5; *Glasgow Herald* 1Sept. 1865, p. 3.
[93] Renfrew Sasine Extracts, # 3268, filed May 20, 1867.
[94] *Paisley and Renfrewshire Gazette*, 18 July 1868, p. 4.
[95] *Paisley Herald and Renfrewshire Advertiser,* 7 March 1868, p.5.

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TURKEY RED TEXTILE DYEING IN GLASGOW: A CROSS-DISCIPLINARY INVESTIGATION INTO SCOTLAND'S BYGONE INDUSTRY

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Abstract

The history of Turkey red dyeing in Glasgow and the West of Scotland is a complex and multi-faceted story encompassing economics, social and working conditions, international trade, and the rapid rise in industrialisation during the nineteenth century. As part of a project at the University of Glasgow exploring the chemistry of Turkey red dyeing for conservation and reproduction purposes, this article outlines the historical, geographic, and social context for the textile dyeing and printing as well as recent publications and exhibitions about Turkey red to highlight its significance to Scottish cultural heritage.

Introduction

Turkey red textile dyeing was practiced in the west of Scotland from the late eighteenth to early twentieth centuries (Peel 1952). The product was a vibrant red cotton cloth or yarn that had a remarkable resistance to fading and bleeding, making the labour- and time-intensive process worth the investment (Arthur et al. 2007). The product quality was such that it commanded three times the price of non-Turkey red prints—the 1875-76 Montgomery Ward (an American retailer) catalogue sold red prints at 9 ½ cents per yard and Turkey red prints at 27 ½ cents (Brackman 1989).

Despite the relatively recent demise of production, awareness of its existence has largely faded from public consciousness, although there has been a revival of interest within the last twenty years as evidenced by gallery exhibitions, research projects, and installations (Jacqué et al. 1995), (Arthur et al. 2007), (Karadag & Dolen 2007), (Boot et al. n.d.). The most significant of these is the Colouring the Nation project at National Museums Scotland (NMS), which studied 200 manufacturers' pattern books from the United Turkey Red Company (UTR) that had been in the NMS collection since the 1960s. The project explored, digitized, and published online a variety of print pattern samples as well as studying evidence from business papers, exhibition catalogues, and Board of Trade Design Registers (Nenadic & Tuckett n.d.), (Tuckett & Nenadic 2012). A book was also published in

conjunction with the project that explored the Turkey red cotton industry in Scotland from 1840-1940 (Nenadic & Tuckett 2013).

There exists a large body of literature on the economic and industrial history of Turkey red. Some chemists and dyers contemporary with the industry explored the chemistry of the process and a few modern re-creations have been done, but as yet there is no comprehensive study on the product itself or definitive way to distinguish Turkey red from a visually identical imitation. This paper explains the history of Turkey red in Scotland and the aim of this cross-disciplinary doctoral project, which examines archival records and historical textile samples to understand what made the product of this technique so singular.

What is Turkey Red?

The exact definition of Turkey red is somewhat fluid; in general, it can be described as 'a colour lake formed with an oxidised fatty acid [...] in combination with aluminium oxide, Alizarin, and calcium' (Peel 1952, 502). The aims of the research for this project are to establish the chemistry of Turkey red dyeing to be able to better understand its industrial history, and to develop a reliable way authenticate textile artefacts in order to better preserve them. One of the challenges faced here is to work with what could be called a "lost" art, for there are no practitioners from the heyday of the industry still living. Another is the secretive nature of the process, described as 'a highly specialised craft that had been slowly evolved over generations by a host of contributors, and practically no up-to-date information about it was to be found in textbooks or in lectures on dyeing. [...] so little leaked out that it is not surprising that books on dyeing had little to tell aspiring entrants to the industry' (Peel 1952, 502).

Turkey red is a textile dyeing process that imparts to cotton cloth and yarn a vibrant red hue that 'was much in demand because of its brilliant colour and fastness against light and washing' (Hofenk de Graff et al. 2004, 95). It was particularly noteworthy for its resistance to typical bleaching processes and was used by Irish linen makers for embroidering their cloth and in Scotland to mark household linens and personal items because it was durable with repeated washings (Knecht et al. 1893), (Jacqué et al. 1995). Andrew Ure, the nineteenth-century Scottish scholar, doctor, and chemist, writes that it was 'the fastest colour which is known' (Ure 1844, 793).

The process and product are called by the same name. The final creation exists only in the form of a coloured textile, that is, one cannot find a bottle or vial of "Turkey red" and apply it directly to cotton; it must be created within the fibre by means of a series of treatments that together comprise the dyeing process. Imitations were

rampant because of the price quality Turkey red could demand, and counterfeit bottles of "Turkey red dye" could be purchased (Arthur et al. 2007), (Brackman 1989). It is even possible today to purchase a modern fibre-reactive dye in a shade called "Turkey Red" (Anon n.d.).

The research for this project is conducted by examining various historical dyeing texts and treatises as well as archival records related to Turkey red. The Scottish Business Archive (SBA) at the University of Glasgow has in its collection a set of ten pattern sample books from United Turkey Red, eight of which contain printed pattern samples of Turkey red. These, in combination with the textiles in the NMS collection, provide a wealth of authentic samples. The SBA collection also contains a ledger of ingredients used in Turkey red dyeing, which does not provide information about the process but does give a picture of what was used, what changed, and what was consistent over nearly twenty years of dyeing (Anon 1873). More recently and outwith the time period on which this research focuses (1870-1900), documents from the early 1900s in the Coats archive at Paisley Library describe their industrial method for making Turkey red, which is much similar to those used twenty years earlier (Brennan et al. 1943), (Collin n.d.), (Straugh 1908), (Tannahill 1906). Evidence of other similarities with methods prior to the period of focus provide evidence of continuity in the manufacturing process throughout its nearly 150-year production.

A Brief World History of Turkey Red

The origins of Turkey red, like most dyeing processes, exist far in the past and were not documented. Ure writes that 'this dye was discovered in India, and remained long a process peculiar to that country. It was afterwards practised in other parts of Asia and in Greece' (Ure 1844, 793). John James Hummel, a late nineteenth-century English industrial chemist and professor of dyeing at Yorkshire College, agreed that 'Turkey-red dyeing probably had its origin in India. At an early date it was introduced into Turkey (hence its name)...' (Hummel 1886, 427). The recurring French appellation *rouge des Indes* supports this conjecture, given the absence of records from India. It was also called *rouge turc* (Turkey red) and *rouge d'Andrinople* or *Adrianople red*, a Turkish city that is modern-day Edirne (Liles 1990).

In his comprehensive history on the madder trade in Europe, Robert Chenciner writes that Turkey red 'was made in the East using a secret process...which yielded a brilliant and lasting shade of red. [...] In spite of their exorbitant prices, yarns dyed with Turkey red, mainly from Asia Minor and Greece, were sold in large quantities in Europe during the 17th and 18th centuries'(Chenciner 2000, 211). Because of the value of the product, processes were carefully protected by dyers,

though Chenciner also notes that 'even when no secrecy was intended, it is impossible to note down all the fine adjustments carried out almost subconsciously as the result of long experience' (Chenciner 2000, 328). This made it difficult for Western European dyers to acquire the skills needed to produce Turkey red themselves, or as W.T. Johnston, a modern historian, puts it, 'to dye a pure and fast red was a secret that eluded most European textile traders until well into the 18th century' (Johnston 2010, 295). Once the trade was established, the tradition of secrecy persisted and new publications on dyeing processes were rare (Peel 1952). Robert Peel, a dyer for United Turkey Red and British Silk Dyers in the first half of the twentieth century, writes in his comprehensive study of the history of Turkey red that 'processes were so carefully guarded in those days that few inside the works themselves knew anything more than the broad outline or general method. If a very special and new method was on trial, it was called a "secret work" and kept a secret' (Peel 1952, 502).

Another challenge the dyers faced in appropriating the process were the climatological differences between Britain and Turkey or the south of France and the adaptations necessary to make the desired product (Schaefer 1941). As with the availability of publications not necessarily translating to a practical understanding of the dyeing, a comparative reading of late eighteenth-century French publications versus mid-nineteenth century British ones does not indicate any major contrast, implying that the modifications were subtle or kept tacit and left unpublished. J. N. Liles, a modern craft dyer, attributes the challenges to a lack of necessary heat and sunlight to chemically alter the oil as well as a misunderstanding about the importance of calcium salts in the dye bath (Liles 1990). No one could argue the obvious differences with respect to heavy precipitation and little heat or sunlight in Britain, and the work was mostly seasonal until the adoption of indoor drying in the 1830s (Peel 1952), (Tarrant 1987).

Turkey Red in Western Europe

In the mid-eighteenth century, two French industrialists named d'Haristoy and Goudard persuaded Greek dyers from Smyrna to bring the ability to make Turkey red to France, setting up works near Rouen and in Languedoc around 1746 (Cardon 2007). Similar operations soon cropped up in Normandy and around Marseilles. After the Greeks had taught their trade to the French they were dismissed, and moved on to Alsace to found more Turkey red works (Chenciner 2000).

The question remains, why was it so difficult to acquire the capability to produce authentic Turkey red? Dyers in Turkey and India had been making it for time immemorial, but the French were unable to make it until shown how to by the Greek dyers. Relative to the time it took to be established in France, the time taken

to establish an even more successful industry in Scotland is negligible. One theory behind this is that the ties of the Auld Alliance encouraged the technology transfer, though given the financial incentives and the already established Scottish textile industry, this is likely more a romantic fancy than fact (Peel 1952).

Major Figures in Scottish Turkey Red

Prior to the discussion of the Turkey red industry in Scotland, a few personages will be introduced. William Stirling, whose father John Stirling was Glasgow Provost from 1728-1730, founded the firm of William Stirling & Sons in the mid-eighteenth century. He began by selling on commission Indian cottons printed in London and operated out of a shop in High Street opposite the Blackfriars Wynd. By 1750 he had established a print works at Dawsholm on the Kelvin, from which he took water for his operation. In the 1770s he was instrumental in establishing the textile industry in the Vale of Leven, which had an even better supply of water. He feued the Cordale works from Lord Stonefield and started a print field there (Eyre-Todd 1934). The Stirling family's money originally came from trade with the colonies in Virginia (Arthur et al. 2007).

George Macintosh (sometimes spelled Mackintosh) was born in Roskeenshire in 1739. He moved south to Glasgow as a young man and worked as a junior clerk at a tannery on the Molendinar, becoming the head of a rival enterprise by the age of thirty-four (Eyre-Todd 1934). In 1777 he founded a cudbear operation in Glasgow occupying 1 ½ acres and surrounded by a high wall to maintain secrecy. Cudbear, a dye derived from orcella or orseille lichens found in the Highlands, produces purple shades on wool and silk (Carment 1845). Macintosh was described in the *First Statistical Account of Scotland* as 'a gentleman whose spirited and successful exertions have been of the greatest benefit to the manufacturers of this country'; he died in 1807 (Burns 1794, 113), (Johnston 2010).

Charles Macintosh was the son of George and contributed his name to the garment made from cloth waterproofed via a process he developed using natural rubber—the Mackintosh. He was also involved in a number of chemical industries in the Glasgow area, which is discussed later in this article (Macfarlan 1845).

David Dale was also born in 1739, at Stewarton. Peel calls him a "maker" of Glasgow, and like many men of his era he had a diverse set of interests, skills, and occupations (Peel 1952). He started out as a herd, later apprenticing to a weaver in Kilmarnock and becoming a peddler of yarns and cloth in his early twenties, travelling the countryside buying up linen thread spun by farmers' wives. He started as clerk in a Glasgow drapery store in 1763, eventually importing yarn from Holland and running a shop above the Tollbooth in High Street (Eyre-Todd 1934).

He was also instrumental in bringing the first branch of the Royal Bank of Scotland to Glasgow (McLaren 2012). David Dale was chosen as a magistrate of the city of Glasgow in 1794 (Eyre-Todd 1934).

The founding of the cotton industry in Glasgow can, in a way, be attributed to Rob Roy MacGregor. James Monteith was a small laird near Aberfoyle in Stirlingshire and was regularly beset upon by Highland reavers and refused to pay blackmail to Rob Roy. After repeated plundering and near ruination, he 'died of a broken heart' and his son Henry sold his land and moved to the village of Anderston near Glasgow, working as a market gardener. His son, James, became a handloom weaver. He was later the biggest importer French and Dutch yarns as well as a cambric manufacturer, establishing a bleach field by his house located near what is the modern-day Anderston railway station. James's son John built a factory in Pollockshaws with two hundred power looms. His brother James became a cotton yarn dealer in Cambuslang and purchased the Blantyre mill from David Dale, narrowly escaping ruination after the outbreak of the French Revolution. He had been unable to sell his yarn, but was able to weave the cloth and sell it by public auction in London, amassing a fortune of £80,000 (about £4 million in 2005 currency) over five years (Anon n.d.). The third son of the weaver James, Henry, was the most successful of all. By the age of twenty he owned a weaving mill in Anderston, making himself very unpopular and the source of one of Glasgow's first industrial riots when he reduced wages in the face of economic competition. The twenty one-year old mill owner was assaulted by his employees, who smashed his warehouse windows and cut off his queue. He was later very successful in building the cotton industry in Glasgow and accumulated great wealth (Eyre-Todd 1934). Henry Monteith was Lord Provost of Glasgow from 1814-1816 and 1818-1820. He died in 1848 at the age of 84, wealthy from Turkey red (Peel 1952).

Foundation of an Industry

After the 1707 Act of Union, Glasgow was a major port for trade between British North American Colonies and Continental European ports, especially for tobacco. This allowed the city to prosper during the eighteenth century, until the American War of Independence (1775-1783) ended the tobacco trade. It was during the resulting economic slump that the textile industry began to take off. Schoeser argues that the trade networks and family connections that were the legacy of the tobacco trade made it easy to establish a textile economy in lieu (Arthur et al. 2007).

Interest in Britain for cotton textiles predates the post-tobacco slump, however. At the end of the seventeenth century, demand had increased for cheap cotton prints from India, Persia, and China, at a detriment to wool and silk manufacturers.

Parliament passed an Act in 1700 prohibiting the importation and use of these prints at a fine of £200. The domestic trade was allowed to continue, as it was deemed not to interfere with wool and silk. In 1712, realising the value of this trade, an Excise duty of 3d. (about £1 in 2005 currency) was imposed 'on every square yard of calico printed, stained, painted, or dyed' and as no great objections were made it was doubled in 1714 (Anon n.d.). The wool and silk manufacturers began to suffer again and in 1720 Parliament passed another Act banning the wearing or use of any domestic or imported dyed or printed calicoes, excepting those that were dyed all blue. For sixteen years only linen could be printed, after which cloth of cotton and linen mix could be printed. The law against printing calico was repealed in 1774, the Excise duty not being removed until 1831 (Bremner 1869).

Textile printing was introduced into Scotland in 1738 according to Bremner and 1729 according to Arthur, who also says that the first print field in Glasgow was in Pollockshaws around 1742 (Bremner 1869), (Arthur et al. 2007). In 1775, Richard Arkwright, a barber at Bolton, invented the "spinning jenny" for the spinning of yarn, an invention born of an understanding of the nature of hair and therefore fibres as well. David Dale recognized the potential for this machine in terms of factory production and took advantage of Arkwright's 1783 trip to Glasgow. He invited Arkwright to the Falls of Clyde at Lanark to assess their suitability for water-powering a mill. A boggy level plot on the river was purchased from Lord Braxfield and the New Lanark Mills opened in March 1786. Arkwright, who was teased back home for his beginnings as a barber, replied that 'he had put a razor into the hands of a Scotsman who would shave them all.' Dale went on to establish other mills at Catrine, Oban, and Stanley. His son-in-law, Robert Owen, ran New Lanark and became famous for his Utopian socialist ideals (Eyre-Todd 1934, 315).

Together with James Monteith (brother of Henry, Lord Provost), David Dale founded a mill at Blantyre in 1785 to spin a kind of cotton yarn called "water-twist". A second mill was built six years later for "mule-twist", both mills being powered by the flow of the Clyde (Anderson 1845). Burns writes in the *First Statistical Account of Scotland* that the mill did not began work until 1787, though the difference is small enough to be negligible for the purposes of this research (Burns 1794). Monteith later bought out Dale's share in 1792 (Eyre-Todd 1934). Ten years later Henry took over the factory at Blantyre (Peel 1952)

If David Dale can be considered the founder of the spinning industry in Glasgow, it is the Monteith family that founded the weaving industry (Eyre-Todd 1934). From the handlooms of his father and power looms of his brother, Henry Monteith went on to make a fortune in cotton. He had commercial ties with the Bogle family, who in turn had ties to the tobacco trade as well as another export from the American South—cotton. The Bogle family had also helped fund George Macintosh's

cudbear works (Arthur et al. 2007).

By the mid-nineteenth century there were 'now many splendid spinning establishments in and around Glasgow' including New Lanark and James Finlay and Company. The latter company's operations at Catrine, Deanston, and Ballindalloch were 'the most extensive ones in the whole kingdom' and employed about 2400 people in spinning, weaving, and bleaching (Macfarlan 1845, 148).

Turkey Red in Scotland

The ability to make the profitable Turkey red was coveted by the British textile industry. In this paper, Britain refers to the entirety of the island comprising of England, Scotland, and Wales, with the countries being named separately. The "Society for Encouraging the Dying of Mather Red" was granted a charter in 1759 by the Town Council of Glasgow (Anon n.d.). They imported madder from Holland and logwood from America and the West Indies (Eyre-Todd 1934). The Society had the dual interest in the promotion of madder dyeing and making charitable donations to women and children in need. The minutes book from the 1730s and 1740s appears to involve more about charitable collections and distributions than madder dyeing, but evidently the interest was present (Anon n.d.).

According to Tarrant, 'Britain had the opportunity of learning the secret of Turkey red dyeing in 1751 when the British minster in Copenhagen forwarded a petition to the Secretary of State from a Dane who said he knew the process'(Tarrant 1987, 38). Nothing must have come of this, for Turkey red was not established in Britain until much later and it is not mentioned anywhere else. John Wilson was a dresser, bleacher, and dyer of cloth and piece goods in Ainsworth, near Bolton (Aikin 1795). In 1753 he sent an envoy to Turkey to stay with a Richard Dobs who was a merchant in Smyrna. Dobs introduced the envoy to dye houses where he learned how to make Turkey red, returning to England with bales of the madder root needed for the process. Wilson was disappointed with the process, which he found tedious and time-consuming in addition to being ill suited to his work dyed piece goods and cotton velvets. He did not pursue the process further (Wilson 1786). Aside from the dramatic irony of Wilson's choice and the lost economic success that could have resulted, it took more than thirty years after this for Turkey red to be produced in Britain.

In 1764, Simon Spurret of Isleworth received £100 from the Society of Arts for allegedly dyeing Turkey red, though the processes used to make the samples submitted to the competition were in fact only those for ordinary madder reds (Tarrant 1987). In 1795, the French government published a method for dyeing Turkey red, making public, in theory at least, the process, and illustrating the

difficulty had in replicating the process from a text alone (Hummel 1886), (Anon 1765).

The British House of Commons offered a prize of £2500 for the successful dyeing of Turkey red, which was claimed by two Frenchmen. Louis and Abraham Henry Borelle (the French spelling, alternately given as Borell) came to Britain from Rouen, where thirty-odd years earlier some of the first Turkey red had been dyed in France (Cardon 2007). Louis Borelle said later that he had come to Britain in 1781 to show the process to a friend, William Morton Pitt, who was a member of the House. Pitt had been abroad and advised Borelle to wait until his return, then taking longer than expected before coming back to Britain. The Borelles submitted their samples in the winter of 1784 to the Manchester Committee of Trade, showing them to the House Committee in February of 1785. Before awarding them the prize in 1786, the Committee observed the Borelles during the entirety of the process and then replicated it without them, testing the product for quality and fastness (Great Britain House of Commons 1803). Louis Borelle later established an operation in Manchester (Bremner 1869).

Another dyer from Rouen, Pierre Jacques Papillon, was also instrumental in the establishment of Turkey red in Britain (Cardon 2007). Papillon had submitted samples to the House of Commons under the name Cigale in February 1785, and although they were deemed to be of quality he was turned down because the Borelles had preceded him (Great Britain House of Commons 1803). It is here that the Scottish connection begins, for that same year George Macintosh was in London and met Papillon. Realising his potential, he brought Papillon back to Glasgow and with David Dale the three set up the first Turkey red dye works in Scotland on the banks of the Clyde (Burns 1794). The works, named Dalmarnock, were situated between what is today French Street and the Clyde (Peel 1952).

Papillon must not have been easy to get along with, however, because the partnership lasted only two years. A letter from George Macintosh to his son Charles in January of 1787 reads 'Papillon has now left us entirely! We could not manage his unhappy temper. I have made a great improvement in his process. I dye in twenty days what he took twenty-five to do, and the colour better. We paid him his salary up to October, so as to be quite clear of him'(Johnston 2010, 296). In the *First Statistical Account of Scotland*, published in 1794, Burns writes about Dalmarnock and 'another dyehouse, equally extensive, lately erected for the same purpose, in the neighbourhood of this one, also in the barony parish, under the management of Mr. Papillon, who is now connected with another Company. At both places the Turkey red colours are now made in great perfection'(Burns 1794, 114). Johnston writes that Papillon set up his own works in 1787 and petitioned the Board of Manufactures for a grant to keep his business going. Not wanting to support him for nothing, the Board agreed after much back-and-forth to provide

funding if Papillon gave them his process. It was written out and examined by Dr Joseph Black, professor of chemistry, before being sealed for twelve years(Johnston 2010). In 1804 the method was published in a few places, one being the *Philosophical Magazine* (Anon 1804).

Although Turkey red was first dyed in England, it was in Scotland where the industry was established first and most successful, making Glasgow famous for its production (Bremner 1869). Burns writes that 'the business was first established here' and Peel that 'Scots have a better idea of the properties of Turkey Red than Englishmen, because Scotland introduced Turkey Red dyeing to these islands: she was successful in the very earliest stages of the process' (Burns 1794, 114), (Peel 1952, 496). In *The Second Statistical Account of Scotland*, Macfarlan writes 'the process for dyeing Turkey or Adrianople red, was first introduced into Britain by Mr George Macintosh, at a dye-house which he established in Glasgow. The immense importance since attained by this branch of commerce in Britain owes its origin entirely to this circumstance' (Macfarlan 1845, 165).

The seat of the Turkey red industry was eventually to become the Vale of Leven west of the city. This exodus began with William Stirling & Sons and the details are discussed in a later section (Eyre-Todd 1934). By the end of the eighteenth century Turkey red dyeing in the west of Scotland had been expanded and refined, producing various effects on yarn and cloth and producing in mass quantities (Arthur et al. 2007).

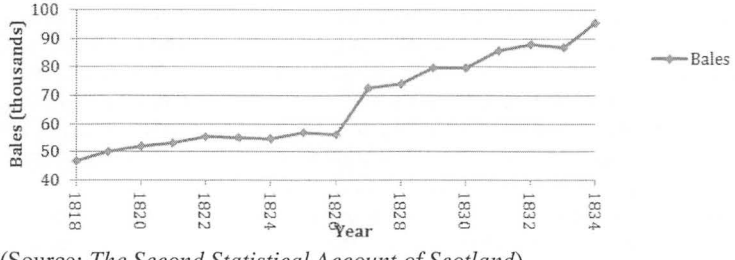
The Industry in Scotland

The success of the textile industry in Scotland was largely due to the availability of requisite resources, namely an abundant supply of soft water and a workforce. Print works were situated on or near sources of water and on occasion reservoirs were built to optimize flow. Arthur says 'what can be said with certainty is that Glasgow as a merchant city was a focal point for an industry physically dispersed over a wide area. Some firms became large-scale producers, dependent on export markets, and using mass-production techniques' (Arthur et al. 2007, 11).
The Turkey red industry in Scotland was a largely seasonal operation prior to 1835 because of the inability to effectively dry the cotton indoors. Work was done in fields surrounded by beech hedges and narrow canals (Arthur et al. 2007). Earlier innovations include the invention of cylinder printing in 1785 by William Bell of Glasgow (Bremner 1869). The discharge printing process is widely acknowledged to have been developed by Daniel Koechlin of Mulhouse in 1811, though, Arthur says that Robert Henry is credited as having developed a method at least seven years earlier and that George Roger is credited as having discharge printed and sold the first bandana in Britain in 1802 (Arthur et al. 2007).

Henry Monteith & Co. built a large manufacturing operation on banana printing, employing presses with lead plates that applied 320 tons of pressure and produced 224 finished handkerchiefs every ten minutes, processing 19,200 yards of cloth every ten hours (Ure 1824). The firm was described by Ure as 'celebrated in the commercial world, for the excellence and beauty of its cotton fabrics. The madder-reds rival, in brilliancy and solidity, any ever produced at Adrianople; and the white figures distributed over the cloth surpass in purity, elegance, and precision of outline, the original Bandana designs' (Ure 1824, 7). The success of the Scottish manufacture was such that the original industry that made bandanas in India was 'forced into terminal decline' (Arthur et al. 2007, 22). These bandanas are the those associated with the iconic red-and-white cowboy bandanas of the American West, and Turkey red calico was closely associated with the frontier, evidenced by references in Laura Ingalls Wilder's books based on her childhood and the short story *Turkey Red* published 1920 (Wilder 1932), (Wood 1920).

In the mid-1840s, Macfarlan gave figures for the increase in raw cotton consumed by the Scottish textile industry. He quotes figures from an 1834 Parliamentary Factory Commissioner that in Scotland there were 134 cotton mills and that 'with the exception of some large establishments of Aberdeen, and one at Stanley, near Perth, the cotton manufacture is almost entirely confined to Glasgow, and the country immediately adjoining'; Lanarkshire had 74, Renfrewshire 41, Dumbartonshire 4, Buteshire 2, and Argylshire and Perthshire each 1. The increase from about 46,000 bales in 1818 to about 95,000 in 1834 indicates the rapid rise of textiles in the Glasgow area (Macfarlan 1845).

Figure 1: Raw cotton consumed by Scottish industry:



(Source: *The Second Statistical Account of Scotland*)

The process of Turkey red dyeing was adopted by William Stirling & Sons at their Cordale works in the Vale of Leven in 1816, making it the earliest Turkey red production in the Vale. The firm had been struggling after the slump following the Napoleonic wars but Turkey red turned things around and helped Stirling prosper until after World War I (Eyre-Todd 1934). The Stirling firm also made bandanas

and between them and Monteith, Glasgow had 'almost a monopoly of the trade' (Bremner 1869, 303). The cloth and yarn dyed and printed by Stirling & Sons was spun and woven in Glasgow and Manchester (Bremner 1869).

Bremner writes that 'it would be impossible to have such an establishment in a locality where there was not an abundance of pure water; for the quantity consumed at Dalquhurn would be sufficient to supply every man, woman, and child in the city of Edinburgh with ten gallons a day' (Bremner 1869, 301). He estimated that 'upwards of 12,000 persons are employed in the print and dye works' in 1869 (Bremner 1869, 297).

Markets

Most of the Turkey red produced in Scotland was exported, though some was for the local market as furnishing or dress fabric; Arthur writes 'the industry thus helped to create a colour and design-conscious society, and one where quality mattered.' Dyed yarn was supplied to Manchester weaving firms and the Glasgow firms Mann Byers, Steward & McDonald and Scottish Co-op Warehouse dealt in Turkey red twill, damask, cambric, and chintz (Arthur et al. 2007, 12).

Many of the bandanas were exported to Continental Europe and North America where they were called 'Monteiths'. In North America, Turkey red was sent from Greenock and Port Glasgow to Boston, New York, Maryland, Virginia, South and North Carolina, St Kitts, St Vincent, Jamaica, and Barbados (Arthur et al. 2007).

Turkey red from the west of Scotland was also exported to India, Indonesia, China, Central and South America, and the West Indies. Design consideration was important and manufacturers tailored them to the appropriate market. Taylor writes that 'local, cultural and religious traditions had to be respected in the selection of suitable imagery. [...] dancing women were a popular motif among Hindu customers, whereas Muslims favoured non-representational geometric patterns. Peacocks were ubiquitous, as well as being decorative [...]' (Arthur et al. 2007, 23). Bremner writes about the industry that 'as most of the goods are for the Indian market, the colours are somewhat "loud" and the designs peculiar. [...] None of the designs of these Indian garments would find admirers in this country; and as the artists are bound down by certain conventional rules, they have no scope for the creation of original patterns' (Bremner 1869, 302).

Supporting Industries

The industry in the west of Scotland produced a significant amount of textile

product, and consequently the proportional quantity of raw materials. Raw cotton was imported from the American South, madder from France and Holland, and olive oil from France and Italy, to name a few. An assortment of chemical industries grew up in the Glasgow area on the heels of Turkey red manufacture. One of the first was Charles Macintosh, son of George, who began making sugar of lead, or lead (II) acetate, which was used in textile printing and was cheaper than imported Dutch product (Burns 1794).

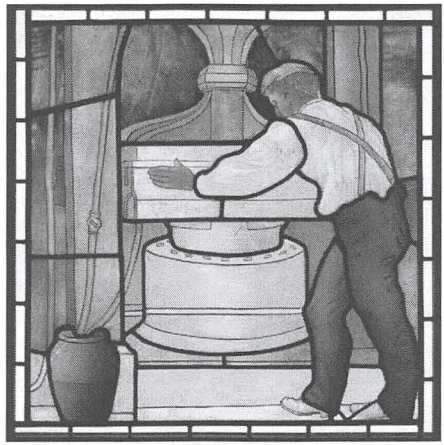
Macintosh also set up a chemical factory at St Rollox, northeast of modern central Glasgow, with Charles Tennant, which became the largest of its kind in Europe. Tennant was the fourth son of an Ayrshire farmer and started out as a weaver and opened a bleach field south of Glasgow. He applied the research done by Berthollet on the principles of bleaching with chlorine to develop a bleaching liquor using calcium chloride that vastly improved the time taken to bleach fabric (Eyre-Todd 1934). In 1795 Tennant opened Scotland's first alum works in Hurlet, Renfrewshire, and later two others at Campsie and in Baldernock, Stirlingshire. In 1799 he began preparing calcium chloride, or bleaching powder (Macfarlan 1845). Macfarlan writes in *The Second Statistical Account of Scotland* that 'in 1800, Messrs Tennant, Knox, and Company, established a chemical work at St Rollox; now carried on under the firm of Charles Tennant and Company, for the manufacture of sulphuric acid, chloride of lime, soda, and soap. This manufactory, the most extensive of any of the kind in Europe, covers ten acres of ground' (Macfarlan 1845, 163).

Other industries in the area made mordants and other ancillary ingredients. In addition to alum, copperas was made at Hurlet and Lennoxtown and lead, tin, and iron acetates were made in the Vale of Leven and the east end. Chrome mordants were made in Rutherglen, several works made bleaching powder and sulfuric acid, and natural ingredients like bullock's blood and dung were traded locally as well (Arthur et al. 2007). A soda works run by Charles Todd and Co. was located at Dalmuir Shore which made about 30 tons of sulfuric acid per week as well as producing bleaching powder (Barclay 1845). The Milburn Pyrolignous Works in Bonhill were established in 1806, employing 15 men and producing pyroligneous acid, pyroxylic spirit (methanol), creosote, and Prussian blue pigment (Gregor 1845). The works were opened by the Turnbull family who had migrated to the Vale in 1770 following William Stirling & Sons; they reputedly were successful in dyeing Turkey red at Croftengea Works in Alexandria in 1827 (Peel 1952).

Workers

The textile workers in the in the west of Scotland were vital to the success of the industry. Despite mechanisation with inventions like Arkwright's spinning jenny,

workers were still needed to operate the equipment provide quality control. Stevenson writes of Blantyre in *The First Statistical Account of Scotland* that 'the employment at cotton mills, has, in general, been accounted unfavourable to health; and yet, what is singular, in the present case, is, that out of a great number, employed at work within the mill, only two have died since it was erected' (Stevenson 1792, 217). Many of the first workers were Highlanders coming south to making a living, encouraged by George Macintosh (Carment 1845). Population accounting for Bonhill parish indicates that in 1755, 901 people lived there and by 1791 there were 2310, 562 under the age of ten (Gregor 1845). In the last decade of the eighteenth century, two print fields were established in Rutherglen and Shawfield, employing about 200 workers. By the middle of the nineteenth century there was a cotton mill and a Turkey red dye works as well as 500 handloom weavers in the parish (Brown 1845).



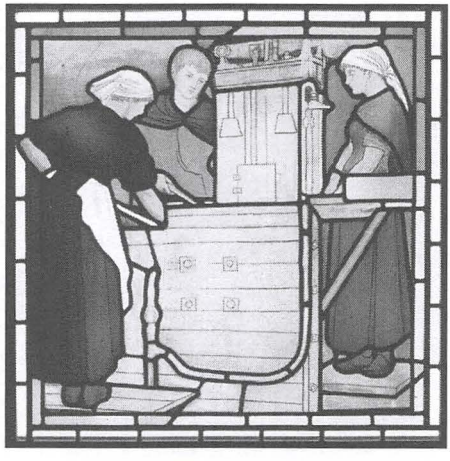
Lead press operator, Maryhill Burgh Halls, Glasgow, c. 1878.
Image reproduced by kind permission of Culture and Sport Glasgow, Glasgow City Council

The rapid increase in the number of paid workers as a result of the growth of cotton spinning, weaving, a dyeing created a shortage of currency with which to pay wages. From 1780-1830, cotton mills at Deanston and Catrine, Blantyre works, and other Glasgow businesses counter struck Spanish American silver 'pieces of eight' coins for their own purposes (Arthur et al. 2007).

The 1845 *Second Statistical Account* provides a wealth of information on numbers of workers in factories, wages, and working arrangements. In Old Kilpatrick, Cockney Field employed 70 persons—32 men, 18 women, 8 teenage girls and 12

teenage boys. Employees worked from six in the morning to seven at night with two one-hour meal breaks. Men were paid about 12s. per week, women about 6s., and the young people about 3s. The bleach and print works owned by Patrick Mitchell at Milton Field employed 400 to 500 workers 'in full operation'. They worked six days per week for ten hours a day, excepting Saturdays where most worked 'only eight hours'. Men could earn from £1 per week but women averaged about 6s. and children around 4s (Barclay 1845, 28).

Workers at Blantyre were described as 'in general as healthy as their neighbours in other parts of the parish, many of them attaining a great age. [...] Many workers are now employed who have been upwards of forty years in the service of the company. As a class, it must be confessed that they are much more healthy than the mill-workers in large towns' (Anderson 1845, 322).



Calico print workers, Maryhill Burgh Halls, Glasgow c. 1878. Image reproduced by kind permission of Culture and Sport Glasgow, Glasgow City Council

In the Vale the Cordale print works of William Stirling & Sons covered five acres of ground and employed about 500 men, women, and children. Machine printers earned about 40s. per week, small block printers about 28s. per week, large block printers about 35s. and small boys used as aides around 5s. per week (Bremner 1869). The firm's Dalquhurn operation employed nearly a thousand, many of them Irish women. Bremner writes 'a more healthy-looking class of women than those employed in bleaching is not to be found, though the labour in the winter time is

somewhat trying' (Bremner 1869, 301).

Unsurprisingly, one of the problems facing owners and operators of the textile mills was theft of product by the workers. Many newspapers from the late eighteenth and early nineteenth centuries refer to thefts and subsequent punishments. Arthur cites an example, Catherine Veer, who stole printed cotton shawls from a bleach field east of Dumbarton and was banished for fourteen years. More severe punishment could be transportation to His Majesty's plantations (Arthur et al. 2007).

Workers in the twentieth century were equally influenced by the presence of the textile industry. United Turkey Red was a significant presence for residents of the Vale from the 1920s through World War II. It was the largest single employer and owned much of the local property, providing skilled and unskilled work. Artists designed patterns that were sent to zinc cutters who cut a plate for each colour of the design. Pantographers reduced the design to actual size and engraved it on a roller, which was then passed on to an etcher. They processed the design in a bath of potassium cyanide before passing the now-etched copper cylinder to an engraver, who hand-corrected any irregularities before sending it to the printers (Fryer 1995).

The Vale of Leven

The River Leven flows out of Loch Lomond at Balloch and into the Clyde at Dumbarton, about seven miles in length. In the early eighteenth century the area was rural and agrarian, but by the end of the nineteenth century many parts had become industrialised. During this time period, the population increased from 340 to about 20,000 (MacKay 2011).

Glasgow manufacturers were sending textiles to be bleached on the banks of the Leven and Loch Lomond at early as 1728 and Dalquhurn bleach field was established in the area in 1715 (Peel 1952). The first print field on the Leven began operation around 1768 with two more following within twenty-five years (Stewart 1792). William Stirling & Sons moved operations to the Vale in 1770 when they purchased Cordale (Peel 1952).

The area was ideal of textile dyeing, printing, and bleaching because of the abundance of space and soft, clean water that flowed out of Loch Lomond and down to the Clyde (Arthur et al. 2007). Peel says '"The Vale", as it is fondly known to exiles all over the world, witnessed the rise and fall of Turkey red in Scotland' (Peel 1952, 499). The importance of the industry in the area carried into the twentieth century. An interview with the wife of a printer for United Turkey Red who worked there around the Second World War says 'really every family had

somebody that worked there.' At this time, the Croftengea works where the printer was employed had a railway link from the factory to the main line (Fryer 1995).

In an account of his childhood on the Leven in the 1930s, Tom Gallacher describes playing on the river: 'We jumped back from the odd jets of steam which spurted from its banks and were drawn to the gaping sluice gates which took giant gulps of fresh water and spat it out—blood red. Actually, it was "Turkey red"—the preferred colour of dye for saris exported to India' (Gallacher 1993). Today, none of the dye works still stand. A self-guided walking tour put together by the West Dumbartonshire Council highlights the sites of the former works of the United Turkey Red and other Vale industries (Anon n.d.).

Dye Works

Dalmarnock/Barrowfield

The Dalmarnock Turkey red works founded by David Dale and George Macintosh with the assistance of Papillon were the first of their kind in Scotland. They sold the site to Henry Monteith, Bogle & Co. in 1805 (Jacqué et al. 1995). Monteith renamed the works Barrowfield and production continued until the retirement of his son Robert in 1873, when they were demolished (Peel 1952). This ended Turkey red production in Glasgow city and left the industry to the Vale of Leven. Monteith's production of bandanas, described earlier, made the firm a fortune and the Barrowfield works were 'probably unequalled in the kingdom' (Macfarlan 1845, 163). A more detailed description of the works' operations can be read in the 1824 firsthand account in Andrew Ure's *Description of the Great Bandana Gallery* (Ure 1824).

Blantyre

When Henry Monteith took over Blantyre from his brother James in 1802, he began Turkey red dyeing there (Peel 1952). Between the *First* and *Second Statistical Account*, the population of Blantyre parish grew from 1040 to 3000, credit for this going to the Monteith firm providing jobs. Workers in the mill, of which there were around 550, worked a twelve-hour day five days a week and a nine-hour day on Saturdays. The Blantyre works were the second Turkey red dyeing operation in Scotland after Dalmarnock, though the site also spun and wove cotton (Anderson 1845). Operations continued at Blantyre until 1904 (Arthur et al. 2007). The works were condemned, and in 1925 the Livingstone Scottish National Memorial was built on the site, where Livingstone was born and had worked for much of his youth (Peel 1952).

Dalquhurn

Dalquhurn was founded as a bleach field in 1715 and purchased by William Stirling & Sons in 1791. The firm began Turkey red dyeing there in 1816 but was not consistently successful until 1828 (Peel 1952). By the mid-nineteenth century the grounds of the works covered seventy acres with buildings covering ten (Bremner 1869). The works used steam from 14 boilers and consumed 25,000 to 30,000 tons of coal per year. Around 18.5 million yards of cloth and about 700,000 pounds of yarn were dyed annually. Of the cloth, more than one half was exported as plain red and the rest was sent to Cordale (Bremner 1869).

Women bleaching linen. Stained glass window, Maryhill Burgh Halls, Glasgow c. 1878.
Image reproduced by kind permission of Culture and Sport Glasgow, Glasgow City Council.

Cordale

Cordale works were built by William Stirling & Sons in 1770 (Peel 1952). By the mid-nineteenth century it was 'one of the most extensive works of the kind in the country' and only Turkey red printing was done (Bremner 1869, 298). The grounds covered five acres and employed around 500 (MacKay 2011).

Croftengea/Alexandria

Croftengea was established in 1790 as a bleach field by William Stirling & Sons (MacKay 2011). Turkey red yarn dyeing there began in 1827 by S. Turnbull, Arthur & Co (Jacqué et al. 1995). In 1835 the works were leased to John Orr

Ewing, who eventually purchased them and surrounding land, becoming Alexandria Works.

Dalmonach

The print field of Dalmonach was established in 1786 by the Kibble family (MacKay 2011). At the end of the nineteenth century Dalmonach had branch rail lines from North British and Caledonian Railway Companies into the works along with 28 print machines, two which could print up to 16 colours. The works finished more than 25 million yards of fabric per year and dyed more than one million pounds of yarn (Arthur et al. 2007).

Dye Firms

John Orr Ewing

John Orr Ewing the one of two brothers who became giants in the Vale of Leven Turkey red production in the mid-nineteenth century. Orr Ewing acquired Croftengea in 1840 and turned it into the extensive Alexandria works. He also bought Levenfield, the first print field founded in the Vale in 1768, in 1850 (MacKay 2011). He was an astute businessman and hired a qualified chemist, John Christie, in 1859, who in addition to being an expert Turkey red dyer was instrumental in the founding of United Turkey Red (Peel 1952).

Archibald Orr Ewing

The second brother, Archibald Orr Ewing, leased Levenbank works in 1845 and bought them in 1853. He purchased Milton bleach field in 1850 and the Dillichip print works in 1866 (MacKay 2011).

United Turkey Red

Rising import tariffs imposed by the Indian government at the end of the nineteenth century incited change in the Turkey red industry of the west of Scotland. In 1898, William Stirling & Sons, Archibald Orr Ewing, and John Orr Ewing amalgamated to form United Turkey Red, later joined by yarn dyers Alexander Reid of Milngavie. Each firm continued to market under their own brand and mark, but the umbrella association allowed for some protection in the market (Arthur et al. 2007). John Christie, the chemist engaged by John Orr Ewing, became first Chairman of the firm (MacKay 2011). The works involved were Levenbank, Dillichip, and Milton from the Archibald Orr Ewing firm; Dalquhurn and Cordale from William Stirling & Sons; and Alexandria of John Orr Ewing, plus the Reid operation (Peel 1952).

Textile bale label from United Turkey Red Bale, for foreign markets. UGD 13/7/4 © Archive Services, University of Glasgow, reproduced by kind permission

United Turkey Red was a Scottish firm, though several smaller companies joined the English Calico Printers Association, headquartered in Manchester (Arthur et al. 2007). Production of Turkey red declined following World War I and was by 1936 replaced completely by synthetic red naphthol dyes of acceptable fastness (Peel 1952). United Turkey Red continued production of other textile products and was bought out by the Calico Printers Association in 1960 (MacKay 2011).

Conclusion

The history of textile manufacturing in the west of Scotland is rich and varied. Much can be said about wool, linen, and cotton processing and its growth during the industrial era. Some works like Blantyre were more vertically integrated in that they spun, wove, and dyed on the same site. Other operations, like Stirling & Sons, dyed at one site and printed at another. Peripheral industries like chemical manufacturing are also part of the story, as are foreign markets growing cotton and other ingredients. Outwith Turkey red, local agrarian economies producing wool and flax make up another aspect of Scottish textiles.

There is a fairly strong body of literature outlining the history of United Turkey Red and the history of Turkey red dyeing in Britain and in Scotland. While this project does not aim to uncover much more, it is without a doubt important to establish the social and economic context in which such a remarkable and significant textile product was produced for nearly 150 years. Further reading in *The First* and *Second Statistical Account of Scotland*, MacKay's *Bleachfields, Printfields and Turkey Red*, and *Colouring the Nation: The Turkey Red Printed Cotton Industry in Scotland c. 1840-1940* provide a more detailed account of the major characters, facilities, workers, and production surrounding Turkey red.

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Cover Images are as follows:

***Centrepiece**: Anchor Mills, Paisley, photographed 2014 by S McKinstry*

***Left Miniature**: The Gatehouse, Anchor Mills, photographed 2014 by S McKinstry*

***Centre Miniature**: Sma' Shot weavers Cottages, Paisley, photographed 2014 by S McKinstry*

***Right Miniature**: Close up of Anchor Mills and gatehouse, photographed 2014 by S McKinstry*