

Survival or adaptation? Domestic rural textile production in eastern Canada in the later nineteenth century*

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Abstract

Historians have always assumed that the 'modernization' of North American agriculture necessarily entailed the disappearance of domestic manufacturing, including the production of handmade cloth. The weavers, who were female, gave up weaving in favour of dairy and poultry production as soon as factory-made materials became available. This process fits Jan de Vries's model of an industrious revolution in the countryside. Consequently, lingering domestic cloth production is described as symptomatic of a stagnant agriculture. However, late domestic cloth production may not have been the consequence of poverty, but a rational economic choice. It may also have been part of a North American variant of the 'industrious revolution'. These themes are examined using detailed data mostly drawn from the Canadian census of 1871 for household and farm production in a number of Canadian villages.

Reflecting on the role women played in the economic transformations of the eighteenth and nineteenth centuries, Jan de Vries has argued they were key to the 'industrious revolution' which preceded the more famous Industrial Revolution.¹ During the industrious revolution, women shifted their efforts from the production of goods and services for their households to goods and services for the market. At the same time, households replaced the goods women used to make with purchased ones. The process affected rural households in several ways. Women (and children) produced more agricultural commodities destined for the market; they worked longer hours per day and more days per year; and finally they increased their involvement in by-employment during the agricultural slack season. This led to proto-industrialization. In the second half of the nineteenth century, the trend towards market-oriented activities reversed, and women withdrew from paid employment to devote

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¹ Jan de Vries, 'Between purchasing power and the world of goods. Understanding the household economy in early modern Europe', in J. Brewer and R. Porter (eds) *Consumption and the world of goods* (1993), pp. 85-132; id., 'The Industrial Revolution and the Industrious Revolution', *JEcH* 54 (1994), pp. 340-61.

more time to providing services for their family; better nutrition, better health and child care, higher standards of hygiene.

Other historians' findings buttress this model. Ivy Pinchbeck argued more than half a century ago that the commercialization of agriculture had created wage-earning opportunities for women and children. Increases in production levels had depended upon more labour-intensive forms of cultivation. Hiring lower paid women and children for seeding, thinning, hoeing, weeding, pruning, picking crops and carrying dung therefore made economic sense.² Amongst recent writers, Robert Allen, for instance, claims that agricultural productivity increased on seventeenth-century copyholds in the absence of significant technological changes because copyholders and their families worked harder.³ Not all findings by English historians fit into this model however. Most work indicates that the commercialization of agriculture spelled the demise of women's wage work in the nineteenth century, except in dairy regions.⁴ Allen claims that out-of-work female farm workers did not necessarily find alternative work in proto-industries or in factories.⁵ In short, the industrious revolution seems to have applied to some regions of England better than to others.

De Vries claims that his model applies to North America as well as to England and Western Europe.⁶ The works of North American historians however qualify the model. The arable regions of the US do not seem to have been more propitious to the 'industrious revolution' than their English counterparts. According to J. Mack Faragher, by the end of the nineteenth century, men were engaged in market production but women in subsistence production to cover the needs of the household. Women's activities had become marginal to the economy of the farm, even if their egg money was important to *them*.⁷

The situation was different in dairy districts, where it was the distaff side of the farm economy that commercialized; nevertheless, historians are not providing us with a uniform picture of this process. The starting point of the commercialization process is usually the same: women gave up textile production and turned to dairying when the availability of cheap factory made material made hand weaving 'unprofitable'. In their oft-cited study of nineteenth century northern agriculture, Atack and Bateman state that the emergence of an industrial-agricultural economy in the US was paralleled by the 'rapid demise of home produced clothing, furniture and similar items in farm and other rural households'.⁸ Thomas Weiss calculated that farm gross production increased in all northern states in the nineteenth century. This increase was paralleled by a slow decline in the value of home manufacturing on farms, and its collapse after 1870. He concluded that 'to some extent, the decreased production of these items [home

² Ivy Pinchbeck, *Women workers and the Industrial Revolution, 1750-1850* (1931).

³ R. C. Allen, *Enclosure and the Yeoman. The agricultural development of the south Midlands, 1450-1850* (1992), pp. 208-9.

⁴ Joyce Burnette, 'An investigation of the female-male wage gap during the Industrial Revolution in Britain', *ECHR* 50 (1997), pp. 257-81; K. D. M. Snell, 'Agricultural seasonal employment, the standard of living, and women's work in the south and east, 1690-1860', *ECHR* 34 (1981), pp. 407-39; Pam Sharpe, 'The female labour

market in English agriculture during the Industrial Revolution: expansion or contraction?' *AgHR* 47 (1999), pp. 161-81; Allen, *Enclosure and the Yeoman*, p. 215.

⁵ *Ibid.*, pp. 239-62.

⁶ de Vries, 'Industrial Revolution and the Industrious Revolution', p. 346.

⁷ John Mack Faragher, *Women and Men on the Overland Trail* (1979), esp. chap. 2.

⁸ Jeremy Atack and Fred Bateman, *To their own soil: Agriculture in the antebellum North* (1987), p. 205.

manufactures] was a response to increased commercialization; farmers specialized in marketable crops and substituted commercially produced industrial goods for home manufacture'.⁹

Economic historians provide us with overviews; women's historians the details. In the Oneida valley, in upstate New York (between Syracuse and Utica), farmers kept large flocks of sheep until the 1820s, and women spun and wove at home. Textile mills appeared in the area in the 1820s and 1830s, and the production of domestic woollen cloth immediately declined. Women then shifted their labour to the production of cheese, a commercial product, and thus became more involved in market activities.¹⁰ So did women in Chester county, Pennsylvania.¹¹ Joan Jensen describes the strategy of those farm women in terms that seem almost lifted from De Vries (except that she wrote before him). Women engaged in dairying instead of weaving 'to make their farms more profitable and increase their cash income to purchase commodities from commercialized cities and industrializing river valleys'.¹² Marjorie Cohen describes female cloth making in Ontario (Canada) as an activity geared towards home-consumption and neighbourhood barter, and abandoned as soon as cheap factory cloth became available. Once province-made factory woollen cloth became available, 'expending time on home production became less rational'. More remunerative opportunities for women also led them to abandon home-weaving. By mid-century, urban growth had created a market for the products of women's agricultural activities: dairy, eggs, poultry, fruit and vegetables.¹³

Historians do not agree on the long-term impact commercialization had on women's work in those regions. They depict a wide variety of consequences, ranging from defeminization of production to women shifting from one type of production to another in order to respond to market demand. Cohen claims that men pushed women out of commercial dairy production as soon as its profits became significant: market production was a male prerogative. Women were sent back to their kitchens and poultry yards.¹⁴ Dairy production was also masculinized in Oneida county. McMurry, however, contends that women were the ones who chose not to continue dairying and cheese making. Rural women used contemporary images of women to justify their attitude, and accused the men of exploiting them, making them work beyond their strength, or in unsuitable surroundings. Oneida county young women had alternatives to dairying: they could find factory work, go to school, take white collar jobs, or marry in town and devote themselves to homemaking. They could escape the intensification of labour dairying had entailed for them. Those who married and stayed on the farm switched to egg and poultry production.¹⁵ On the other hand, women in the Nanticoke valley, south-west of Oneida county (near Binghamton) did not withdraw from market production in general, and dairy production in particular.¹⁶ In Pennsylvania, dairy farms even tried to hire dairymaids. However, in 1850,

⁹ Thomas Weiss, 'Long term changes in US agricultural output per worker, 1800-1900', *EcHR* 46 (1993), p. 337.

¹⁰ Sally McMurry, *Transforming rural life: Dairying families and agricultural change, 1820-1885* (1997), pp. 70-8; id., 'American rural women and the transformation of dairy processing, 1820-1880', *Rural Hist.* 5 (1994), pp. 143-53.

¹¹ Joan A. Jensen, *Loosening the bonds: Mid-Atlantic farm women, 1750-1850* (1986), p. 87.

¹² *Ibid.*, p. 79.

¹³ Marjorie Griffin Cohen, *Women's work, markets and economic development in nineteenth-century Ontario* (1988), pp. 75-82.

¹⁴ *Ibid.*, pp. 75-82.

¹⁵ McMurry, *Transforming rural life*, pp. 203, 207-211.

¹⁶ Nancy Grey Osterud, *Bonds of community. The lives of farm women in nineteenth-century New York* (1991), p. 211.

only a third of the farms in the areas investigated had a female servant. Demand for female labour already exceeded supply; female wages had increased sharply as early as the 1830s.¹⁷ Economic historians, for their part, point towards an intensification of women's work (or at the very least, of work traditionally done by women). For Fred Bateman, the significant increase in milk production per cow that characterized the northern United States between 1850 and 1910 was the result of additional women and children's labour input: women and children exchanged some of their leisure for work in the barn.¹⁸ In an article co-authored with Lee Craig, Thomas Weiss attributes the rising productivity of northern farms during the American Civil War years (1861–66) not to the replacement of men by machines, but to the intensification of work performed by women and children. Dairying, poultry and egg production, pork production and market-gardening, all traditional women/children activities, were being commercialized. They concluded that 'women and children shifted their time from unmeasured household tasks to market activities or reallocated their efforts among farm and non-farm market work'.¹⁹

The pattern seems relatively straightforward: women remained outside commercial production in arable regions. In Ontario, New York and Pennsylvania, they first switched from household manufacture (weaving) to commercial production of dairy products, and later poultry, eggs, and vegetables. In at least one region, they refused to go along with the intensification of their work. In another, they may have been sent back to their 'proper place' by men desirous to preserve their prerogatives. De Vries' model seems to fit; some of McMurry's Oneidans even went through its two phases in two generations.

When one takes a close look at the historians' evidence however, the applicability of the model becomes less obvious. Lee and Weiss's data, for instance, shows increased labour input by women and children, but also by men.²⁰ Men became more 'industrious' as well. Weiss's own data tempers his argument that household manufacturing was gradually replaced by commercial production. The relative value of home manufacture dropped by a third between 1800 and 1870, but the absolute value changed much less (13 per cent). This suggests that until 1870, increased production of marketable commodities was not entirely at the expense of home manufacture but in addition to the latter. The industrious revolution then may not have been at the expense of non-market production. This is what Osterud argues occurred in the Nanticoke valley. There, farmers did not abandon subsistence production: commercialization meant reallocating resources and labour from less to more profitable market production. Home weaving could nonetheless have disappeared, as the category 'home manufacture' was a generic one which included cloth and handmade tools, soap, chairs, candles and shoes. Households may have reallocated resources within this category as well, shifting from textile production to other hand-work.

The next difficulty concerns the sex of the weavers. Women's historians and economic historians alike take it for granted that women did the weaving. Jensen's work on Chester county, Pennsylvania (just behind Philadelphia) is a case in point. She found evidence of

¹⁷ Jensen, *Loosening the bonds*, pp. 89–90.

¹⁸ Fred Bateman, 'Improvements in American dairy farming, 1850–1910, a quantitative analysis', *JECH* 28 (1968), pp. 255–73.

¹⁹ Lee A. Craig and Thomas Weiss, 'Agricultural productivity growth during the decade of the Civil War', *JECH* 53 (1993), pp. 527–48.

²⁰ *Ibid.*, pp. 542–3.

increased textile production on early nineteenth-century farms, and credited women for it. On the other hand, Adrienne Hood, a material historian who has investigated the production of handmade cloth in the same Chester county in the late eighteenth and early nineteenth century, demonstrates that in that region, as in Europe, women spun and men wove. Only 10 per cent of the estate inventories listed looms – and those were almost always owned by men (female loom owners had inherited them from their husbands). Women learned to spin informally. And although they may have spun for other people, spinning was never considered a trade. It was a household activity, like plucking chickens or making sausages. Men learned to weave from their relatives, or through apprenticeship; they wove for their fathers, for wages, or once established, hired others to assist them.²¹ Jensen's own probate data tells exactly the same story.

Rural weaving intensified in Chester county at the beginning of the nineteenth century when carding mills increased the productivity of spinners, and factory-made warp alleviated the shortage of domestic yarn. But rural weaving remained masculine. Some weavers moved away from the production of bespoke material using their client's yarn, and began to weave purchased material for open sale. A few succeeded in running their own spinning mills.²² If Chester county farm women experienced an industrious revolution, it was one more complex than simply mothballing their looms in order to make butter for the Philadelphia market. Rather, the need for their labour in the production of textiles (as hand carders and spinners) decreased, and they used this freed time to produce something else.

New England followed a different pattern.²³ In the seventeenth century men wove and women spun as in Pennsylvania or Europe. But, in the first half of the eighteenth century, household production was reorganized and weaving became a female activity. Men were no longer interested in learning, or practising the trade, probably because they could employ themselves more profitably in other lines of business. The shift entailed more than the substitution of workers of one sex for workers of another. Women did not become specialized village craft persons. Instead, weaving became a household task. And this meant that women would be willing to weave for a lower return than men who had to support a family with their craft. Ulrich dated the shift by looking at the ratio of looms to wheels in the probate inventories: the higher the ratio, the more widespread weaving was, and the less likely weaving was a specialized task (it took eight to ten spinners to keep a weaver occupied full time; any ratio of looms to wheels higher than one in eight then implies that weaving was a part-time occupation). By the end of the eighteenth century, this ratio could be higher than one in two in some counties. In Pennsylvania on the other hand, the ratio hardly changed and never exceeded 0.16 (six wheels for every loom).²⁴

In Canada, Ontario weavers had been assumed to have been male village artisans, and Quebec

²¹ Adrienne Hood, 'The gender division of labor in the production of textiles in eighteenth-century rural Pennsylvania (Rethinking the New England Model)', *J. Social History* 27 (1994), pp. 537–61; 'The material world of cloth production and use in eighteenth-century rural Pennsylvania', *William and Mary Quarterly*, 3rd ser., (hereafter *WMQ*) 53 (1996), pp. 43–66.

²² Adrienne Hood, 'Industrial opportunities: from handweaving to mill production, 1700–1830', in P. Benes

(ed.), *Textiles in early New England: design, production and consumption* (1999), pp. 135–52.

²³ Gloria Main, 'Gender, work and wages in colonial New England', *WMQ* 51 (1994), pp. 39–66. Carol Shammas, 'How self-sufficient was early America?', *J. Interdisciplinary History* 13 (1982), pp. 267; Laurel Thatcher Ulrich, 'Wheels, looms, and the gender division of labor in eighteenth-century New England', *WMQ* 55 (1998), pp. 3–36.

²⁴ *Ibid.*, p. 38.

ones to have been farm women.²⁵ Dorothy and Harold Burnham contend that only one per cent of the weavers in Ontario in 1871 were females. Cohen states that professional weavers in Ontario were frequently recent male immigrants from Ulster, Scotland or Germany. Women, she argued, frequently wove, but did not consider themselves professionals and gave up the activity when they married, but might take it up again if they became widows. Other authors have come to contrary conclusions. Kris Inwood used census data to demonstrate that even in Ontario, weaving was primarily a female occupation.²⁶ Ruddel makes the same point for Quebec, and Cynthia Wallace Casey for southern New Brunswick.²⁷ The number of cloth making tools found in late eighteenth and early nineteenth century inventories, examined by Dessureault and Ruddel, also reveal very high ratios of looms to wheels in the province of Quebec from the 1800s onwards (superior to 0.5).²⁸ Seventeenth- and early eighteenth-century weavers then may have been males in the English colonies and in Quebec. Weaving became a female activity in New England in the eighteenth century, and possibly in Quebec in the early nineteenth century. Domestic weaving increased women's work load, but even where they did not weave themselves, increased cloth production could have occurred only if women spent more time carding and spinning, at least until carding and spinning mills spread in the countryside.

The work of Canadian and American historians supports a modified 'industrious revolution' characterized by intensification of women's work for the household in the eighteenth and early nineteenth century; marginalization of women's work in arable regions in the nineteenth, and increased participation of women in commercial production in the dairy districts. The North American industrious revolution also occurred in a significantly different context, which goes a long way to explain why it was different from the European one.

Being a farmer in North America was not the same thing as being a farmer in the Old World. First, there was lots of land. In 1861, the average farm in the northeastern United States comprised 79 improved and 39 unimproved acres.²⁹ Canadian farms were similar in size. The farmers we shall discuss below owned or rented an average of 100–130 acres. Tenancy was also relatively rare: in 1861, only 15 per cent of the northeastern farmers were tenants, and 20 per cent of the ones in the mid-west.³⁰ The only region where tenancy was widespread in the

²⁵ Dorothy Burnham and Harold Burnham, 'Keep Me Warm One Night': *Early handweaving in eastern Canada* (1973), p. 11; Cohen, *Women's Work*, p. 81.

²⁶ Kris Inwood and Janine Grant, 'Gender and organization in the Canadian Cloth Industry, 1870', *Canadian Papers in Business History* 1 (1989), p. 19.

²⁷ Cynthia Wallace-Casey, 'Providential openings: the women weavers of nineteenth-century Queens County, New Brunswick', *Material History Rev.* 46 (1997), pp. 29–44. Surveyor General Joseph Bouchette, who travelled extensively in the Canadas in the first two decades of the century, noted that in Quebec, weaving and spinning were winter female activities. Joseph Bouchette, *The Brit-*

ish Dominion in North America (London, 1832), p. 370; Ruddel's analysis of apprentice contracts similarly failed to uncover male weaving apprentices. David-Thiery Ruddel, 'The domestic textile industry in the region of and city of Quebec, 1792–1835', *Material History Bulletin/Bulletin d'histoire de la culture matérielle* 17 (1983), pp. 95–126.

²⁸ Christian Dessureault and John A. Dickinson, 'Farm implements and husbandry in colonial Quebec, 1740–1840', in P. Benes (ed.), *New England-New France, 1600–1850* (1992), pp. 110–21.

²⁹ Atack and Bateman, *To their own soil*, p. 111.

³⁰ *Ibid.*, p. 111.

nineteenth century was Prince Edward Island, in Canada. There, farmers thought themselves very ill-used indeed paying one shilling a year per acre on 999 year leases.³¹

Second, there was no large, landless rural proletariat in North America. By the nineteenth century the poorer fringe of smallholders and tenant farmers usually had to perform some wage work in addition to farming in order to make ends meet, but they did not represent a large proportion of the rural population. Securing workers had always been a problem for North American farmers. Southerners solved it with slavery; Northerners relied on the labour of their, and other people's children, supplemented by indentured pauper adolescents. Agricultural wage work and domestic service on farms were done mostly by adolescent and young unmarried adults. Marriage was supposed to put an end to dependency, and wage work was a form of dependency. Young couples farmed their own land, or a portion of their future inheritance, or rented a farm.³²

North Americans also coped with the limited supply of labour by engaging in extensive agriculture, which required few workers, but lots of land. By European standards, North American extensive agriculture was primitive and low yielding; the fields were insufficiently cultivated, manure was reserved for a few demanding crops and for the garden, and fallows were not ploughed. Ten to twelve bushels an acre was a normal yield for wheat. Farmers compensated for those low yields by putting as much of their land under cultivation as their family could harvest, and this in turn made crop specialization impractical. One had to plant a combination of crops with different growing periods.

The rural labour shortage, and abundance of land, also meant that proto-industrialization did not develop in North America. New England merchants put out yarn to weave, shoe lasts to stitch, and straw to plait at the end of the eighteenth and in the first half of the nineteenth century. But the workers attended to those tasks when they had no farm chores to do, not when it suited the merchants. The merchants brought the work under factory roofs as soon as feasible. New England female adolescents briefly followed their work into the textile mills until the owners cut their wages in the 1840s.³³ The mill hands wrapped themselves in revolutionary rhetoric, accused the industrialists of being 'British Aristocrats' trying to enslave the Daughters of the Republic, and went back home, often to teach, as the public school system dates from the same period. Irish immigrant women replaced them in the factories.³⁴

³¹ Ian Ross Robertson, *The Tenant League of Prince Edward Island, 1864-1867. Leasehold tenure in the New World* (1996), p. 8.

³² Daniel Vickers, *Farmers and fishermen: two centuries of work in Essex County, Mass., 1630-1850* (1994). Clarence Danhof, *Changes in agriculture: the northern United States* (1969), pp. 140-1.

³³ Thomas Dublin, *Transforming woman's work. New England lives in the Industrial Revolution* (1994), esp. pp. 29-76; id., 'Women and outwork in a nineteenth century New England town: Fitzwilliam, NH, 1830-1850,' in Stephen Hahn and Jonathan Prude (eds), *The countryside in the age of capitalist transformation. Essays in the social history of Rural America* (1985), pp. 51-69; Gail Fowler Mohanty, 'Handloom outwork and outwork weaving

in rural Rhodes Island,' *American Stud.* 30 (1989), pp. 41-68; Gregory Nobles, 'Commerce and community: a case study of the rural broommaking business in antebellum Massachusetts,' *J. of the Early American Republic* 4 (1984), pp. 287-308; Mary H. Blewett, 'Women shoeworkers and domestic ideology: rural outwork in early nineteenth-century Essex county,' *New England Q.*, 60 (1987), pp. 403-28; id., *Men, women and work: class, gender and protest in the New England Shoe Industry, 1780-1910* (1988), pp. 143-153; Daniel Vickers, 'Competency and competition: economic culture in early America,' *WMQ* 47 (1990), pp. 3-29.

³⁴ Thomas Dublin, *Women at work: The transformation of work and community in Lowell, Mass., 1826-1860* (1976).

Third, farmers were slow to specialize, and especially slow to abandon non-market production. The Nanticoke valley was typical in this respect. The lack of herbicides, pesticides, and artificial fertilizers made narrow specialization impossible: crops had to be rotated. Animals also had to be kept for manure, even if there was no market for their products. Low population density, and rudimentary means of transportation until the advent of the railway, translated into high transportation costs. High price commodities like wheat, flour, salted meat, beer and whisky, and cheese could bear the cost of long distance transportation, and were not likely to spoil in the process. Such was not the case of lesser grains, roots, fresh meat and vegetables and other perishables. The market for most commodities remained regional, and except in the vicinity of cities, limited in size. To serve these relatively small regional markets, farmers produced modest surpluses of a wide range of commodities, rather than large surpluses of a few. Most of these commodities were also the ones farmers consumed, and therefore market production did not eliminate subsistence production. The latter imperceptibly shaded in the former rather than being its opposite. The production of foodstuff was also an insurance against unpredictable distant markets and against the vagaries of the weather: one did not starve if the main crop did not sell or fail.³⁵ One frequent strategy, for instance, consisted in fattening and selling cattle when meat was dear and grain cheap, and selling the grain and slaughtering underfed cattle for home consumption when grain was dear and meat cheap.³⁶

Fourth, households did not necessarily specialize in farming. Adolescents and young adults

³⁵ The literature on the transformation of North American farming in the nineteenth century is enormous. The following are the most useful. About the self-sufficiency of commercial farms: Bettye Hobbs-Pruitt, 'Self-sufficiency and the agricultural economy of eighteenth-century Massachusetts', *WMQ* 41 (1984), pp. 339-52; Rusty Bitterman, 'Middle River: the social structure of agriculture in a nineteenth-century Cape Breton community', (MA thesis, University of New Brunswick, 1987); id., 'Farm households and wage labour in the northeastern maritimes in the early nineteenth century', in Daniel Samson (ed.), *Contested countryside: Rural workers and modern society in Atlantic Canada, 1800-1950* (1994), pp. 34-69; Richard L. Bushman, 'Family security in the transition from farm to city, 1750-1850', *J. Family History* 6 (1981), pp. 238-243; Vickers, 'Competency and competition'

For the diversification of farms as they moved away from the pioneer stage, see Richard Lyman Bushman, 'Markets and composite farms in early America', *WMQ* 55 (1998), pp. 351-74; Alan Taylor, *William Cooper's town: Power and persuasion on the frontier of the early American Republic* (1995), pp. 103-105; Robert Ostergren, *A community transplanted. The transatlantic experience of a Swedish immigrant settlement in the upper middle west, 1835-1915* (0000), pp. 197-8; Mary Eschelbach-Gregson, 'Specialization in late-nineteenth century midwestern agriculture: Missouri as a test case', *AgHR* 67 (1993),

pp. 16-35; id., 'Rural response to increased demand: crop choice in the Midwest, 1860-1880', *JEcH* 53 (1993), pp. 332-45.

Discussions of market production as a supplement to, not a substitute for subsistence production, see in addition to the above: Kevin M. Sweeney, 'Gentlemen farmers and inland merchants. The Williams family and commercial agriculture in pre-revolutionary Western Massachusetts', in P. Benes (ed.), *The Farm* (1987), pp. 60-73; Andrew Baker and Holly IZard Paterson, 'Farmers' adaptations to markets in early nineteenth-century Massachusetts', *Ibid.*, pp. 95-108; Marvin McInnis, 'Marketable surplus in Ontario Farms', *Social Science History* 8 (1984), pp. 395-424; Doug McCalla, *Planting the province. The economic history of Upper Canada, 1784-1870* (1993); Thomas Acheson, 'New Brunswick agriculture at the end of the colonial era: a reassessment', in Kris Inwood (ed.), *Farm, factory and fortune. New studies in the economic history of the Maritime Provinces* (1993), pp. 37-60; Serge Courville, 'La crise agricole du Bas Canada, éléments d'une réflexion géographique', *Cahiers de géographie du Québec* (1980), pp. 193-224, 385-428; Serge Courville, 'Villages and agriculture in the seigneurie of Lower Canada. Conditions of a comprehensive study of rural Quebec in the first half of the nineteenth century', *Canadian Papers in Rural History* (1986), pp. 121-49.

³⁶ Christopher Clark, *The roots of rural capitalism in Western Massachusetts, 1780-1860* (1990), p. 77.

might work at a non-farm occupation for a few weeks or months, when the opportunity arose. In low density population areas, farmers opened custom grist-, saw- and carding-mills where they processed the products of their neighbours for a share of the commodity. They also opened taverns, stores, or operated ferries across rivers, tanned leather, made beer, distilled brandy and butchered animals. Where the population was sparse, those businesses did not generate enough revenue to support a household, and had to be run in addition to another activity. Those business ventures could also be ways of employing young adult sons. When these businesses had served their purpose, they were given up.

In the forested regions of Canada, farmers and their sons worked in the woods in winter, as lumbermen, as subcontractors for lumber-operators, or hired out their horses and oxen. New Brunswick even had men who declared their occupations as farmer-lumberer-fishermen.³⁷ Individuals who started as rural craftsmen or entrepreneurs frequently acquired a farm as well as insurance against downturns in the economic cycle. The two merchants, who will be mentioned below, are good examples of both strategies. The Dufour brothers were farmers who organized lumbering parties, ran a store and a forwarding business till the economic crisis of 1848 forced them out of all their non-farm activities. They had bought the store from a farmer-store keeper, whose father had been a farmer-miller. John Emmerson, the second merchant, moved to the region as a young man in 1828 to make his fortune. He took up a farm, cut timber, and in the mid-1840s, opened a store and started a forwarding business. He ran the farm himself and still owned it at his death in 1867. He secured some of the necessary labour by letting farmers work for him to pay their store debt. The boundary between the farm and the non-farm population was therefore quite porous. Merchants, professionals and craftsmen farmed for safety and farmers added and shed non-farm businesses as the needs and opportunities arose.

Industriousness may have characterized women and men on north-eastern farms, but it occurred in a distinctly different context – one where the demands on workers' time had always been high, occupational pluralism the norm, and self-sufficiency a complement rather than an obstacle to market involvement. This peculiar aspect of the North American farm economy can help us understand an apparently anomalous phenomenon: the persistence of cloth production on Canadian farms in the nineteenth century. The production of cloth by farm households remained significant in Ontario until the middle of the century, and later in Quebec and the Maritime provinces (Table 1). In 1871, Quebec, with a population of slightly over a million, produced 1.5 million yards of linen and 3.4 million yards of woollen cloth; Ontario (population 1.6 million) produced 25,000 yards of linen and 1.8 million yards of

³⁷ Clark, *Roots of rural capitalism*, p. 160; McCalla, *Planting the province*, p. 93; Serge Courville, Jean Claude Robert and Normand Séguin, 'The spread of rural industry in Lower Canada, 1831–1851', *J. Canadian Historical Association* (1991), pp. 41–70; Serge Courville, 'Un monde rural en mutation: Le Bas Canada dans la première moitié du XIXe siècle', *Histoire sociale-Social History* 40 (1987), pp. 237–58; Serge Courville, 'Croissance villageoise et industrie rurale dans les seigneuries du Québec, 1815–1851', in F. Lebrun and N. Séguin (eds), *Sociétés villageoises et rapports villes-campagnes au Québec et dans la France de l'ouest, XVII-XX siècles* (1987); Normand Séguin (ed.), *Agriculture et colonisation au Québec* (1980); René Hardy et Normand Séguin, *Forêt et société en Mauricie* (1984); Gérard Bouchard, *Quelques arpents d'Amérique* (1994); Graeme Wynn, *Timber Colony: a historical geography of early nineteenth century New Brunswick* (1980); Daniel Samson, 'Situating the rural in Atlantic Canada,' in Samson (ed.), *Contested countryside*, pp. 1–33.

TABLE 1. Per capita hand woven fabric production in four Canadian provinces, 1827-91 (yards)

	Ontario	Quebec	New Brunswick	Nova Scotia
1827	nd	6.40	nd	nd
1842	2.73	nd	nd	nd
1844	nd	3.20	nd	nd
1851-2	1.79	2.80	3.21	4.08
1860-1	1.53	2.80	nd	4.00
1870-1	1.13	4.49	3.94	4.09
1880-1	0.75	3.01	2.68	3.17
1890-1	0.25	1.86	1.48	1.69

Note: per capita domestic cloth production = total domestic cloth production reported in the census divided by the population of the province.

Source: *Recensement des Canadas 1851-2* (2 vols, 1853), *Recensement des Canadas, 1860-1861* (2 vols, 1863); *Census of Canada, 1870-71/Resensement du Canada* (4 vols, 1873), IV; *Census of Canada, 1881/Recensement du Canada, 1881* (1883-4); *Census of Canada, 1891/Recensement du Canada 1891* (1893-4).

cloth; New Brunswick and Nova Scotia, with a combined population of 673,000 produced 186,000 yards of linen and 2.5 million yards of woollen cloth.³⁸ Canadian farming was not significantly different from that of the United States, except that the climate is colder in Canada and the growing season shorter. Domestic cloth production should have disappeared as it did in the United States; but it did not.

Canadian social and economic historians have been only incidentally interested in the reasons why this was so. Their primary focuses have been production for export (staple theory), the commercialization of agriculture, urbanization and industrialization.³⁹ When they have shown an interest in the issue of domestic production, they have sought to understand why this activity lasted much longer in Quebec than in Ontario. Their explanation was simple: Quebec's domestic cloth production was another symptom of the Quebec 'economic lag'. Quebec rural households made their own cloth because they could not afford factory-made products. Ontario households, which could afford commercial cloth, did not weave. John McCallum's landmark comparative study of Quebec and Ontario economies until 1870 squarely put the blame for the continuation of domestic textile production in Quebec at the feet of the farmers' 'lack of cash'.⁴⁰ The persistence of domestic cloth production was therefore an indicator of rural poverty and therefore must be part of a strategy of expense avoidance through self-sufficiency. By contrast, successful commercial farming precluded domestic textile production. Since McCallum, other Canadian scholars have followed this line of argument linking the continuation of domestic cloth production in Quebec and eastern Ontario to poverty stemming from distance to markets, lack of local agricultural potential, declining prices for agricultural commodities and 'low

³⁸ Canada, Dominion Bureau of Statistics, *Census of Canada, 1871: Censuses of Canada, 1608 to 1876* (1878).

³⁹ For instance the two standard Canadian economic history texts do not mention it. W. T. Easterbrook and Hugh G. J. Aitken, *Canadian Economic History* (1988, first

edn 1956); Kenneth Norrie and Doug Owrarn, *History of Canadian Economy* (1991).

⁴⁰ John McCallum, *Unequal Beginnings, Agriculture and economic development in Quebec and Ontario until 1870* (1980), p. 88.

productivity'.⁴¹ Kris Inwood, in addition, argues that weaving persisted also because there were few alternative economic opportunities for rural women. Their 'labour opportunity cost' – the amount of money they could earn doing something else – was low. It was therefore profitable for them to weave, even for little money.⁴²

Recently, some historians have begun to challenge this interpretation. Adrienne Hood noted that rural cloth production increased in early nineteenth century Pennsylvania, and attributed this to the existence of rural carding and fulling mills, and the availability of industrial yarns.⁴³ Kris Inwood, Serge Courville and Michel Boisvert make exactly the same argument for Canada: the spread of carding mills and the increased availability of ready-made yarn contributed to the perpetuation of domestic cloth production.⁴⁴ We found the same situation in New Brunswick.⁴⁵ Inwood and Courville also claim, but with little evidence, there was a market for domestic cloth among lumberers, river drivers and fishermen. Cynthia Wallace-Casey documents women using finely crafted material to settle their accounts at the local general stores, giving the lie to two assumptions: that women had only rudimentary skills and that they produced for use or barter with neighbours.⁴⁶

The persistence of farm cloth production in Canada remains poorly explained. In this paper, we try and shed some light on the question by focussing on three western Canadian communities (Map 1). The first is the seigneurie of Argenteuil, about 50 km north-west of Montreal, on the north shore of the Ottawa river, just above its junction with the St Lawrence.⁴⁷ Argenteuil's

⁴¹ David-Thierry Ruddel, 'Domestic textile production in colonial Quebec, 1608–1840', *Material History Bulletin/Bulletin d'histoire de la culture matérielle* 31 (1990), pp. 39–49; id., 'The domestic textile industry', pp. 95–126; Inwood and Grant, 'Gender and organization', pp. 17–31; Kris Inwood and Janine Roelens, 'Labouring at the loom: a case study of rural manufacturing in Leeds county, Ontario, 1870', *Canadian Papers in Rural History*, 5 (1990), pp. 215–35; Jack E. Little, *Crofter and inhabitants: settlers, society and economy and culture in a Quebec town-ship, 1848–1881* (1991), pp. 145–6; Sophie-Laurence Lamontagne and Fernand Harvey, *La production textile domestique au Québec, 1827–1941, une approche quantitative et regionale* (1998).

⁴² Inwood and Roelens, 'Labouring at the loom'.

⁴³ Hood, 'Industrial opportunities'.

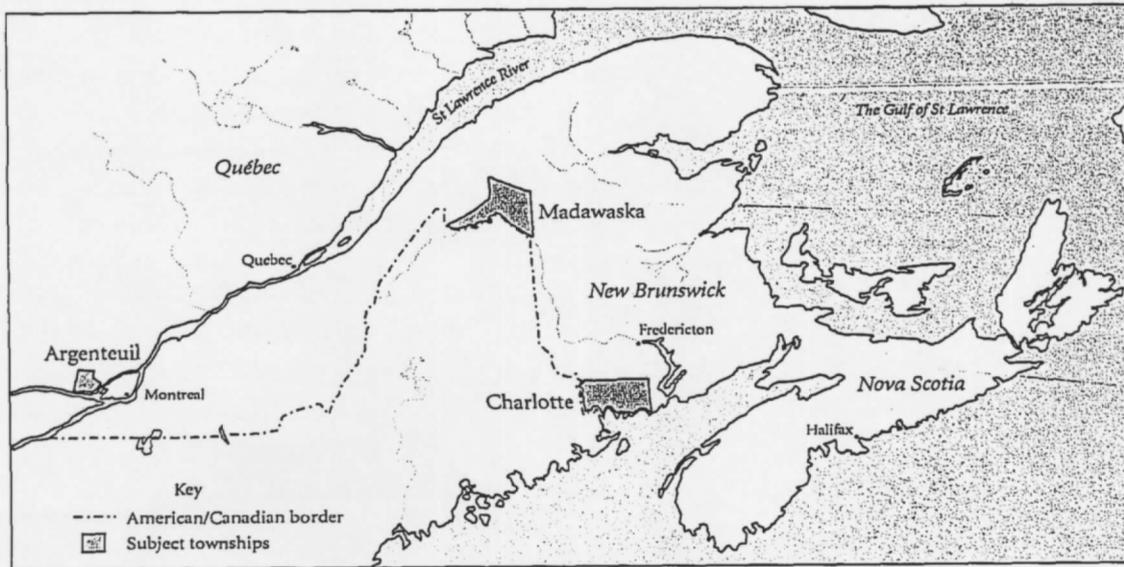
⁴⁴ Kris Inwood and Phillis Wagg, 'Domestic cloth production in rural Canada circa 1870', *JEcH* 53 (1993), p. 352. Serge Courville, Jean-Claude Robert, Normand Séguin, *Atlas historique du Québec* (1995), pp. 59–60; Michel Boisvert, 'La production textile au Bas Canada: L'exemple Laurentien', *Cahiers de Géographie du Québec* 40 (1996), pp. 421–37.

⁴⁵ Béatrice Craig and Judith Rygiel, 'Femmes, marchés et production textile domestique au Nouveau Brunswick au XIXe siècle', *Histoire et mesure*, 15 (2000), pp. 83–112.

⁴⁶ Wallace-Casey, 'Providential openings ...', pp. 29–44.

⁴⁷ Material on Argenteuil is drawn from Elizabeth Turcotte's MA thesis, 'Balancing the scales: Women's

economic contribution through dairy and textiles, Argenteuil, 1831–1861', (Department of History, University of Ottawa, 1996), as well as from a SSRHC supported research project on the socio-economic history of Argenteuil in the nineteenth century directed by B. Craig. For background material on Argenteuil, see S. Laurin, *Histoire des Laurentides* (1989). Material on Charlotte County is taken from Judith Rygiel's MA thesis, 'Women of the cloth: Weavers in Milltown and Moncton, N.B., 1871–1891' (Department of History, Carleton University, 1998). The Madawaska material is taken from Craig's research on this region, 1785–1871: B. Craig, 'Agriculture in a pioneer region: The upper St John Valley in the first half of the nineteenth century', in Kris Inwood (ed.), *Farm, factory and fortune. New studies in the economic history of the Maritime Provinces* (1993), pp. 17–36; id., 'Le développement agricole dans la haute vallée du St Jean en 1860', *Revue de la Société historique du Canada* 3 (1993), pp. 13–26; id., 'Agriculture and the lumberman's frontier: The Madawaska Settlement, 1800–1870', *J. Forest History* 12 (1988), 125–37, reprinted under the title 'Occupational pluralism in British North America', in J. M. Bumsted (ed.), *Interpreting Canada's Past* (2 vols, 1993), I, pp. 366–394; for population figures, see *Recensement des Canadas, 1851–2* (2 vols, 1853); *Recensement des Canadas, 1860–1861* (2 vols, 1863); *Census of Canada, 1870–71/Recensement du Canada* (4 vols, 1873), vol. 4 of which contains aggregate tables of all the previous British North American censuses.



MAP 1. New Brunswick and Québec
Reproduced from nineteenth century plans

population numbered 4450 persons in 1851, 4467 in 1861 and 3892 in 1871, distributed between two civil parishes, St Andrew and St Jerusalem. Argenteuil was settled by Loyalists, late Loyalists and immigrants from the British Isles. It was still predominantly anglophone in 1871. It was an agricultural settlement which benefited from its proximity to Montreal, the existence of a military garrison on its western boundary, the presence of a large labour force canalizing a section of the Ottawa river at Carillon in the 1830s, and the expansion of the lumber industry up the Ottawa River. Unfortunately, its soil was poor. Villages emerged very early at Carillon and St Andrew, and later at St Jerusalem (Lachute). By 1851, half the population of the parish of St Andrew did not live on farms.⁴⁸

The second is the Madawaska territory, which encompasses both sides of the St John River in north-west New Brunswick (Canada) and northern Maine (USA). The river has been the international boundary since 1842 making the residents of the south bank Americans, and those of the north, Canadians. We only investigated the north bank, because the US census, unlike the Canadian one, contains no questions about domestic cloth production. In 1851, Canadian Madawaska had 3464 inhabitants distributed among four civil parishes; in 1861, 4554 and in 1871, 7234, and comprised most of the inhabitants of Victoria county. There were no villages worthy of mention in this period even if the province had laid a town platt at Edmundston. Ninety per cent of the population was French speaking, of French Canadian or Acadian descent. The Madawaska territory was a thriving agricultural settlement, supplying oats and hay to the innumerable lumber camps in its vicinity. Its relatively good soil attracted would-be farmers in such numbers that until the late nineteenth century, pioneers provided established farmers with a significant market for staple food. Madawaska did not grow wheat in 1871, and

⁴⁸ As is common in Canada, one of the villages took the name of the civil parish that included it. The censuses identify village residents as such.

had not done so since the 1840s due to an unreliable climate, and various pests and diseases which affected the wheat crops throughout the entire north-east.

The third area under consideration is Charlotte County, on the southern coast of New Brunswick. Charlotte County had been settled by Loyalists in the late eighteenth century, many of whom abandoned their holdings to Protestant Irish from Ulster at the end of the eighteenth and beginning of the nineteenth century. It had a population of 19,938 in 1851, 23,663 in 1861 and 25,882, regrouped in seven civil parishes in 1871. There were two urban centres: St Stephen (6500) and St Andrew (2962). Charlotte County's soil is only moderately suitable for agriculture. Many of its residents made their living by fishing and lumbering, in addition to growing crops. Contrary to Madawaska, Charlotte County experienced very limited demographic growth during the nineteenth century; its children moved either to northern Maine, where good farm land was available, or hopped onto one of the many steamers plying the route between New Brunswick and Boston, and never came back. The three regions produced significant amounts of fabric as late as 1871 (see Table 2). As in Quebec, but contrary to Ontario, domestic cloth production increased between 1851 and 1871. As elsewhere, in 1871, people who could be identified as weavers were almost all females.

We have focused mostly on 1871 because of the nature of the sources. Our main sources of information on farm textile production are the provincial censuses, and after Confederation (1867), the Canadian Dominion census.⁴⁹ The various Canadian censuses are extremely useful because they offer data at the farm level. They indicate for each farm, the improved and unimproved acreage held, the field crop output, and the number of animals. Additional questions were asked in different years or different jurisdictions. The censuses from Lower Canada (Quebec) reported cloth, flannel and linen production from 1842 onwards. The New Brunswick census of 1851 included a question on fabric and on loom ownership. The 1861 New Brunswick census counted looms and asked information about the value of domestic production but not the yardage produced. In New Brunswick in 1861, the census taker did not always itemize loom ownership; he just added the total number at the bottom of the sheet. The Dominion censuses are identical in all provinces. The one for 1871 included nine separate schedules: nominal, death, buildings and equipment, field products, stock and animal products, manufacture/industrial (schedule six), forestry products, mineral and quarries, and finally fisheries. Schedules three, four, five and seven can be cross-linked with the personal census as the lines in those schedules starts with a page and line reference to the appropriate household in the nominal one. Rented farm units were enumerated under the name of the person cultivating it, not under the name of the owner. The manuscript schedules (what is known in Britain as the Census Enumerators' Books) have survived for Quebec, for New Brunswick (except for the 1851 agricultural schedules)

⁴⁹ The returns used in this study are all held at the National Archives of Canada as follows: Parishes of St Francis, Madawaska, St Basile and St Leonard, microfilm reels C10385, C10386, Charlotte county reels, reels C10375, C10376, C10377, Province of New Brunswick, 1871, Census of Canada, Dominion of Canada; Argenteuil 1851, microfilm reel C1147, census of Lower Canada, Province of Lower Canada; Parishes of St Andrew and St Jerusalem, microfilm reels C100029 and C10030, Province of Quebec, 1871, Census of Canada, Dominion of Canada. Provincial Archives of New Brunswick, Journal of the Legislative Council of the Province of New Brunswick, 1852, App. 1; population returns and other statistics, Charlotte County, pp. 210-11; Victoria County pp. 228-9.

TABLE 2. Per capita domestic cloth production in three regions (yards)

	<i>Argenteuil</i>	<i>Charlotte</i>	<i>Madawaska</i>
1851	1.07	1.79	2.47
1871	3.65	1.82	6.63

Note: Regional production divided by regional population.

Source: Manuscript census schedules as in footnote 49.

and for the 1871 Dominion census. All post-1871 schedules, the nominal ones (schedule one) excepted, were destroyed in the 1960s without being copied.

In other words, one also knows for 1871 the age and sex composition of each household, the occupation of the residents, and their relationship to the head. One also knows what every household grew, on how much land, in what quantities, how many animals they owned, how much butter or maple sugar they had made, whether they had produced timber, lumber or cord wood, whether they had trapped animals and if so how many, whether they owned ploughs or harvesters, carts or boats, in addition to a few other pieces of information.

The 1871 Dominion census contains information about domestic cloth production in three different schedules. The nominal schedule (schedule one) reports people's main occupation. According to the instructions, women were to be listed as having an occupation only if they received pay for it. Schedule five (agricultural production) reports wool, flax and cloth production; schedule six (manufacturing) lists 'industrial establishments'. The census instructions described an 'industrial establishment' as 'a place where one or several persons are employed in manufacturing, altering, making up or changing from one shape or another, materials for sale, use, or consumption, quite irrespectively of the amount of capital employed or of the products turned out'. Whether or not the producer made a profit was irrelevant. What mattered was that 'raw material had changed form, and so much value had been added to it; and it is the fact to be recorded'.⁵⁰ The key criteria for inclusion in schedule six appears to have been the presence of a hired hand for at least part of the year. In the case of the weavers, women reporting small amounts of cloth, but who had paid help, were listed in schedule six; women who produced large quantities without such paid help were not. Schedule six indicates the nature, quantities and value of input and output, the value of the equipment, the number of months worked, the number of hired hands and their annual wages.

At Madawaska, no weaver is listed in schedule six – not even the young woman, identified as a weaver in the nominal schedule, and whose household reported 1000 yards of cloth in schedule five. There are only seven weavers listed in the schedule six for Argenteuil. In Charlotte County, there are 110 weavers listed in schedule six (almost all women) – but an additional 23 are listed in the nominal census (although only 94 were counted in the published aggregate tables!). The census enumerator for St George parish did not collect any information on the production of the twelve hand loom weavers in his district. He merely mentioned, in the margin

⁵⁰ Manual Containing 'The Census Act', and 'Instructions to officers employed in the taking of the first census of Canada, 1871', Sessional papers (no. 56) 34 Victoria, 1871.

of schedule six, that these weavers were included in the agricultural schedule. St George brings the total of schedule six weavers to 122. The agricultural schedule for Charlotte County lists 1101 cloth producing households. The census therefore underestimates commercial cloth production in two ways. It underestimates narrowly defined commercial production (production for sale) by including only weavers with hired help in schedule six. It underestimates broadly defined commercial production (production for non-cash exchanges) by not listing their producers as 'weavers'.

The detailed nature of the census allowed us to isolate a 'farm' population. We defined as farmers not the people reporting this occupation in the nominal census, but the ones operating a farm (people were normally not allowed to report more than one occupation, and they tended to list the most prestigious). We defined as a farm, for the purpose of this study, all units with at least 5 acres of improved land and one field crop. This eliminated villagers with pigs and a cow who grew 300 bushels of potatoes and half a ton of hay on their three-acre patch; this also left out pioneers with 150 acres of timber, 10 chopped acres but no crops. We also eliminated the Madawaska convent, which had its own farm. Weaving off the farms included in our corpus was negligible: no cloth was produced at Madawaska outside the units we defined as 'farms'; at Argenteuil, only 7.5 per cent of the fabric was produced 'off-farm', despite farmers representing 56 per cent of the population. In Charlotte County, only four Schedule six weavers were not wives, or daughters of men listed as farmers. Three of the 'non-farming' husbands, a 'labourer', a blacksmith and a ship's carpenter, had farms, the blacksmith, for instance, owning 200 acres of land, 75 improved! In addition five weavers were married to farmer-fishermen, who owned an average of 20 acres, almost all of them improved.

In addition to the census, we have also used any surviving general store ledgers and day books. We could not locate any useful ones for Charlotte County for the period under consideration.⁵¹ American authors made extensive uses of probate records. Madawaska settlers almost never used the probate courts: until 1851, the court was too far away, and afterwards, the settlers were slow in developing the habit. A probate court was opened in the heart of the settlement at Edmundston in 1873 but burnt down with all its contents at the beginning of the twentieth century. Analysing post mortem inventories was not in the scope of the work

⁵¹ For Argenteuil, we have used the day books from Dewar and Hopkins for 1831-1842 and 1851-2. Dewar and Hopkins kept a general store in the village of St Andrew. For Madawaska we used the surviving ledger (1844-8) from the Dufour general store, and papers from John Emmerson's store as well as his probate inventory (1867). The Dufour brothers, farmers, store keepers, sometimes lumberers, and small scale forwarders had a store next to the oldest church in the settlement at St Basile. The last of their store ledgers, covering the years 1844-8 has survived. In 1848 however, the Dufour were out of business and merely settling existing accounts. John Emmerson was a wholesale-retailer, who specialized in supplying lumber camps. His store was located in what became Edmundston. In addition, he owned a farm, and town lots which he rented, he cut some lumber, and his store accommodated the Post Office and Telegraph Office ran by his brother-in-law William Hodgson. Emmerson died in 1867, and the store was continued by his sons. Some scattered parts of what must have been an impressive collection of business records have survived: two ledgers (1851-64), which contain the accounts of individuals and firms with whom he did business; some memorandum books (1849-67, and scattered ones afterwards), which contain the accounts of ordinary households; a receiving book, covering the 1849-58 period, where he itemized the merchandise his numerous suppliers sent him, and their value; and some other material not pertinent to this study. Madawaska, Maine: Madawaska public library, Dufour ledger, 1844-8; St John, New Brunswick: New Brunswick Museum, John Emmerson papers, 1848-1901.

undertaken by Rygiel or Turcotte, but a quick foray into the paper of the notaire who resided in Argenteuil shows that inventories were extremely rare. (For instance we could find only six inventories for the years 1823–29, representing barely one per cent of the various documents the notaire drafted).⁵²

I

The existing historiography suggests several possible explanations for the persistence of farm cloth production. Did women weave because their households were poor, and could not afford factory-made material? Was the continuation of cloth production part of a widespread strategy of not abandoning production for home use, even when one could afford to? Did women weave because they could not find something more profitable to do? Or because there was a market for their product? We try to answer those questions by focussing on our three communities.

The link between backwardness, poverty and low productivity on the one hand and the continuation of domestic weaving on the other is of such long standing that it must be addressed first. Did farm households weave to save money? Were they poor because their labour was not very productive? Kris Inwood made an explicit link between domestic cloth production and low labour productivity. He measured the latter in terms of farm size, and number of bushels of wheat produced per farm resident. Inwood found that farm size, household size and output and productivity were proportional; the smaller a farm and the less productive its residents, the more likely they were to weave and the greater the quantities of cloth produced.⁵³

We can compare some of Inwood's results with similar calculations for Charlotte County schedule six weavers. Farms in Quebec and New Brunswick had ceased to produce wheat in significant quantities by 1871, in the case of New Brunswick because neither climate nor soil was conducive to this culture; in addition, severe pest infestations repeatedly destroyed the crops from the 1840s onwards. Ranking weaving households in terms of their wheat production would be meaningless. On the other hand we can compare Inwood's ranking of Leeds county schedule six weavers in terms of farm size with the ones in Charlotte County (Table 3).⁵⁴

In both counties, the negative correlation between farm size and per capita cloth production is obvious. Large farms produced much less on a per capita basis than small ones. The question remains however whether farm labour productivity was really the cause of this trend. Neither farm size (or wheat production) really measures labour productivity, in the sense of the amount of output one can produce in a fixed unit of time. Rather, it measures underemployment: people with a small acreage have more time on their hands, all things being equal, than people on large ones. Productivity, not in the sense of farm residents being incapable of working efficiently, but in the sense of too many hands chasing too few farm chores, is a plausible factor.

However, labour productivity in the usual sense of the term may not have been a factor.

⁵² In Quebec, marriage contracts, deeds, sales, indentures and other contracts between individuals were drawn by a category of lawyers called notaires. The notaires kept a copy of all the acts. The latter did not necessarily have to be publicly registered. A lot of notarial papers (called greffes) have been deposited in

public archives.

⁵³ Inwood and Roelens, 'Labouring at the loom', pp. 215–35.

⁵⁴ As mentioned above, there is no schedule six for Madawaska, and the one for Argenteuil enumerates only seven weavers, not enough for statistical purposes.

TABLE 3. Cloth output per farm, person and improved acres by size of farm among weavers, 1870.

Leeds county				Charlotte county					
total size of farm in acres	n	yards per person	yards per improved acre	total size of farm in acres	n	yards per person	yards per improved acre	Total value of cloth ^a	value of farm production (\$) ^b
1-10		86	173	1-10	12	54	66	221	26
11-25		98	26	11-25	14	49	14	200	156
26-50		50	8	26-50	52	37	7	202	259
51-75		52	5	51-75	16	28	3	167	334
76-100		48	4	76-100	3	26	3	173	360
101-125		33	3	101+	7	13	0.67	64	526
126-150		48	3						
151+		16	1						
TOTAL	103				104				

Notes: ^a From census schedule; ^b Calculated data (see below, n. 43).

Sources: Leeds county, Inwood and Roelens, 'Labouring at the loom' (Inwood does not give the number of instances in each category, but the total number of observations is 103); Charlotte county, manuscript census schedules as in footnote 49.

Lewis and McInnis have estimated (male) farm labour productivity at the county level for the province of Quebec in 1851. We can compare their results with per capita domestic fabric production (calculated from the data in the census aggregate tables). There is absolutely no correlation between the two. In addition, farm labour productivity and farm income are not necessarily correlated. Lewis and McInnis's study also shows that some of the poorest counties (Gaspé and Bonaventure), were among the five most labour productive, and that some prosperous counties, like Yamaska were among the five least productive.⁵⁵ Low labour productivity then may not necessarily engender the kind of poverty that forces farm households to seek additional forms of income. (This does not preclude a link between underemployment and weaving however.) The link between low income and cloth production is by no mean obvious either. In 1851, most cloth was produced in the Montreal-Quebec city corridor and Richelieu valley, which have always been the most agriculturally productive regions of Quebec.⁵⁶ In none of our three regions does poverty correlate with cloth production. We estimated the value of net farm production using the method devised by Frank Lewis and Marvin McInnis.⁵⁷ Average values of farm production explain neither the quantities produced, nor the proportion of

⁵⁵ Frank D. Lewis and Marvin McInnis, 'Agricultural output and efficiency in Lower Canada, 1851', *Research in Economic History* 9 (1984), 45-87.

⁵⁶ *Recensements du Bas Canada, 1842, 1851, 1861; Recensement du Canada, 1871* (published aggregates).

⁵⁷ Net farm production is calculated by adding the value of the field crops reported in the census, using regional prices culled from contemporary sources, such as newspapers. Meat and dairy production are

estimated on the bases of contemporary animal weights, contemporary slaughtering ratio and contemporary milk yield per cow. This production is then valued in the same manner as the field crops. To this is added the value of surplus draught animals (all animals in excess of a yoke of oxen or one horse per 50 acres is surplus), under the assumption surplus animals are raised for sale; from this aggregate figure is subtracted the value of the seeds (quantities based on contemporary

TABLE 4. Per capita fabric production and value of net farm production, 1871

	<i>Argenteuil</i>	<i>St James and St Patrick, Charlotte county</i>	<i>Madawaska</i>
Value net farm production, in \$	207.0	557.0	457.0
Per capita fabric production, in yards	3.65	4.80	6.63

Source: calculated from census schedules (as footnote 49).

weaving households (Table 4). If this was a valid explanation, St James and St Patrick should have produced the least amount of cloth and Argenteuil the highest. Instead, the poorest community produced the least.

More significant is the fact that the value of the production of the average Madawaska farm in 1861 had been similar to that of the average Ontario farm in the same year.⁵⁸ For lack of data on Ontario in 1871, we cannot say whether this was still true ten years later. However, there is no reason to believe Madawaska would have fallen much behind the western province, if at all. If a comfortable income level had freed Ontarians from the obligation to weave, it should similarly have freed Madawaskayans. Prosperity did not necessarily incite people to mothball their looms.

There is no negative correlation between value of net farm production and cloth production at farm level either. The higher the value of net farm production, the higher the production of cloth, and the more likely a household was to report cloth to the census taker, as one can see from Table 5. Deficit farms almost never reported cloth (only one at Argenteuil).⁵⁹ St James and St Patrick in Charlotte County were the exception. There, production peaked among farms in the \$1000-1499 production range and was absent amongst larger farms. However, we are dealing with very tiny numbers. Schedule six weavers, who produced the highest quantities per household, also displayed the highest farm production of all, \$628. Schedule six weavers differ on one significant point from schedule five weaving households however. The quantities of fabric reported by schedule five households increase with the value of farm production. There is no linear trend among schedule six weavers. Production went up and down, and significantly declined among the richest farmers. 'Commercial' cloth production was more likely to be a strategy pursued by the middling range of farmers (see Table 6).

For all practical purpose, Madawaska farms with a net farm production of at least \$250 were self-sufficient in cloth; at least 80 per cent of them produced cloth, and they produced an

ratio of seeds to crops) and the value of the fodder (quantities based on contemporary feeding practices). The result is the value of the farm net production. Lewis and McInnis, 'Agricultural output and efficiency...', pp. 45-87; Marvin McInnis, 'Marketable surpluses in Ontario farming, 1861', in Douglas McCalla, *Perspectives on Canadian Economic History*, (1987), pp. 37-57. For Charlotte county, we did the calculations for only two parishes: St Patrick and St James, and on schedule six

weavers. St James had a low proportion of schedule five cloth producers; St Patrick, a high one. In other respects, the two parishes are typical of the county's other rural parishes; for more on the application of this method to the St John valley, see n. 47 above.

⁵⁸ Craig, 'Le developpement agricole...', pp. 13-26.

⁵⁹ We define a deficit farm as one which did not produce enough to cover its food and feed needs.

TABLE 5. Domestic cloth production at Argenteuil, St James/St Patrick and Madawaska, 1871 by value of farm production

Value of net farm production, in \$	St James and St Patrick			Argenteuil			Madawaska		
	<i>n</i>	% reporting fabric	Average number of yards reported	<i>n</i>	% reporting fabric	Average number of yards reported	<i>n</i>	% reporting fabric	Average number of yards reported
0 or less	3	0	0	15	7	30	21	0	0
1-99	23	13	17	84	49	20	131	34	41
100-249	53	36	35	148	79	61	207	68	43
250-499	143	48	52	100	86	48	249	82	48
500-749	94	52	43	16	87	53	152	89	70
750-999	61	52	51	2	100	62	70	93	82
1000-1499	37	57	65	1	100	130	83	95	101
1500-1999	5	60	55	0	-	-	28	96	133
2000-4999	2	0	0	0	-	-	11	100	143
5000-9999	0	-	-	0	-	-	1	100	1000
Total	421	49	50	366	72	49	953	74	66

Sources: Manuscript census schedules as in footnote 00.

TABLE 6. Textile and agricultural production, weaving households, Schedule six, Charlotte County, 1871.

Value net farm production in \$	<i>n</i>	Average quantity of fabric made (yards)	Average value of fabric produced (\$)
0	2	350	289
less than 100	6	186	114
100-249	11	324	248
250-499	25	296	204
500-749	32	176	121
750-999	13	306	215
1000-1499	11	218	150
1500-2999	4	76	53
Total	104	241	169

average of 48 yards.⁶⁰ In Charlotte County, all farms reporting a net production worth at least \$250 and who wove were also self-sufficient. At Argenteuil, the self-sufficiency threshold was

⁶⁰ According to Adrienne Hood, a family of four in late eighteenth-century Pennsylvania needed 45 yards of fabric to cover its clothing and household linen needs; Hood, 'The material world of cloth', pp. 43-67.

reached by farms producing at least \$100. Producing households may not have performed all the labour required for cloth production however. The better-off a household was, the more able it was to hire women to card, spin and come and weave for them. John Emmerson's household was such a case: Emmerson hired local women to card, spin, weave and sew for him.⁶¹ Emmerson was primarily a merchant, but not a putter-outer. The work he farmed out did not even produce enough cloth and clothing for his household. He merely hired people to produce some of the goods his household needed. One cannot think of a reason why farmers would not have followed a similar strategy.

Farms with a high value of production were not specialized either. The trend was for farms to increase the volume of production of a large number of commodities, and to broaden the range of commodities produced. Cloth production clearly fitted into this pattern. Schedule five weavers were women who wove without the assistance of a paid helper. They may have worked alone, or be helped by their daughters, other female relatives, or by their live-in servant. Their production, for use, barter, or commercial exchange, was part of the farm's diversified production. The more diversified the farm, the more cloth produced and the smaller the overall contribution of cloth production to the total farm revenue. In Charlotte County on the other hand, this pattern applied to poor St Patrick's parish, but not to better off St James, where few households reported cloth in schedule five. St James farmers did not incorporate weaving into their economic strategies, and at most 16 per cent of the farm households in each revenue category wove. Weaving may also have been a strategy followed by poor women who hired themselves out to the likes of Emmerson. But they would have used their skills to generate income, not to avoid expenses, and, unless they also owned a loom, they would have been invisible in the census. Conversely schedule six weavers hired assistants: they invested more than their time in the process of production. Perhaps as a consequence, their average cloth production level was much higher than the average of the schedule five weavers. In many cases, the gross value of their production exceeded the value of the farm production (Table 6).

Schedule five and schedule six weavers, in short, throw some light on two types of economic strategies involving cloth production. One relies on the labour of the household and the other uses a limited amount of hired labour. Neither strategy can be described as attempts at self-sufficiency. Schedule six weavers are certainly not striving merely for self-sufficiency: for them, weaving is a commercial enterprise. Schedule five weavers may have belonged to households which could be self-sufficient in cloth (and other commodities), but it is very doubtful that their self-sufficiency was part of a market-avoidance strategy. Farms with a net production valued at \$1500 or more and producing twice as much cloth as they needed were obviously producing to sell. But at the other end of the economic spectrum, poor farm wives lucky enough to have a loom may have had no option but sell most of their cloth, and make do with patched-up clothing for themselves and their families.

Why did the poorer households not weave? The obstacle may not have been the cost of the equipment. Any joiner could make a loom frame; heddles (made of string) and harnesses (made of dowels) could also be home made. Reeds had to be purchased, but were durable (at Madawaska, they sold for \$1.50 a piece.⁶²) In Charlotte County, weavers owned between \$15

⁶¹ St John, New Brunswick, New Brunswick Museum, John Emmerson Papers, Day Books, 1851-67.

and \$20 worth of weaving tools: these figures are however flat estimates, as they are usually the same in each parish. Space would, on the other hand, have been a real problem for poor people, as a loom takes up about as much space as a double bed. Poor people usually had very small houses. They could also have been deterred by the need to purchase raw material: they may not have had any spare cash for the purpose. Thomas Dublin, studying rural outwork in early nineteenth-century New England, found the same situation. New England women who wove for merchants did not belong to really poor households, but to the middling sort. Dublin believed the cost of a loom, and the need to have space to house it, prevented the poor from acquiring one.⁶³

II

Gloria Main and Laurel Ulrich attributed the demise of male hand weaving in New England to increased male wages. Weaving became a female domestic chore when men deserted the craft because better earning opportunities beckoned. Both Kris Inwood and Marjorie Cohen suggested that the opportunity cost of female labour – the value of whatever other work they could perform instead of weaving – was one of the factors determining the perpetuation of domestic weaving. Women continued weaving because few alternative opportunities were open to them. When opportunities, such as commercial dairying arose, or when factory made cloth lowered the return for their own weaving, they too switched.

Almost all weavers in Charlotte County in 1871 were female. Only four men declared weaving as their occupation in the personal schedule. Three of them, all Irish-born, lived in St Patrick; Scottish-born Peter Smart of Dumbarton was 94, and had produced 30 yards of cloth. Only one schedule six weaver was male. He was Irish born and declared his occupation to be farmer in the personal census. At Madawaska, visitors noted throughout the century that women were very active spinning and weaving; otherwise, we know nothing about them. We can identify the weaving households, but not the weaving individuals. At Argenteuil, one of the seven schedule six weavers was male. He made much more fabric than his female colleagues, but as we shall see below, his craft was not very profitable.

Was it worth a woman's time? Women's labour opportunity cost was indeed very low in most rural areas. At Madawaska, in the 1840s, male workers received 2s. 6d. to 5s. a day (50 cents to one dollar), depending on the nature of the task. Female farm servants – the only work available for women – earned 12s. 6d. a month (\$2.50) plus room and board. Wages for men and women do not seem to have increased much during the period under investigation. In 1871, Emmerson's brother-in-law was still paying the hired girls 12s. 6d. a month plus room and board. In the Nanticoke Valley, at about the same time, female farm servants were earning \$2.00 a week, and male farm labourers, \$1.00 a day, \$2.00 during harvest.⁶⁴ New Brunswick labourers were not well paid.

We can estimate the weaver's added value from the data for Charlotte County. The material produced by schedule six weavers was relatively uniform in composition and value, and any parish can be taken as a reasonable example of the whole. The census taker for St James division 1

⁶² Public Archive of New Brunswick (hereafter PANB), Inventory of John Costello, merchant, 1864.

⁶³ Dublin, *Transforming woman's work*, pp. 29–76.

⁶⁴ Osterud, *Bonds of community*, p. 215.

TABLE 7. Earnings of schedule six weavers, Charlotte county, 1871

Parish	Number of weavers	Earnings before deducting employees' wages (\$)		Earnings after deducting employees' wages (\$)	
		Monthly earnings	Yearly earning	Monthly earning	Yearly earning
St James - 1	19	32.0	102.8	24.0	77.0
St James - 2	17	26.7	72.1	8.9	24.0
St David	60	40.0	67.0	28.9	49.0
West Isles	14	15.7	66.2	9.0	39.0
Total, Charlotte county	110	30.0	77.2	19.6	50.5

Source: 1871 census, Charlotte county, schedule six.

broke down inputs into their components (wool and cotton) allowing fairly precise calculations. The 19 enumerated weavers made fabric containing an average of 0.16 lb of cotton at 40 cents a pound and 0.62 lb of wool at 50 cents a pound. It took 38 cents worth of raw material to make one yard of fabric worth 79 cents. Charlotte County schedule six weavers reported fabric worth an average of 70 cents a yard and containing 35 cents of raw materials. The weaver's added value ranged from 35 to 41 cents a yard throughout the county.

Weavers would have equated added value with profit. Modern day accountants and economists factor depreciation of equipment, the use of space for the loom, inventory and marketing costs in the calculation of profit. Nineteenth-century farmers had little concept of those hidden costs - it is not even certain that accountants had developed them yet. Weavers could make an average of 3½ yards a day⁶⁵ (this is not full-time weaving), and would have earned \$1.22 to \$1.30 a day, less the wages of their assistants. Schedule five weavers, who did not have paid assistants, would have kept all the profit. The helpers' wages ranged between \$5 and \$9 a month, except in St James division 2 where they ranged from \$10 to \$15 a month.

In Charlotte County, females made much more by weaving, or even hiring themselves to a weaver than they could hope for by going into service. Weavers who could avoid the expense of a paid assistant could earn incomes comparing favourably with the one of male seasonal workers. (The 3½ yard output per day was well within the capabilities of a single worker.) The large saw mills on the St Croix River were the county's largest employers of men. They employed 726 hands in 1878, who averaged \$29.22 per month. The axe and tool manufacturers in St Stephen paid \$37.20 a month, and the granite quarries, \$36 a month.⁶⁶ In some parishes, hand weavers could earn as much - and even the ones with the lowest earning made more - than servants (see Table 7).

The quantity produced and the number of months engaged in the business had a direct bearing on monthly net incomes. The majority of schedule six weavers (69 per cent) wove between 50 and 300 yards.⁶⁷ Those weaving between 300 and 400 yards, working an average 3½

⁶⁵ Yardage reported in the schedule divided by 27 and divided by the number of months worked. This assumes a six day work week.

⁶⁶ 'Report of Edward Willis on the manufacturing industries of certain sections of the Maritime Provinces', *Sessional Papers* (no. 37) 48 Victoria, 1885, p. 58.

months per year, could net about \$17.50 a month from their labour. Though most schedule six weavers worked part time, their incomes made a difference to the family economy. They earned an average net income of \$20 per month worked. At St David, they earned almost \$30. Although the majority of St David schedule six weavers worked fewer months than other weavers, they earned higher net incomes through larger outputs. Weavers in St David dedicated only, on average, 1.75 months a year to their weaving.

At Madawaska, cotton warp sold for 40 cents a pound 1871 – the same as in Charlotte county. Store keepers bought homemade cloth for 80 cents a yard, and resold it for \$1.00. If we assume Madawaska weavers made the same types of material as the Charlotte county schedule six weavers, and if we assume wool cost the same, they would have added a value of 42 cents a yard if they sold the material for 80 cents, and 62 cents if they sold it for a dollar. If they made $3\frac{1}{2}$ yards a day, their gain would have been \$1.40 a day. Women who wove for others were also making more money than hand spinners or seamstresses. John Emmerson was paying spinners 10 to 15 cents a day (25 to 30 cents a pound – a pound takes two days to hand spin), weavers, 25 cents a yard to make cloth and 16 cents a yard to make towelling (which was half the width of cloth), and seamstresses 25 cents for a shirt, 60 cents for trousers, 50 cents for a waistcoats, and up to \$1.50 for a coat. Hired weavers were the best paid of all the textile workers.⁶⁸

Weaving was less profitable at Argenteuil. With the exception of a woman making 100 yards at \$1.75, the fabric produced averaged 63 cents a yard. Inputs were valued at 42 cents a yard leaving a potential profit of a third (21 cents a yard). Three and a half yards of fabric would have earned the weaver a profit of 68 cents, still a good return, but much less than in New Brunswick. The profits of the schedule six weavers were however less, because they all had hired hands. The weaver's net income was even rather low compared to what other people were earning in the community. The women who worked for the local dressmakers earned \$10 and \$11 a month; the dress makers themselves earned \$30 to \$108 a month. George Redpath, the only male in the group, averaged a net income of \$10.70 a month. Had he worked for wages at the saw mill, or for a shoemaker, he would have earned \$15 a month – and \$33 at the potash factory or at the carding mill.

But although potential profits from weaving were lower at Argenteuil, they were not inconsequential for women. If women relied mostly on their own yarn and the help of their children, their profit would have been higher, although the quantities they could have produced would have been limited by the size of their household and by the number of sheep they owned. This may explain why almost as many households wove at Argenteuil as at Madawaska, but the quantities per weaver were smaller; this may also explain why very few people at Argenteuil (compared to other communities) bothered weaving more than 90 yards. The profitability of the activity goes a long way to explain the difference between the two communities. Argenteuil weavers reached the point of diminishing return quicker than their Madawaska counterparts.

The economic position of hand weavers was therefore quite different in New Brunswick and Argenteuil. In New Brunswick, weaving was a very profitable activity which allowed women to

⁶⁷ 72 schedule six female weavers wove less than 300 yards, 16 between 400 and 499 and 8 over 500 yards. values of cloth, and wages paid are taken from the Dufour Ledger and John Emmerson papers.

⁶⁸ The values of raw materials, purchase and resale

TABLE 8. Butter and cloth production in St Jerusalem 1871

<i>Quantities of butter (lbs)</i>	<i>N</i>	<i>Average quantities of cloth (yards)</i>
1501 or more	3	39
1001-1500	24	44
751-1000	26	40
501-750	57	43
251-500	45	33
101-250	16	23
0-100	23	12

Source: 1871 census, St Jerusalem, schedule five and six.

earn unusually high incomes. The work was seasonal, and they probably could not have earned this income for each of the twelve months of the year, but almost all the work available for men was also seasonal. Despite weaving being profitable, the men did not try to take it over. Cohen has argued that, in Ontario, men elbowed women out of dairying when it became commercially profitable, but in Ontario, the demise of arable farming had eroded male farmers' economic base. In New Brunswick, there was no shortage of seasonal work for male farmers looking for extra income. They did not need to take over their wives' and daughters' jobs. When women wove and men worked in the mills or in the woods, the household had a greater income than when men worked and women merely kept house.

In Argenteuil, hand weaving was a poorly paid craft for men and women. Men apparently avoided it. Women, on the other hand, did not have alternative forms of employment: all the businesses listed in schedule six, with the exception of the two dressmaking shops, were employers of men (carriage making, saw-, grist-, carding- and shingle mill, potashery, sash and door factory and so on). So they wove, but not as much as the New Brunswick ones. In other regions the introduction of commercial dairying coincided with the disappearance of domestic cloth production. Agricultural production by women was not an alternative in New Brunswick, where dairying did not develop until the twentieth century. But it could have been in Argenteuil, where butter production increased significantly in the parish of St Jerusalem (the northern part of Argenteuil) between 1851 and 1871. A comparison between the quantities of butter reported in the census and the quantities of cloth is interesting: both products increased simultaneously – but then cloth declined as butter increased (see Table 8). Again, above a certain level, one had to choose between producing more of the one, or more of the other.

III

New Brunswick and Argenteuil women seem to have woven when it was profitable for them to do so, and refrained from this activity when it paid poorly. Their behaviour was economically rational. Men did not try to muscle them out: this would have been economically irrational. But why was weaving so much more profitable in New Brunswick than in the Montreal region? The answer is the existence of a sustained market that pushed prices up in one region, and its

absence in the other. The existence of a market for the material in New Brunswick is easy to establish. Cynthia Wallace-Casey mentions that advertisements for cotton warps and offers to buy 'homespun', as handmade fabric was called, appeared in the St John newspapers as early as the 1840s. Much later in the century, the demand was still there. Southern New Brunswick newspapers in the 1880s carried advertisements offering to purchase woollen yarn, homespun, mitts, and socks in large quantities.

For instance, in June 1880, A. A. Miller advertised in the *NB Reporter and Fredericton Advertiser* in these terms:

Look Sharp
Buy your cotton warp at
A. A. Miller and Co.
and make up

Homespun cloth, socks, mitts, etc.

Early in the season, and you can be relieved of all such domestic goods at the store of
A. A. Miller and Co, opposite City Hall, in exchange for dry goods. We want about
4000 yards of cloth.⁶⁹

In September of the same year, A. A. Miller and Co. headed their advertisements with the words: 'Woollen goods in great demand'. They wanted 'homespun cloth of all kinds in large quantities, also 2000 pairs of socks and mitts, 1-2 ton woollen yarn, over socks, home knit drawers, shirts, pants etc'.⁷⁰ In November, they asked for 'all the homespun cloth, socks, mitts, yarn etc. made in York county' (Fredericton was in York county).⁷¹ In November 1881, after Miller had died, his successors' advertisement ended with a call for socks, homespun, mitts and yarn. They advertised 'camp supplies for lumbermen, camp blanketing, grey blankets, knit shirts and drawers, socks, oversocks and mitts, horse blankets, our own make'.⁷² In return, knitters and weavers could select from a bewildering array of goods imported from England, the United States, and the rest of Canada: shawls, silks, velvets, tweeds, and the latest novelty dress material.

Miller and Co. were not the only store in Fredericton purchasing homespun, yarn and knitted goods. Other stores in the city were similarly advertising, asking for equally staggering quantities of goods, and offering in exchange an equally bewildering array of imported goods. Similar advertisements could also be found in the papers of the other major city in southern New Brunswick, St John.⁷³ Merchants, in short, were encouraging local women to weave and knit and exchange the finished products with imported fabric.

The Madawaska stores, whose ledgers have survived, on the other hand, purchased very little homespun. Although both Dufour and Emmerson supplied lumber camps with food and fodder, and despite the fact Emmerson was supplying one of the major regional lumber operations with whatever it needed, neither sold significant quantities of work clothes. They both carried cotton warp and factory-made fabric. Emmerson, for instance, received an average

⁶⁹ *NB Reporter and Fredericton Advertiser*, 8 June 1880.

⁷⁰ *Ibid.*, 8 Sept. 1880.

⁷¹ *Ibid.*, 11 Nov. 1880.

⁷² *Ibid.*, 23 Nov. 1881.

⁷³ *St John Morning News*, 4 Jan. 1861.

of 1000 lb of cotton warp a year from his St John supplier between 1849 and 1858.⁷⁴ Those two Madawaska storekeepers' role seem to have been limited to providing weavers with supplies. It is possible that the weavers may have found their own way to reach the customers who operated practically in their backyards and so save the cost of selling through a middleman. Or, another storekeeper or trader, whose books have not survived, specialized in the cloth and clothing trade. But the indications are that the trade in homespun was less formalized.

The production process never seems to have evolved towards a European style putting out system, where merchants gave workers yarn to weave and collected the finished product in exchange for a set payment. Weavers purchased cotton warp from merchants; they took their wool to the local carding mills and spun their own woollen yarn, or possibly purchased yarn from their neighbours; then they sold their product to the merchant of their choice. One should not read too much into the fact they were paid in truck, instead of cash. Although the practice was getting less and less common by the end of the century, truck payment had been widespread in the province; the currency shortage which plagued British North America until the creation of the Dominion of Canada – with the right to mint – left little alternative to truck payments and elaborate multi-party barter. The literature on rural stores also shows clearly that as long as a merchant did not have a monopoly, he was not in a position to impose his conditions on his customers. Potential customers were willing to shop wide and large to find the best deal.⁷⁵ Cloth producers, in short, remained independent producers, who had a choice among a large number of buyers.

By 1880–81, there were also textile mills in New Brunswick, and obviously, as the advertisements show, any kind of fabric could be purchased in the town stores. Even country stores, like the ones at Madawaska, carried a wide range of textiles from the 1840s onwards. Why then was there a high demand for homespun material? Contrary to what one may at first think, it was not because homespun was a cheap fabric. At Argenteuil in the 1830s and Madawaska in the 1840s, 1850s and 1860s, storekeepers paid about 4s. (80 cents) a yard for homespun and sold it for about 5s. (\$1.00). In Charlotte County, it had a reported value of 62 to 84 cents a yard.⁷⁶ We can compare this with the price of the yard goods listed in storekeeper John Emmerson's post-mortem inventory in 1867: cotton cloth sold for 8 to 20 cents a yard; flannel for 32 to 57 cents; velvet for 30 cents; black silk and silk velvet for 80 cents; cloaking and pilot cloth (both coating materials) for 60 cents; and blanketing for 145 cents.⁷⁷ Homespun was in the price range of coating material and silk! Put in another way, with the profit on one yard of homespun, a farm wife could have purchased half a yard of silk, or a yard of merino wool cloth, or a yard and a half of velvet, or two to 5 yards of cotton. On this account alone, weaving was a worthwhile activity.

And yet, homespun was a coarse, uncomfortable fabric, described by the elderly people who wore it before World War II as 'itchy' and 'scratchy'. Why were nineteenth century people

⁷⁴ B. Craig, J. Rygiel and Elizabeth Turcotte, 'The home-spun paradox. Market-orientated production of cloth in eastern Canada in the nineteenth century', *Agricultural History* (forthcoming, 2001).

⁷⁵ A good introduction to the relationship between general stores and workers is Rosemary E. Ommer (ed.),

Merchant credit and labour strategies in historical perspective (1990).

⁷⁶ Data from schedule six.

⁷⁷ PANB, Victoria County Surrogate Court, John Emmerson inventory, 1867.



PLATE 1. Peter Loggie lumber camp, Northumberland County, New Brunswick, c. 1900.
 Source: Provincial Archives of New Brunswick, P18/266, Olé Larsen Collection.

willing to spend so much on it when they could have purchased something cheaper and perhaps softer? Here, homespun wearer and nineteenth century accounts agree: homespun was close to indestructible: it was an extremely sturdy material, capable of withstanding the harsh working conditions of the lumbercamps and the log drives, besides being warm.⁷⁸ And lumbering was New Brunswick's main resource, occupying men by the hundreds from late fall till the March thaw. Some stayed on to float the log rafts down river to the ports where they would be shipped to England or sawn into lumber for the American market. Homespun was the denim of the nineteenth century: homespun garments made the season. Factory made cheap cloth somehow did not make the grade. And in New Brunswick, this type of homespun cloth was apparently only available from home weavers. The nature of the material, its suitability for the making of winter work clothes, not its price, protected its market share. Hence, photographs of men working at lumber camps from the turn of the century, like plate one, show them wearing locally-produced homespun cloth.

When manufacturers set up woollen mills in New Brunswick, they strove to produce a material similar in quality to the one made by domestic weavers. In 1861, William Park of St John announced that his mill was manufacturing 'satinets and tweeds on cotton warp, made expressly for strength and durability'.⁷⁹ In 1871, James McGill, who owned the only textile mill in Charlotte county, made cloth using the same weight of wool per yard as the home weavers.⁸⁰

⁷⁸ Ruddel, 'The domestic textile industry', p. 123; Katherine Brett, 'Country clothing in nineteenth-century Ontario', in Alan Brooks (ed.), *Proc. fourth*

annual agricultural history of Ontario (0000) p. 40.

⁷⁹ *St John Morning News*, 4 Jan. 1861.

⁸⁰ Schedule six - Penfield parish.

The standard obviously was homespun. Manufacturers however did not rush to produce homespun-type fabrics; there were very few woollen mills in New Brunswick in 1871, and the ones that existed were quite small.

One would have to be blind not to find evidence of a demand for homespun in New Brunswick; on the other hand, finding traces of a market for homespun in the Argenteuil region, and even further west, in the Ottawa valley, a lumbering region, was a vain search (Argenteuil was located at the mouth of the Ottawa valley.) There was no clamour for the product in the Montreal and Ottawa Valley newspapers. Did merchants get all they needed without advertising? Did lumber camp outfitters have alternative sources of suitable fabric? By the late 1860s, they did. The Ottawa Valley and eastern Ontario witnessed the proliferation of small textile mills, often annexed to an existing grist-saw and carding mill, which manufactured a coarse cloth using the wool of local sheep. Outfitters needing two gross of shirts, as many pairs of work pants, not to mention other garments, may have preferred to deal with small manufacturers who could guarantee them a given amount of fabric by a given time, rather than be dependent on the domestically made pieces of cloth that trickled and dribbled to the stores when farm women had the time to weave. There was apparently no huge market for homespun in the area then; this does not mean there was none. Argenteuil experienced a rapid growth of its village population between 1830 and 1871, and most villagers were manual workers needing sturdy and warm work clothes. Argenteuil weavers may have sold their goods to them.

IV

Although the connection between market demands, adequate resources to meet them and cloth production was compelling, one should resist the temptation to homogenize weavers. The factors that lead regions to engage in an activity may apply unequally to its residents. We have already noted the different strategies pursued by households listed in schedule five and schedule six. The sources suggest that individual weavers may have followed different strategies and engaged in cloth production for different reasons and under different constraints. Producing cloth did not respond to a single set of factors. Other variables were at play.

The profile of the 54 households reporting 150 yards of fabric or more at Madawaska was quite varied. They had between 4 and 300 improved acres; the value of their farm net production ranged between \$99 and \$9023, and their farm surplus (that is the net farm production less the cost of feeding the farm household) from \$26.57 to \$8915. Fourteen made linen (15 to 200 yards).

One of the two largest producing households was Dominique Michaud's which reported production of 1000 yards of flannel worth \$780. Michaud's second daughter had married during the year, but still lived at home with her husband. She was the one, and only one, listed as a weaver in the personal census. Michaud's farm production, exclusive of textiles, was worth \$603. His household included himself, his wife, nine children, a son in law, and a boarder and two very small children who were neither his, nor the boarder's. Helene Michaud may have woven with the assistance of her 23 and 18 year old sisters. Her production yielded an approximate profit of \$350, more than the value of half of the farm's net production.⁸¹

⁸¹ The fabric and the profits are valued at the same rate as the ones reported in Charlotte county schedule six.

Helene's labour could easily support the second couple in the household. The Michaud had only ten sheep, and obviously were not weaving all their own wool.

The other large textile producer was the household of Isaac Bijeau (800 yards of flannel and 200 of linen). Bijeau, 36, lived with his wife, a 12 year old son and a nine year old daughter. He owned 500 acres of land, 300 improved – more than he could cultivate without outside help. His farm net production was worth over \$9000. His household was no more likely to weave 1000 yards of material unaided than it was to cultivate 300 acres (and tend 50 sheep and 63 pigs!). Bijeau was also listed in the industrial census as a grist miller and a commercial baker! Bijeau's sheep could not supply him with enough wool to produce 800 yards of cloth. At best, he could have produced half that amount. His mill might have included a set of cards (but missed by the census taker). He might have kept some of the wool he processed as payment for his services, and put it out to spin – and then hired women to help his wife with the weaving. Or he may have bought fleece, as he was buying flax, to produce fabric (he did not grow any flax). For the Bijeau household, cloth production was merely one of their numerous ventures, and one whose gross value was no more than 5 per cent of the value of farm production. The family were extreme diversifiers.

The third largest producer was altogether different. Louise Landry was a widow aged 34 with nine children aged between 17 and 2, and a small 100 acre farm with only 10 acres improved. It did not cover the household's needs in food and feed (they fell short by 50 bushels of grain), in part because they grew almost no bread grain. Their net farm production was worth \$386, and their surplus a modest \$151. Louise also reported 400 yards of flannel, worth \$312, and 100 yards of linen. She could not have covered her yarn needs from their 10 head flock. The economy of the Landry household was obviously very different from those of the Michaud and Bijeau families. The Landry household, deprived of the labour of an adult male, focused on activities that could be handled by women, adolescent males (her oldest was a boy) and young females: small scale animal husbandry, spinning, weaving, supplemented by a few subsistence crops like peas and potatoes. The strategy paid off: the value of the Landry net farm production and fabric placed them in the middle income range.

The poorest of the group was Elzéar Ouellette, a 39 year old man with a wife and eight children on a 60-acre farm (10 improved). He did not grow enough grain to cover his household's needs, and had half the number of animals of the Landrys. His gross production was worth only \$62, and once the cost of feeding his family was deducted, he was left with a deficit of \$191. The Ouellette household *had* to find additional sources of income. The 400 yards of flannel and 100 yards of linen reported by his household were probably made by his wife and daughters as part of their strategy to keep the wolf at bay. The flannel was worth \$312, and could have brought a profit of about \$150. It was not enough to save them from hunger, although the women may have weaved for better off neighbours.

In between the Bijeau family and Elzéar Ouellette were people like Isidore Daigle, a 29 year old farmer, married and father of five children under ten. He had two servants, one male and one female, and his 67 year old widowed mother lived with them. His farm production was worth a little over \$1777. It produced 150 yards of flannel. So did the household of 23 year old Vital Albert. He was married, had two small children and two male hired hands. His farm production was worth \$1800. More curious was Augustin Daigle. His farm's net production

was worth \$1609. He had 120 acres of improved land (half his property) and 30 sheep. He reported 155 yards of flannel. But Daigle was a 67 year old widower living alone. His son's household, next door, on the other hand was overrun with people: son Zephirin, his wife, their four small children and several unrelated individuals, including a 22 year old female reporting the occupation of 'employee'. Did she weave for Augustin, and board at his son's?

There is, in short, no typical economic profile of the large cloth producing household at Madawaska. For some, cloth was an attempt at escaping poverty; for others, a way to keep the family comfortable; for others again, one business among others. In the case of households like the Daigle's, it may have been the way through which an older lady kept busy.

Schedule six weavers were an equally heterogeneous lot in Charlotte County. They had between 0.5 and 150 improved acres, and a net farm production worth nothing to \$860. The largest cloth producer was Martha Towle from St David; she was 45 and had 5 children aged 4 to 16. She had made a total of 1388 yards of cloth worth \$832 over four months. The Towles had a small 70 acre farm, 40 of which were improved. Its net production was only \$139, not even enough to feed the family. The most productive weaver's farm belonged to Emma Leaver and her husband, also from St David. They possessed 300 acres, 110 improved, and had lots of animals: 4 horses, 13 cows, 50 sheep and 12 pigs. Emma's husband was assisted by his 22 year old son and his 74 year old father. Emma could count on the help of her 25 year old daughter. The women wove only for one month a year and made 100 yards of flannel. They also made 1000lb of butter and 100lb of cheese. Emma and her daughter could not be in two places at once and they chose to be in the dairy. The Towle and Leaver families were prosperous, the Towles because Martha worked very hard to compensate for an inadequate farm or an inadequate husband, the Leavers because five adults could take full advantage of a larger than average holding. Like the Bijeau household, the Leavers did not really need to weave, but they probably had lots of wool, so why not?

In the middle range were households like the Smiths of St David and the Burgesses of St James. Forty six year old Mary Smith wove for 3 months and produced 625 yards of fabric (300 reported on schedule five). Her household included three boys aged 7 to 18, four girls aged between 4 and 12, and her 62 year old mother in law. Their farm was small, comprising only 100 acres, but 60 of them were improved. They had 18 sheep, 6 cows, made 300lb of butter and their net farm production was worth \$403. Rebecca Burgess, 41 years old, was also married to a farmer but had a smaller household: a nineteen year old son, a 13 year old daughter, and an elderly female whose relationship to the family is not specified. She produced 520 yards of fabric worth \$410. Although the Burgesses had fewer improved acres than the Smith's (20), they outproduced them, and their farm net production was worth \$572.

Women on the islands along the coast of the county also wove. Most were married to fishermen, like 62 year old Mary Ann Adams. In four months, she made 340 yards of cloth worth only \$168. The Adams had two adult sons, also fishermen, and they owned an acre of land on which they kept a cow and four sheep, had grown 20 bushels (1200lb) of potatoes and three-quarters of a ton of hay. The Adams family combined fishing, gardening, cow keeping and cloth making to make a living.

One, in short, can find very few features common to all weaving households. Weavers were

usually middle age and married. At Madawaska, the large cloth producing households were demographically different from the average. They included a large proportion of multi-generation or multi-family households (one third), and slightly more than half included more than one female aged 16 or older. (One had no women at all!) The presence of extra females in the household was likely a factor besides market demand, economic needs, or the desire to turn a profit. In Charlotte County, two-thirds of the schedule six weaving households included more than one female over 14 years of age; only one-third included more than two however. In no New Brunswick parishes were weaving households overrun with females, and one should not carry this explanation too far. Besides, schedule six weavers in Charlotte County had all hired a helper during the year. One did not need an army of daughters to weave, for it was possible to hire substitutes.

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Charlotte county, Madawaska and Argenteuil bring to light some of the factors which encouraged domestic cloth production. It was not a response to rural poverty. Market demands and female labour opportunity costs are more convincing explanations.

In New Brunswick, where there was a strong demand for domestic cloth, women either wove great quantities of fabric themselves, or hired assistants to increase output. In Argenteuil, where the demand seems to have been less, they wove smaller quantities and rarely had employees. Per capita production also increased in New Brunswick between 1851 and 1871, possibly because demand increased. It is unfortunate that we cannot know what women were doing in the first half of the century, when they may have woven less. Women, then, seem to have been perfectly able to measure their labour in terms of the demand for their products. Cloth production for market, however, did not eliminate production for home use. 'Homespun' was used for everyday work clothes, but purchased material was preferred for summer dresses, shirts, aprons and 'Sunday best'.

Charlotte county and Madawaska exemplify two ways in which homespun could become parts of market-orientated strategies. At Madawaska, weaving was frequently part of a strategy of diversification to multiply potential sources of income, and which was by and large successful as high income farms were the most diversified (the same thing occurred in Argenteuil). But when cloth was one of many commodities produced on a farm, the weavers did not think of themselves as professional; making cloth was one of the innumerable productive activities of farm women. Selling cloth was no different from selling hay or peas and it did not occur to them to identify themselves as 'weavers', nor to the census taker to list them in schedule six. The only woman identified as a professional weaver at Madawaska was not a female head of household, and presumably had little else to do but weave.

In Charlotte county, many farm households produced cloth as part of their various activities. As elsewhere, the more prosperous farm households produced more cloth but without having any of their members fit the official definition of a weaver; they were mentioned only in schedule five. A significant number of women did fit the official definitions, mostly because they had taken the additional entrepreneurial step of hiring some help. They saw themselves or were seen as 'home manufacturers' worthy of inclusion in the industrial schedule. What differed

between the various communities seems to have been the organization of the trade: it was informal where there were no or few schedule six weavers. The contrast between Madawaska (no schedule six weavers) and Charlotte county is revealing in this respect.

Madawaska farmers had two main markets for their products: the lumber camps, which bought their fodder production, and newly established farmers. As late as 1871, one-third of the farms were less than ten years old. A decade was needed to turn a piece of woodland or scrubland into a self-supporting farm. Merchants, like the Dufours and Emmerson, bought oats and hay. The Dufours, however, transported much more fodder than they purchased, suggesting a fair amount of farm gate transactions between producers and lumbermen. Neither the Dufours, nor Emmerson, purchased much foodstuff: and yet established farmers produced large surpluses of those commodities. There was a foodstuff trade obviously, but the local merchants did not mediate it, any more than they mediated the local textile trade. Producers and customers found their own ways to trade. Charlotte county producers, on the other hand, were relatively close to the advertising merchants of St John or Fredericton, and country merchants may have similarly mediated between the producers and the customers. Hiring labour to produce a piece of cloth was a more rational decision when one was reasonably certain of being able to exchange a piece of fabric as soon as it was finished.

Madawaska, Charlotte county and Argenteuil were not dairy districts in the period we have studied. Their examples show that arable farming did not necessarily create an environment inimical to women's production for markets. Two conditions were required for women producing commodities for market: a market and a lack of alternative opportunities (as in Oneida county). These two factors, coupled with the possibility of making good profits, seem to have been important factors behind the persistence of domestic weaving in the parts of Eastern Canada we have investigated. They were not the only factors. The market did not disappear in New Brunswick because entrepreneurs were very slow setting woollen mills in the region (when they did, they made 'homespun' among other fabrics). Market exchanges buoyed the production process until the 1870s by putting factory-made cotton warp at the disposal of the producers. In Argenteuil the incentives to weaving were more limited, and so was production.

New Brunswick and Argenteuil women were industrious, but were they part of an 'industrious revolution'? The answer depends on the definition of 'industrious revolution' which one adopts. They do not fit the European definition as they did not shift from producing goods for the household to producing goods for the market, while their family bought at the store what they had previously made. On the other hand, they can be seen as part of a North American 'industrious revolution' if we describe this as a reallocation of labour and resources from one type of market production to another in response to demand, and if we accept that production for the market did not increase at the expense of production for home use, but was an addition to the latter. Domestic textile production was for self-sufficiency and for the market. Consequently, it responded to market conditions. Women, for their part, were willing to become more industrious, or differently industrious, when it was worth their while.