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The Stanyan Ropeworks of Halifax, Nova Scotia: Glimpses of a Pre-Industrial Manufactory

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CANADIAN LABOUR HISTORY, as it has been written, contains a fundamental bias. The availability of source material, reinforced by preoccupation with the process of "proletarianization" has focused research on the emergence and consolidation of industrial capitalism in the years after 1850.¹ As a result, the world of the pre-industrial worker remains a largely uncharted terrain. The documents which follow challenge the bias of the existing literature by calling attention to attitudes and behaviour among persons as yet untouched by the dislocation of the factory system. The evidence presented here does not, in itself, sustain a major reassessment of our understanding of the worker and his workplace in the early nineteenth century. Nevertheless, it does point to the need for a more systematic exploration of the antecedents of industrialization.

The three documents reproduced below, namely, an indenture of apprenticeship, workshop rules and regulations, and employee pay lists, all derive from the Stanyan Ropeworks of Halifax, Nova Scotia.² This firm, established in 1826-27, was an early example of the diversification of merchant capital into manufacturing. The founders of the Stanyan works, Temple (1783-1860) and Lewis (1785-1867) Piers, had operated on the Halifax waterfront since 1810 as

¹ For example, the first three issues of *Labour/Le Travailleur* included only one article (by Judith Fingard) which focused exclusively on the pre-industrial worker. A survey of the American literature in this field is found in David Montgomery, "Les artisans et la conscience de la classe ouvrière: nouvelles recherches aux États-Unis," *Labour/Le Travailleur*, 3 (1978), 233-242.

² All the documents reproduced here are found in Public Archives of Nova Scotia (PANS), Vertical manuscript file: Ropeworks, Stanyan.

auctioneers and ship chandlers. During the first 15 years of their partnership, they displayed an eagerness for entrepreneurial innovation, experimenting, albeit abortively, with whale fishing and sugar refining.³ Their decision to go into cordage production grew out of the general expansion taking place in the provincial economy through the latter part of the 1820s. Growth in both regional shipping and commercial fishing created a new demand for rope, which the Piers brothers perceived as an opportunity for a new business venture.⁴

Halifax had at least one existing ropeworks when the Piers entered the field, but their enterprise quickly eclipsed the local competition.⁵ The site chosen for the new manufactory was the Piers family estate, located to the north of Citadel Hill in what would become the focus for industrial enterprise in late Victorian Halifax.⁶ The location contained no water power capacity but it did lie a considerable distance from the built-up downtown, a significant advantage, given the risk of fire created by the combination of hot tar and dry hemp found in every ropeworks. The heart of the establishment consisted of a rope walk, a long, narrow, covered wooden building where hemp fibres were "spun" into cordage. Smaller outbuildings, used for such operations as rope tarring, surrounded the central structure. Accommodation for the work force was provided in the form of a separate house for the foreman and several cottages for the skilled workers. Each four-room cottage sheltered two families, an arrangement that must have resulted in considerable crowding. The 1838 census reports between five and nine persons per household for those identified as rope workers.⁷ A short distance away lay the two houses of Temple and Lewis Piers. Total capital investment in the works came to

³ Harry Piers, "Historical and genealogical account of the Piers family," *PANS*, MG 1, vol. 753, no. 1; *Free Press* (Halifax) 15 December 1818; Nova Scotia House of Assembly, *Journals and Proceedings*, 25 February 1820.

⁴ For an overview of Nova Scotian economic development through the first half of the nineteenth century, see David A. Sutherland, "The merchants of Halifax, 1815-50; a commercial class in pursuit of metropolitan status," Ph.D. thesis, University of Toronto, 1975.

⁵ Jonathan Tremain, Loyalist, founded what was probably Halifax's first ropework in the mid-1780s. It went out of business in the mid-1830s. See *PANS*, RG5, series P, vol. 121, *John Tremain to House of Assembly, Nova Scotia*, 22 February 1826; *Novascotian* (Halifax), 1 September 1836.

⁶ The remnants of the Stanyan works were auctioned off in 1881 to make way for Halifax's first cotton factory, *Acadian Recorder* (Halifax), 26 October 1881.

⁷ *PANS*, RG1, vol. 448, entries for Hugh Campbell, William Carew, Alexander Carson, William Carson, Robert Cows [Cose], and James Crawford. Description of the cottages let (at unspecified rates) is found in Piers, "Historical and genealogical account." For further detail, see *PANS*, Halifax county registry of deeds, vol. 78, f. 27.

between £7500 and £8000, a sum which the Piers brothers raised without resorting to either public incorporation or mortgage financing.⁸

To succeed, the Stanyan works, named after the father of the founders, had to produce a high-grade, low-cost product that could withstand competition from British and foreign cordage entering Nova Scotia over a low tariff barrier. Skilled workers were required, along with considerable working capital to purchase large stocks of high-priced Russian hemp. Unlike their New England counterparts, who turned to the local labour and capital markets, the Piers brothers recruited manpower and money in Britain. Scottish spinners and their families were brought to Halifax to serve as the core of the skilled work force throughout the history of the Stanyan works. As well, all of the hand-powered wooden machinery used in the works came from Britain. Finally, working capital was secured from a Glasgow merchant prominent in the export trade to Halifax. In return for long-term credit, the Stanyan proprietors agreed to purchase all their hemp through the house of Richard, William and Richard (Jr.) Kidston.⁹

Few details have survived concerning the production processes used at the Stanyan works. In all probability, the firm followed the conventions for hand-craft manufacture of cordage. Andrew Ure's classic study of nineteenth-century crafts gives the following description of operations in a typical rope works:

The first part of the process of rope-making by hand, is that of spinning the yarn or threads, which is done in a manner analogous to that of ordinary spinning. The spinner carries a bundle of dressed hemp (fibres that had been combed out and cleaned) round his waist; the two ends of the bundle being assembled in front. Having drawn out a proper number of fibres with his hand, he twists them with his fingers, and fixing this twisted part to the hook of a whirl, which is driven by a wheel put in motion by an assistant (usually a boy), he walks backwards down the rope walk, the twisted part always serving to draw out more fibres from the bundle round his waist, as in the flax spinning wheel. The spinner takes care that these fibres are equally supplied, and that they always enter the twisted parts by their ends, and never by their middle. As soon as he has reached the termination of the walk, a second spinner takes the yarn off the whirl, and gives it to another person to put upon a reel, while he himself attaches his own hemp to the whirl hook, and preceeds down the walk. When the person at the reel begins to turn, the first spinner, who has completed his yarn, holds it firmly at the end, and advances slowly up the walk, while the reel is turning, keeping it equally tight all the way, till he reaches the reel, where he waits till the second spinner takes his yarn off the whirl hook, and joins it to the end of that of the first spinner, in order that it may follow it on the reel.¹⁰

⁸ The figures on capitalization are those given by the Piers brothers to the provincial legislature and may have been inflated for self-interested purposes. Nova Scotia House of Assembly, *Journals and Proceedings*, 24 February, 13 March 1829.

⁹ *Ibid.*; Piers, "Historical and genealogical account;" Samuel Elliot Morison, *The ropemakers of Plymouth* (Boston 1950).

¹⁰ Andrew Ure, *A dictionary of arts, manufactures and mines* (London 1839), 1069-70.

The twisted yarns were then "warped" or stretched into lengths averaging 200 fathoms (1200 feet). Next the yarns would be twisted together into strands and tarred to make them water-proof. Finally, the tarred strands were twisted again into rope made in various combinations and in multiple sizes. The Stanyan works sold its cordage for an average price of 65/ per hundred-weight, a rate 5/ below the cost of imports from Britain.¹¹

The enterprise appeared to prosper through the 1830s. In 1837 expansion occurred when the Piers purchased an existing watermill facility on the outskirts of Halifax for subsidiary operations. These premises could be heated so as to permit year-round production; the hydraulic machinery allowed the manufacture of paper as well as twine. By this time, also, horses had been introduced into the main rope walk to drive the machinery. The firm never took the further step, however, of applying steam power to the manufacture of cordage. Using a combination of hand, horse and hydraulic power, the Stanyan works turned out products ranging from ship hawsers to cod lines. Some of the items produced for the fisheries constituted new departures in the field of cordage manufacture.¹²

Unfortunately, the Piers' venture was one that could not be sustained. Under-capitalization meant the firm remained acutely vulnerable to economic dislocation. The commercial distress of the early 1840s, and the associated slump in cordage prices, pushed the enterprise to the verge of bankruptcy.¹³ In 1844 the Stanyan works had to be mortgaged to the firm's principal Glasgow creditors for £5195. Persistent hard times through the 1840s, combined with the growing old age of the founders, appeared to sap the firm's entrepreneurial drive. In any event, rather than discharge the mortgage, Temple and Lewis Piers sold out their remaining interest in the Stanyan works to the Kidston family in 1855.¹⁴ The Kidstons, in turn, handed the property over to their Halifax agent, William Stairs, a wholesale hardware merchant. Stairs, an ardent free trader and anti-Confederate, dismantled the works, allegedly out of doctrinaire opposition to domestic manufacturing.¹⁵ Within a decade, however, Stairs' son, acting in the tradition of merchant-manufacturer, had established a steam-powered cordage factory in neighbouring Dartmouth.¹⁶ It is

¹¹ Nova Scotia House of Assembly, *Journals and Proceedings*, 13 March 1829.

¹² Piers, "Historical and genealogical account;" PANS, RG1, vol. 292, f. 147, Temple and Lewis Piers to House of Assembly, Nova Scotia, 27 February 1836; PANS, RG1, vol. 293, f. 20, Temple and Lewis Piers to House of Assembly, Nova Scotia, 7 February 1837.

¹³ The distress of these years, as well as the problems associated with insufficient working capital, are noted in Morison, *Ropemakers*, 25, 47-47.

¹⁴ PANS (microfilm), Halifax county registry of deeds, vol. 78, f. 26; *ibid.*, vol. 110, f. 554.

¹⁵ Piers, "Historical and genealogical account;" David A. Sutherland, "William Machin Stairs," *Dictionary of Canadian Biography*, IX, 738-740.

¹⁶ *Halifax and Its Business* (Halifax 1876), 99-100.

possible that employees from the old Stanyan works reappeared in the work force of the new industrial enterprise.

The initial 21 persons employed at the Stanyan ropeworks were Scottish immigrants, presumably recruited with the assistance of the Kidston firm in Glasgow. They had been attracted to Halifax by the offer of long-term work contracts which presumably included references to wages and living accommodations. At the end of the 1840s, one-third of the Stanyan work force still consisted of these original immigrants or their immediate descendants.¹⁷ Such continuity in large measure resulted from a tendency to recruit new workers from the families of existing employees. The document which follows illustrates that tendency.

Document One

Indenture of Apprenticeship, 12 May 1845.

I agree with the consent of my father Robert Cose to serve Measrs. Temple & Lewis Piers from the first day of June 1845 till the first day of June 1851 and to be obedient to their commands, conducting myself in a sober honest and respectful manner, and to be obedient to the Foreman of their Rope Works, or to any person under him who may have authority to direct me. It being understood that I am to have the privilege of learning to spin before the expiration of the above term, and that I am to be paid for my services at the following rates, viz: 5/ a week till the 1st day of June 1846. 7/ a week to 1st June 1847. 9/ a week to 1st June 1848. 12/ a week to 1st June 1849. 15/ a week to 1st June 1850. 18/ a week to 1 June 1851. Said Piers being bound by this Agreement, while they continue the manufacturing of Cordage, provided I conduct myself to their satisfaction.

Witness
"Alex Carson"
[Foreman]

"James Cose"
"Robert Cose"
"T. & L. Piers"

Robert Cose, the father of the aspiring apprentice James Cose, had come to Halifax from Scotland in 1827. By 1845 Robert Cose had risen to the rank of master spinner, earning 23/4 a week. His son, it will be noted, was thought to require six years training to qualify as a journeyman spinner drawing wages of 18/ a week. The Stanyan pay lists (Document III) indicate that the younger Cose moved up through the ranks at the rate agreed to in this contract. No other apprenticeship agreements at the rope works have survived, but the experience of Robert Cose appears typical. All of the six boys noted in the 1848-49 pay lists bear the same surname as senior members of the Stanyan work force.

Insight into the work routine at the Stanyan works is provided by an undated set of rules and regulations found in the company records. Nothing is known about the circumstances which led to the drafting of this document. It

¹⁷ This contrasts markedly with the American experience where a high rate of worker turn-over was common throughout the early nineteenth century. See David Montgomery, "The working classes of the pre-industrial American city," *Labour History*, 9 (1968), 3-22.

does not, however, appear to have been the result of a confrontation situation. Labour relations at the works seem to have been harmonious. In 1833, for example, Lewis Piers, the brother most actively involved in workshop management, was presented with a snuff box by the men "in token of their respect."¹⁸ While this is less than definitive proof of worker attitudes, no indication exists that the gesture was insincere. Harmony may well have resulted from a willingness on the part of the owners to allow the men considerable scope in determining the conditions of their employment. This, at least, is one interpretation that can be drawn from the rules and regulations which follow.

Document Two

Rules and Regulations for the Stanyan Rope Works

To be carried into effect under the superintendance of the Foreman

First

The bell to be rung at 20 minutes past 5 o'clock in the morning, on the 22nd day of March, and Work to commence at 1/2 past 5 precisely, that the Spinners may have full time to spin 2 Threads by 6 o'clock. The work in every branch to proceed with harmony, regularity and dispatch, till the Bell rings for closing the Works at 6 o'clock in the evening. This arrangement of time to continue till the 21st day of Sepr.

Second

On the 22nd. day of Sepr. the Bell to ring at 10 minutes before 6 o'clock in the morning and work to commence at 6 o'clock and to ring for leaving off work, at 6 o'clock in the evening. This to continue as nearly as light will permit, till the 21st day of March; unless any arrangement shall be made for suspending work before breakfast during the shortest and coldest days in winter.

Third

On the 16th day of October, the time allowed for Breakfast and Dinner to be 3/4 of an hour, and to continue till the 1st day of Decbr. being eleven weeks, during which time the Bell will ring 20 minutes before 9 and 20 minutes before 2. The remainder of the year an hour to be allowed to each meal. The ordinary time of ringing the Bell at Meal Hours, being 8 o'clock and 5 minutes before 2.

Fourth

Spinners when employed on the Wheel, are at all times to spin at the full rate of 500 fathoms of Coil, Boltrope, or Whaeline Yarn an hour. When Band Hemp shall be used, as near to this quantity as the state of the Hemp will permit.

Fifth

When it may be necessary to detain the Spinners beyond 6 o'clock in the evening, they will be entitled to pay for the extra time.

Sixth

It is understood that at any time a Spinner may wish to leave the employ or to propose an alteration in the rate of his wages, the Proprietors are entitled to 3 months notice; and

¹⁸ Piers, "Historical and genealogical account."

that when the Proprietors intend to make a change affecting a Spinner he shall be entitled to 3 months notice; unless this term shall in any particular case, be abridged by mutual consent.

Seventh

The Laborers and Boys will conform to the foregoing arrangements of time, subject to such variations as have been heretofore as usual, or may be appointed by the Proprietors.

Eighth

No person whatever, to be allowed to *smoke* or bring a *lighted* cigar or Pipe within the Works. It must be understood that every person employed within or about the Premises, has authority in this particular, and in any case (that may come to his knowledge) where the interest of the Proprietors may be liable to danger or injury, in any manner whatever.

Ninth

Should any person in the employ, during day or night discover any building in the Neighborhood [sic] on Fire he is to repair immediately to the Foreman's house, or to the Ropeworks if open, and give the *alarm of Fire*, that the Bell may be *rung smartly*, to communicate the alarm through the Neighborhood.

Interestingly, the document makes no mention of wages. Presumably, a worker's worth was governed by a combination of tradition, skill level, and conditions within the trade. Provision is made, however, for overtime, it being specified that spinners be paid for work done after six p.m. As well, care is taken to spell out the level of productivity expected of the men. Spinners were to work a ten and one-half hour day, during which they would turn out 4750 fathoms of cordage.¹⁹ Supporting evidence suggests that this total was allowed to vary according to the type of hemp being worked. The ability of the spinners to regulate their employment is most vividly demonstrated in clause six of the rules and regulations. Dismissals or changes in wages could not be imposed by the employer without prior notice. Initially the notice period was three months, but the recession of 1837 reduced that to a fortnight. (Even then, however, the workers retained a significant measure of job security.) It must be noted that the principal beneficiaries of all these clauses were the spinners, the men who constituted an elite component of the overall work force. Common labourers and boy apprentices worked in the shadow of the skilled workers. Clause seven suggests, however, that established traditions in the trade would protect even the unskilled from the discretionary authority of management.

These rules and regulations are particularly interesting in that they represent much more than a simple articulation of long-standing craft traditions. The document also embodies an element of innovation indicative of things to come in the era of industrialization. For example, the work place is presented as an

¹⁹ Employment on a sunrise to sunset basis was practiced in the Plymouth Cordage Company, Morison, *Ropemakers*, 24. Spinners in the English naval dock yards were expected to produce 3840 fathoms of cordage per day. Ure, *Dictionary*, 1070.

environment governed by the mechanics of time. Clock-regulated bells began and closed the work day; they also demarcated the two meal breaks. As well, productivity was defined in hourly rather than weekly terms, as if the owners expected the men to maintain a non-fluctuating production rate. Furthermore, as the pay lists given later indicate, those who did not adhere to the hourly work schedule had their pay docked. Inefficient facilities for lighting and heating made necessary certain seasonal variations in the work schedule. Nevertheless, the net impression is that this was a shop which did not entertain the spirit of "Saint Monday" with its assumptions about the need for a cyclical pace of work. The underlying urge to impose rational, symmetrical design on the work place is also reflected in the clauses pertaining to fire prevention. Finally, the very fact that detailed rules and regulations should have been drawn up and posted for what presumably was at least a semi-literate work force, reinforces the impression of the emergence of new ideas concerning the manufacturing process.

The paylists of the Stanyan Ropeworks which survive for 1848-49 (see Document Three) provide a useful complement to the other documents. For one thing, they highlight the stratification of skills within the work force. In January 1848, for example, the Piers brothers employed a foreman earning 33/6 weekly, along with six master spinners paid 23/4 a week. Below them came six journeymen spinners earning 18/ per week. The remaining seven workers were a blend of common labourers and boy apprentices. Their wages varied from a high of 15/ a week to a low of 4/ a week.²⁰ Analysis of the various paylists over the period January 1848 to August 1849 reveals that the work force remained unchanged until the period of the last entry. The drop from 20 to 15 employees evident in the pay list for August 1849 probably reflects the prevailing hard times in Halifax and the accompanying tendency for skilled labour to migrate to the United States. For the most part, mobility within the work force took the form of apprentice promotion. Interestingly, when, as happened between 1847 and 1848, recession forced wage reductions, those who bore the brunt of adversity were the master spinners. Their weekly wages fell by 10 per cent — from 23/4 to 21/.

The daily returns in the pay lists (not given here) allow exploration of absenteeism within the Stanyan work force. Some 3.5 per cent of the work days accounted for were lost through worker absence. Over 80 per cent of the short time occurred on Friday and Saturday, with the absentees often knocking off after working for part of the day. Absenteeism was spread more or less evenly through all ranks in the work force. This pattern suggests that the men could vary their work schedule without incurring the risk of dismissal. On the other hand, and as noted earlier, absentees were docked for the time they were not actually on the shop floor.

²⁰ Wages at the Plymouth Cordage Company were considerably higher. Common labourers there received a daily wage of 5/ while spinners earned 7/, Morison, *Ropemakers*, 24.

Document Three

Worker	Rank*	Weekly rate of pay:**			
		7 Jan/48	21 Jly/48	27 Oct/48	17 Aug/49
William Carson	Foreman	32/6	32/6	32/6	32/6
Hugh Campbell	Master spinner	23/4	21/	21/	21/
Robert Cose	Master spinner	23/4	21/	21/	21/
John Morley	Master spinner	23/4	21/	21/	21/
John Campbell	Master spinner	23/4	21/	21/	21/
John Winrow	Master spinner	23/4	21/	21/	21/
Cornelius Smith	Master spinner	23/4	21/	21/	...
John Smith, Sr.	Journeyman	18/	18/	18/	...
Luke Holt	Journeyman	18/	18/	18/	18/
John McDonald	Journeyman	18/	18/	18/	...
Thomas Carver	Journeyman	18/	18/	18/	18/
John Smith, jr.	Journeyman	18/	18/	18/	...
James McLeod	Journeyman	18/	18/	18/	...
Michael Condon, sr.	Labourer	10/	10/	10/	10/
Donald McLeod	Labourer	10/	7/	10/	10/
Robert Campbell	Apprentice	15/	15/	15/	11/
James Cose	Apprentice	9/	12/	12/	15/
William Campbell	Apprentice	8/	7/	7/	9/
Thomas Carson	Apprentice	7/	7/	7/	...
Michael Condon, jr.	Apprentice	4/	5/	5/	5/
John Carson	Apprentice	9/

* Established through the use of circumstantial evidence; the distinction between labourer and apprentice may not be accurate in every case.

** Actual earnings would depend on the number of hours worked.

Pending further inquiry into the British American work force during the early nineteenth century, only tentative conclusions can be offered concerning these documents. It does appear, however, that the Stanyan ropeworks embodied the kind of "merchant capitalism" that has been seen elsewhere as a key transitional stage between the artisanal workshop of the eighteenth century and the Victorian factory.²¹ Elements of traditionalism in the enterprise included recruitment through the apprenticeship system and from within the families of existing workers, a low rate of worker turn-over, paternalistic relations between employer and employee, handcraft methods of production,

²¹ Conditions at the Stanyan works paralleled those in the St. Maurice Forges of early nineteenth-century Quebec. The place of such enterprises in the transition to mature industrial capitalism is assessed by H.C. Pentland in "The Development of the Capitalist Labour Market in Canada," *Canadian Journal of Economics and Political Science*, 25 (1959), 450-461.

and deference to the skilled elite who were crucial to the production process. The Stanyan works presented the visitor with such elements of innovation as relatively large-scale use of both capital and labour, a significant gap between workers and owners in terms of income and status (e.g. intermarriage between the Piers and their workers never occurred), a workplace governed, at least in part, by mechanistic regulations, and a dependence on relatively sophisticated accounting procedures. Had the enterprise survived the adversities of the 1840s, there is every reason to believe that the spirit of innovation would have gained ever greater ascendancy, leading eventually to the introduction of steam power and the gradual replacement of skilled by semiskilled labour, with many of the latter being female. As it was, however, the firm collapsed, essentially because the founders had been unable or unwilling to transform a family partnership into a limited liability corporation. Thus entrepreneurial failure rendered the Stanyan an abortive episode in the history of Halifax manufacturing.