Carriage Making in St. John's, Newfoundland: A Folkloristic Perspective on a Historical Industry

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Résumé

Cet article s'attache à l'industrie de la voiture à cheval à St. John's (Terre-Neuve). Adoptant la formule de l'étude de cas, il explore comment de petites fabriques isolées se sont progressivement adaptées aux exigences de la mutation industrielle et de la production en série. Dans les provinces de l'Atlantique, les grandes manufactures de voitures coexistaient avec les petits ateliers d'artisans, mais on y trouvait surtout de petites usines rappelant un peu les échoppes rurales. Tout en considérant l'évolution et le déclin de cette industrie à Terre-Neuve en général, l'article s'attarde au cas de l'usine Carnell's à St. John's. Il fait d'ailleurs ressortir les limites du mot anglais «craft» (artisanat) et propose au lecteur une définition plus large de ce terme dans le contexte de l'étude.

Abstract

This article examines the carriage-making industry of St. John's, Newfoundland. It seeks to explore, in a case study format, how small and isolated industries responded gradually to the realities of mass production in an era of industrial transition. In Atlantic Canada, both large carriage manufacturers and smaller craftshops existed; however, most prevalent were the small carriage factories which possessed some of the characteristics of rural craftshops. In considering the development and decline of the Newfoundland carriage-making industry, this paper provides a case study of one particular St. John's factory—Carnell's. Moreover, the limitations of the word craft *are outlined and, in the context of carriage making in the Atlantic region, a broader definition of this term is offered.*

Large-scale progress in transportation technology in the twentieth century, particularly in the industrialized nations, has changed the material culture, daily activities and local economies of many communities. In Atlantic Canada, scholars have focused on the transition from a mercantile to an industrial society in an attempt to explain the rise and fall of large, primary-resource industries. While such works provide a greater understanding of how the region adapted to industrial capitalism, little is known about the material culture of these large enterprises. Even less is known about the so-called pre-industrial industries—the craftshops and local factories—which responded to the needs of a local population by providing various material objects ranging from barrels and furniture to coffins and horse-drawn vehicles.[1]

Carriage making, an integral nineteenth-century industry in many rural and urban North American communities, had highly automated assembly-line operations in some areas of the eastern United States. Here vehicle factories could employ in excess of one hundred men by the 1820s, and the distribution of products to the United States, Europe and South America could yield a gross annual value of $100,000.[2] In contrast, small family craftshops, which, according to Bridenbaugh, "belonged in the economic category known today as small business," were also very common.[3] In Atlantic Canada, large carriage manufacturers and small craftshops existed; however, most prevalent were small carriage factories which possessed some of the characteristics of rural craftshops.[4] St. John's, Newfoundland, and other Atlantic Canadian centres, such as Amherst, Truro, Westville, Sydney, Fredericton, Saint John, Montague and Charlottetown, had small carriage factories of this kind in the nineteenth and twentieth centuries.[5]

This article discusses the development and decline of the carriage-making industry in St. John's, Newfoundland, and focuses on one particular factory, Carnell's, to show that many of the characteristics often attributed to rural

craftsmen were prevalent in these businesses. This study attempts to assess the limitations of the word *craft*, providing broader and more realistic definitions for this term, and to show how small and isolated industries responded gradually to the realities of mass production in an era of industrial transiton.

Carriage factories began to appear in St. John's by the mid-nineteenth century. Before this time local horse-drawn vehicles were

Table 1: Carriage Factories in St. John's in the Nineteenth and Twentieth Centuries

Factory	*Location*	*Dates of operation*	*No. of employees* <5	>5	*Products*	*Fate of site*
Carnell's	1st wheelwright shop—not available 1st factory—12–14 Cochrane Street 2nd factory—120 Duckworth Street	1804–1872 1872–1892 1892–1966	x	x	horse-drawn vehicles; agricultural implements, caskets, coffins	1st shop—not available 1st factory—burned in 1892 2nd factory became a warehouse in 1966, a restaurant in 1978, and burned in 1979; now a parking lot
Thomas Lyon	Duckworth Street (exact location not available)	1851–1875	x		horse-drawn vehicles; agricultural implements	not available
Oke's	1st factory—Water Street 2nd factory—123 Duckworth Street 3rd factory—214 Duckworth Street	1859–1879		x x x	horse-drawn vehicles; agricultural implements, coffins, caskets	1st factory—not available 2nd factory—Sir Humphrey Gilbert Building now on site 3rd factory—became a warehouse in 1965; now a retail store owned by Atlantic Films Ltd.
Thomas McGrath	1st factory—115–116 Duckworth Street 2nd factory—124 Gower Street 3rd factory—not available	1867–1885 1885–1892 1892–1915	x	 x x	horse-drawn vehicles; agricultural implements	1st factory—site now a parking lot 2nd factory—a house now on site 3rd factory—not available
St. John's Carriage Factory (Furlong Brothers)	123 Duckworth Street,	1877–1879		x	horse-drawn vehicles; agricultural implements	sold to Oke's and Sons in 1879; Sir Humphrey Gilbert Building now on site
Myrick and Windsor	1st factory—87 Military Road 2nd factory—17 Monkstown Road	1877–1900 1900–1935	x x		horse-drawn vehicles; agricultural implements	1st factory—a house now on site 2nd factory—a house now on site
S.G. Collier	8 Waldegrave Street	1885–1935	x		horse-drawn vehicles; repair work, agricultural implements	site now a parking lot
The West End Carriage Factory – owned by Nicholas J. Murphy	32 Bambrick Street	1885–1955	x		horse-drawn vehicles; agricultural implements	building demolished when the St. John's arterial road constructed in 1978
Lawrence Brothers	139 Gower Street	1900–1960		x	horse-drawn vehicles; trunks, suitcases, caskets, coffins, racing boats	building now a warehouse and a retail company—Century Ltd.
John T. Nash	24 Adelaide Street	1905–1932	x		horse-drawn vehicles; agricultural implements	a Newfoundland Telephone Company building and the Sundance Saloon Bar and Restaurant on the site
M.J. O'Keefe	1st factory—14 Waldegrave Street 2nd factory—George Street	1895–1924 1924–1945	x x		horse-drawn vehicles; agricultural implements	1st factory—now a parking lot 2nd factory—not available
Phillip Wall	8 George Street	1895–1965	x		horse-drawn vehicles	1965–1978, the building was a warehouse; in 1979, renovated into a bar and restaurant, The Carriage Works
T. Jackman	not available	c. 1909–1930	x		horse-drawn vehicles; agricultural implements	not available
Albert Mathews	Barnes Road (exact location not available)	c. 1909–1920	x		horse-drawn vehicles; agricultural implements	not available
John Cole	not available	c. 1910–1930	x		horse-drawn vehicles; agricultural implements	not available

either imported or constructed at local blacksmith and wheelwright shops. The carriage factories, which had developed by 1850, were small—only five out of the fifteen documented factories had more than five employees (table 1). Some consisted merely of one large room where all activities in the production process occurred, while others were three stories with separate rooms for the various manufacturing procedures. All used some form of machinery: lathes, bandsaws, circular saws and planers were found in most factories. In the mid-nineteenth century, machines were powered by steam engines; in the early twentieth century, by gasoline engines; and, as the twentieth century progressed, by electricity. Each factory had only one power source attached to a network of belts connected to various machines. These factories were part of the machine age, which, according to Herbert Read, "by 1830 was fully and finally established" in Europe and North America.[6]

The St. John's carriage-making industry developed in three periods: early 1850s to late 1870s; 1880s; post-1892 fire to 1910. Between 1850 and 1879 five carriage factories began operating within the city. Carriage factories were opened by Thomas Lyon on Duckworth Street in 1851, William Oke on Water Street in 1859, Thomas McGrath on Duckworth Street in 1867, the Furlong Brothers on Duckworth Street in 1877 and Myrick and Windsor on Military Road in 1877 (table 1). Likewise, the Carnell family, which had operated a wheelwright shop on Cochrane Street since the first decade of the nineteenth century, had transformed their establishment into a factory by 1872. All the carriage manufacturers were located in the east end of St. John's (fig. 1), where most of the city's residents lived. In addition to supplying the needs of urban residents, these businesses also provided agricultural implements and vehicles for the farmers who had established farms on the outskirts of St. John's.[7]

By the 1880s, two of the six early factories, Furlong Brothers and Thomas Lyon's, closed; however, two factories opened to replace them. One, owned by S.G. Collier, appeared at 8 Waldegrave Street, and another, owned by Nicholas J. Murphy, opened at 32 Bambrick Street. By this time, Oke's and McGrath's had relocated to larger premises; Oke's moved to the building formerly occupied by Furlong Brothers on Duckworth Street, and McGrath's to 124 Gower Street.

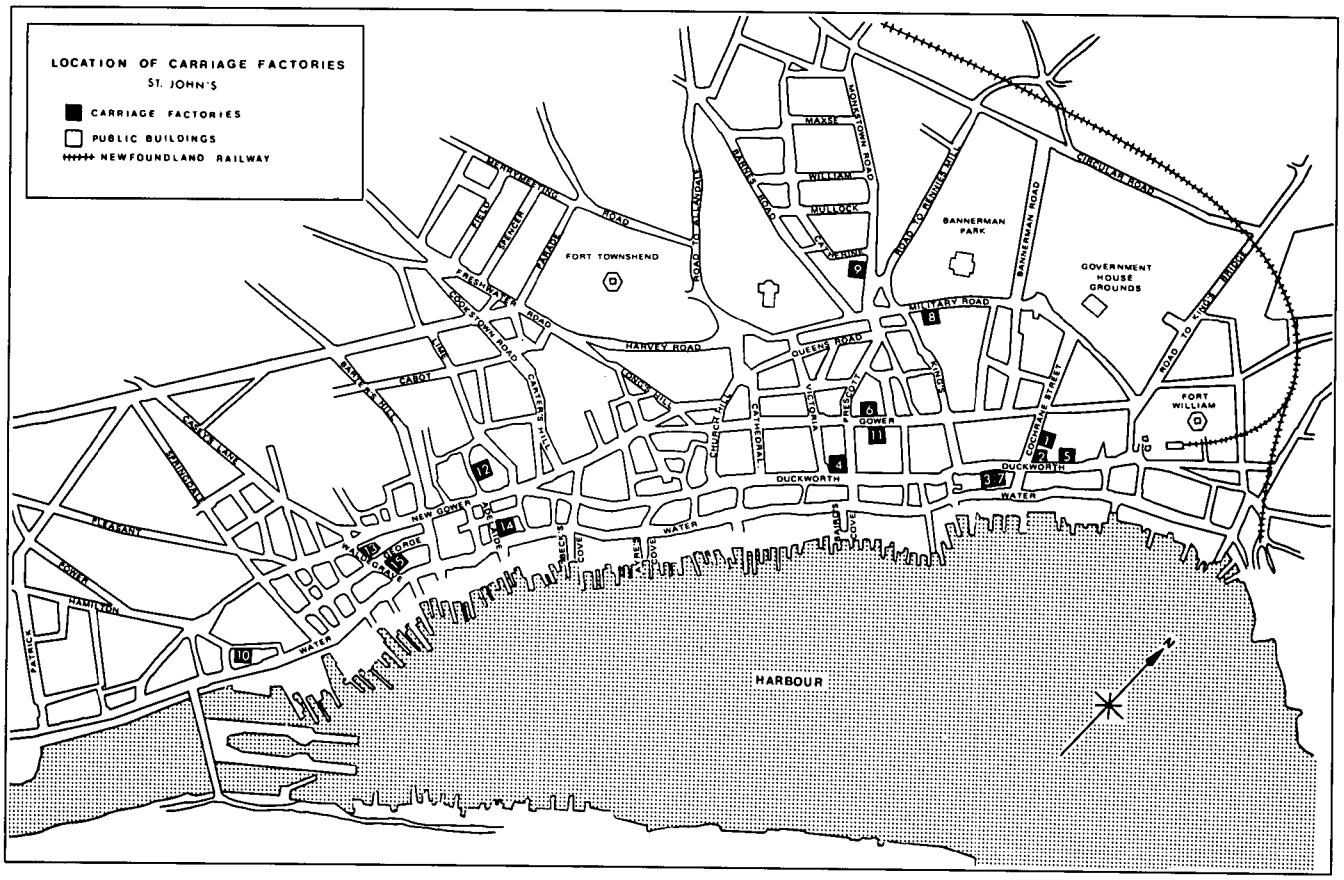


Fig. 1
Location of carriage factories. For exact street addresses and for those factories whose locations are uncertain, see table 1. Carnell's first factory (1), second factory (2); Oke's second factory (3), third factory (4); McGrath's first factory (5), second factory (6); Furlong Brothers (7); Myrick and Windsor's first factory (8), second factory (9); Nicholas Murphy's (10); Lawrence Brothers (11); Nash's (12); O'Keefe's first factory (13); Wall's (14); Collier's (15).

The third period of carriage factory construction began after a devastating fire in 1892.[8] At least three of the factories destroyed in the fire, Carnell's, Oke's and McGrath's, were rebuilt at this time. In addition, the Lawrence Brothers opened a factory on Gower Street in 1892, M.J. O'Keefe at 14 Waldegrave Street and Phillip Wall at 8 George Street. In the first decade of the twentieth century John T. Nash opened a factory at 24 Adelaide Street and three other factories were established by Thomas Jackman, Albert Mathews and John Cole.

A pattern is evident in the development of carriage factories. In the first stage of development, factories were situated in the east end of the city (fig. 1). As the city expanded and commercial premises and family dwellings began spreading towards the west end, factories appeared there.

The increase in the number of carriage factories at the end of the nineteenth century reflects the increased prosperity of some areas of Newfoundland at this time. In 1894 a massive mining development occurred at Bell Island, about 19 km from St. John's. The Nova Scotia Steel and Coal Company, which had acquired property on the island, commenced open-pit mining and shipped their first cargo of iron ore a year later. In 1899, the Nova Scotia Steel and Coal Company constructed another tramway system and a second pier and sold their original transport system to the Dominion Iron and Steel Company. After 1898, the Reid Newfoundland Company was busy establishing a railroad, quarries, sawmills and flour mills.[9]

This increase in economic activity in and around St. John's resulted in a need for more horse-drawn vehicles. The year 1894 brought the start of a sharp decline in the number of men working in the traditional fishery.[10] Much of this labour may have been absorbed by the Bell Island development and the small urban manufacturing industries such as carriage making.

With an increase in the number of carriage factories and their products, fewer vehicles were imported from England and the United States. These factories produced not only catamarans, box carts, slides and long carts for the local farmers, but also slovens, express wagons and cabs for the St. John's industries. Ornate two- and four-wheeled vehicles were also produced for the growing merchant and professional classes of the town. In addition, agricultural implements such as hand plows, wheelbarrows and handles for tools were supplementary items of trade constructed in most factories. The larger companies, Carnell's and Oke's, became involved in the funeral business in the latter years of the nineteenth century. This included not only embalming and organizing wakes and funerals, but also making coffins and the vehicles used in funeral processions. One particular factory owned by the Lawrence Brothers specialized in making trunks, suitcases and racing boats for the annual St. John's Regatta. Another factory began building wooden tricycles, which could be marketed at a quarter of the cost of steel models.[11]

Such diverse products undoubtedly kept the factories open when vehicle orders were not plentiful. This ability to construct a variety of products is a characteristic often attributed to rural craftsmen. Like George Sturt's wheelwright shop in Surrey, England, which built vehicles, plows, harrows and hames, the St. John's carriage factories supplied the sundry demands of local residents.[12]

Accurate quantitative information about the workers in these factories is difficult to obtain. Those owned by Carnell, Oke, McGrath and Lawrence Brothers employed more than five men each, whereas some of the smaller factories only employed one wheelwright, one blacksmith and one painter. The largest factories also employed upholsterers. It appears that by 1924 the number of craftsmen in the St. John's carriage factories began to decline, as shown below:[13]

	1909	*1924*
Wheelwrights	21	14
Blacksmiths	97	52
Upholsterers	10	9
Painters	63	50
TOTAL WORKERS	**191**	**75**

In some cases, St. John's directories list the carriage factories where particular craftsmen worked. These lists, however, are not entirely accurate (table 2). Some individuals who worked at factories could be listed as craftsmen, yet were not recorded as being affiliated with their particular place of work. For example, a newspaper account reveals that in September 1908 Carnell's Carriage Factory employed twenty workers, yet the directories indicate that Carnell's had only nine employees at this time (table 2).[14]

The Newfoundland census material, like the directories, is also inaccurate with respect to the carriage-making industry.[15] Even though at least eleven carriage factories operated in 1921, the Newfoundland census accounts for only three.[16] Despite possible inaccuracies,

Table 2: Incomplete List of Workers at Carriage Factories*

Oke's Carriage Factory 1909
Robert G. Belbin, wheelwright
Edward D. Burke, blacksmith
Edward L. Oke, painter
Gordon Oke, wheelwright
Frank Kenny, wheelwright
Michael J. Skeans, carriage builder

Oke's Carriage Factory 1924
Edward D. Burke, blacksmith
Edward L. Oke, painter
Gordon Oke, wheelwright
Frank Kenny, wheelwright
J.C. Oke, carriage builder

Carnell's Carriage Factory 1909
Ralph Day, painter
John McGrath, painter
Andrew Carnell, wheelwright and owner
Alexander Morris, wheelwright
Denis White, wheelwright
John Winslow, blacksmith
William Downton, blacksmith
Walter Duffett, upholsterer
R. Hamlyn, blacksmith

Carnell's Carriage Factory 1924
Andrew Carnell, wheelwright and owner
Alex Johnson, worker
Fred Lush, painter
John Maher, blacksmith
Samuel Merils, blacksmith•
Alex Morris, wheelwright
Ralph Day, painter
John McGrath, painter
R. Hamlyn, blacksmith
Samuel Harris, wheelwright
William Downton, blacksmith
Walter Duffett, upholsterer
Radial Dwyer, wheelwright
Radial Dwyer, Jr., wheelwright

Lawrence Brothers Carriage Factory 1909
Kenneth Bursey, blacksmith
Joseph Patrick Caul, wheelwright
Lemuel Hynes, worker
Edwin L. Lawrence, upholsterer
William H. Lawrence, wheelwright
Abram Stone, worker

Lawrence Brothers Carriage Factory 1924
Patrick Caul, upholsterer
Joseph Patrick Caul, wheelwright
Peter Furlong, wheelwright
W.H. Lawrence, wheelwright
E. Power, wheelwright
Robert Sexton, carriage builder

Samuel Collier's Carriage Factory 1909
Samuel Collier, wheelwright
Michael Halley, blacksmith

McGrath's Carriage Factory 1909
John P. Duffey, painter
John T. Murphy, worker
Thomas Murphy, Sr., worker
Thomas Murphy, Jr., worker
Edward Ryan, worker
William Walsh, worker

J.T. Nash's Carriage Factory 1909
J.T. Nash, wheelwright
James Grant, blacksmith
Edward Bailey, blacksmith

Source: McAlpine's St. John's Directory (Halifax: Mcalpine Publishing Company Ltd., 1909); St. John's City Directory, 1924 (St. John's: The St. John's Directory Company, 1924).

these statistics provide an indication of the scale of these factories. The capital invested in the physical plant and equipment of those recorded in 1921 amounted to $40,000. Employees numbered five "officers and clerks" earning in total $9,000, and thirty workers earning $44,800. According to the Newfoundland census returns between 1869 and 1921, production in the factories increased steadily throughout the late nineteenth century (table 3). The data indicate a slight decrease in productivity in 1901; however, it appears that it was not until 1921 that the number of carriages manufactured in St. John's declined substantially.

Table 3: Value of Carriages Produced in St. John's, 1869–1921*

	St. John's East	*St. John's West*	*Total*
1869	£1,700	£900	***£2,600***
1874	£1,328	£2,128	***£3,456***
1884	£2,550	£2,000	***£4,550***
1891	$17,200	$ 2,500	***$19,700***
1901	$13,000	$ 3,000	***$16,000***
1911	n.a.	n.a.	***$95,000***
1921	n.a.	n.a.	***$90,000***

Source: Newfoundland Deparment of the Colonial Secretary. Census of Newfoundland and Labrador, 1869, 1874, 1884, 1891, 1901, 1921.

Meanwhile, automobiles began to replace horse-drawn vehicles. The first automobile to arrive in St. John's, according to local historians, was a Rolls Royce imported from London by Robert Reid, Jr., in 1903.[17] Only wealthy merchants and professionals could afford these luxury items; it was not until after the Second World War that a great influx of automobiles occurred.

The carriage-making industry did not decline to negligible levels until the 1940s. The few factories still existing until the early sixties were the ones that had successfully made the transition from carriage making to coffins or box and trunk making. Carnell's and Oke's in their later years devoted most of their attention to the undertaking business; they possessed the tools, machinery and expertise for constructing coffins. As the twentieth century advanced, St. John's residents began holding wakes in funeral parlours rather than in their own homes. One craftsman describes the variety of work he performed in a carriage factory during this period:

> Ah, besides the carriage business we also had the funeral business, such as it was in those days. And if you got a call in the night-time or Sundays, you never got paid for it.... In those days we'd do the pall bearing and, if we had a funeral say on Tuesday afternoon, well, your boss would come along and say we need a couple of men for the afternoon, for the funeral. So you'd go home at twelve o'clock and change from your working clothes and get washed and get dressed up and come back and do the funeral, and usually the funeral was over at 3.30, so you'd be off the rest of the afternoon.[18]

In addition to being a trained wheelwright, this worker had to become familiar with the duties of an undertaker. This worker is still the manager of an undertaking business operated by the Carnell family.

While some former factory workers are still alive, the majority of buildings that housed carriage factories are not extant; the remaining structures are used for different purposes than were originally intended. When the industry died completely in the 1960s, some of the buildings were converted for use as warehouses. Carnell's, Oke's and Lawrence's, because of their size, were used for this purpose. Much of the machinery was sold, dismantled or destroyed at this time. Other factory sites were transformed into parking lots or residential housing. Following the trend to preserve and utilize historic buildings for commercial purposes, former carriage factories have been transformed into a variety of businesses. Carnell's Carriage Factory was converted into a restaurant and bar in 1978, but was completely burned in 1979. Phillip Wall's Carriage Factory on George Street was transformed into a bar and restaurant called The Carriage Works in 1979. Photographs of ornate carriages along with vehicle parts such as springs and axles now adorn the walls of this once productive factory, perpetuating a nostalgic view of the past.

The full acceptance of the automobile caused the eventual demise of the carriage-making industry. As automobiles produced in Central Canada and the United States reigned supreme, carriage factories, craftsmen and products became obsolete. The firms that successfully diversified into other businesses, such as undertaking or the fabrication of truck bodies, eventually closed their operations because of the difficulty in competing with outside enterprise.

While this historical survey illustrates the size, diversity and extent of the local carriage-making industry, it is only a glimpse at the way these factories operated. To fully understand the production context of carriage making, a close analysis of one factory is necessary. Carnell's Carriage Factory provides an understanding of the construction process and craftsmen's work within this industry.

Although the majority of craft studies stereotype craftsmen as rural, isolated country folk who construct "handmade" objects with few tools and without the use of machinery, the carriage business seems to be at variance with this definition.[19] Characteristics of craftsmen include the passing down of craft techniques within one family for many generations; the learning of a craft through a formal apprenticeship system; close craftsman-client interaction; the craft transaction as a social event as well as a business matter; and use of a bartering system rather than cash payment.[20] An examination of Carnell's Carriage Factory shows that some of the characteristics often attributed to rural craftsmen were prevalent. Industries such as carriage making have not been studied by craft scholars because of the limiting nature of the definition of craft. Before focusing on Carnell's Carriage Factory we must first examine the terms often used to define craft.

The terms *handmade*, *tool* and *machine* are used in most definitions of craft, yet are seldom clearly defined by scholars.[21] Objects are sometimes said to be "handmade" even though the maker used a variety of tools and machinery in the construction process.[22] If the strict, literal definition of handmade is used, few of our so-called "craft objects" could be included under the rubric of handmade. Most crafts involve the use of some form or machine in the process of constructing objects from natural materials.

Handmade is used frequently to refer to any kind of workmanship before the industrial revolution. People assume this transformation occurred in the nineteenth century and that before this period most objects were constructed without the use of machines. This assumption is inaccurate; it has been shown that various kinds of machines ranging from windmills to water-powered saws were common as early as the Middle Ages.[23] The term *handmade* is too vague to be used as a major concept in the definition of craft; too many connotations are attached to this word.

Tools are usually viewed by craft scholars as simple hand-instruments manipulated by craftsmen. Sketches and photographs of the tools employed by craftsmen usually accompany a book or article on crafts. Furthermore, the term *hand* often precedes *tool* in most studies. Craftsmen are often stereotyped as isolated country folk who use only hand tools in the construction of their products.[24] In contrast, scholars are unsure of how to categorize machinery in the definition of craft. For example, one scholar states:

> No machine can reproduce the outstanding flexibility, manipulation, sensitivity and response of the human arm, wrist or hand.[25]

This implies that machinery is a negative and regressive force. Others assume that machine-made products are totally distinct from and inferior to handmade crafts:

> The design of machine goods naturally belongs, of course, to an order entirely distinct from that of hand-made objects. It is in the first place the work of an external designer, impersonal, with a hard but

> delicate precision, but lacking the organic freedom and irregularity of objects individually wrought to the design of the craftsman-maker.[26]

Others sidestep the issue by saying it is too difficult to delineate the traditional aspects of "professional crafts," like cabinet making, metal working and glass blowing, and that "more relevant to contemporary folklore studies are the continuing crafts of making toys and musical instruments."[27] J. Geraint Jenkins acknowledges that machinery is essential for many crafts, yet he, too, is unsure of how to categorize machinery. One of the characteristics of craftmanship, according to Jenkins, is that "a true craftsman does not depend on complex machinery and equipment to complete his work."[28] Unfortunately, he does not fully define "complex machinery" nor does he define the opposite—simple machinery.

In truth, many craftsmen, even those in rural, isolated settings, utilize machinery in the making of products. The chairmaker from Kentucky in Michael Owen Jones' *The Handmade Object and Its Maker* used an electric drill press and a lathe for constructing his chairs.[29] To argue that making objects is no longer "folk" if machines are involved is analogous, as Jones says, "to arguing that electrification and amplification destroy folksong and music."[30] It is the conventional modes of expression, the way in which knowledge is transmitted and the traditional skills, not the machines or the hand tools, that create artifacts.

Even though machines were integral to the construction process at Carnell's Carriage Factory, many characteristics of factory workers similar to those possessed by so-called pre-industrial rural craftsmen existed in this setting.

Carnell's Carriage Factory: A Case Study

Carnell's Carriage Factory developed from one of St. John's earliest wheelwright shops. Gilbert Carnell, a millwright by trade, came to Newfoundland in 1804 to build waterwheels for water-powered mills. He saw a great demand for repairing and constructing vehicles and soon began operating a wheelwright's shop in the downtown of St. John's. Two of his sons became wheelwrights and worked in his shop. Gilbert died in 1841 leaving an estate worth £500, a substantial sum at this time.[31]

Samuel, Gilbert's oldest son, began operating the shop after Gilbert's death. By 1872 business had expanded to such a degree that the shop was referred to as Carnell's Carriage Factory. In this year, the factory was situated on Cochrane Street adjacent to the Carnell family residence. It is difficult to locate the first shop because of the great number of devastating fires occurring in St. John's throughout the first half of the nineteenth century. In 1880, Samuel retired from the business leaving the operation of the factory to his son, John T. Carnell.[32] This building was burned in the fire of 1892 and a new factory was reconstructed at 120 Duckworth Street on the corner of Cochrane and Duckworth Streets (fig. 2). Although John oversaw the construction, he died before the building was completed,

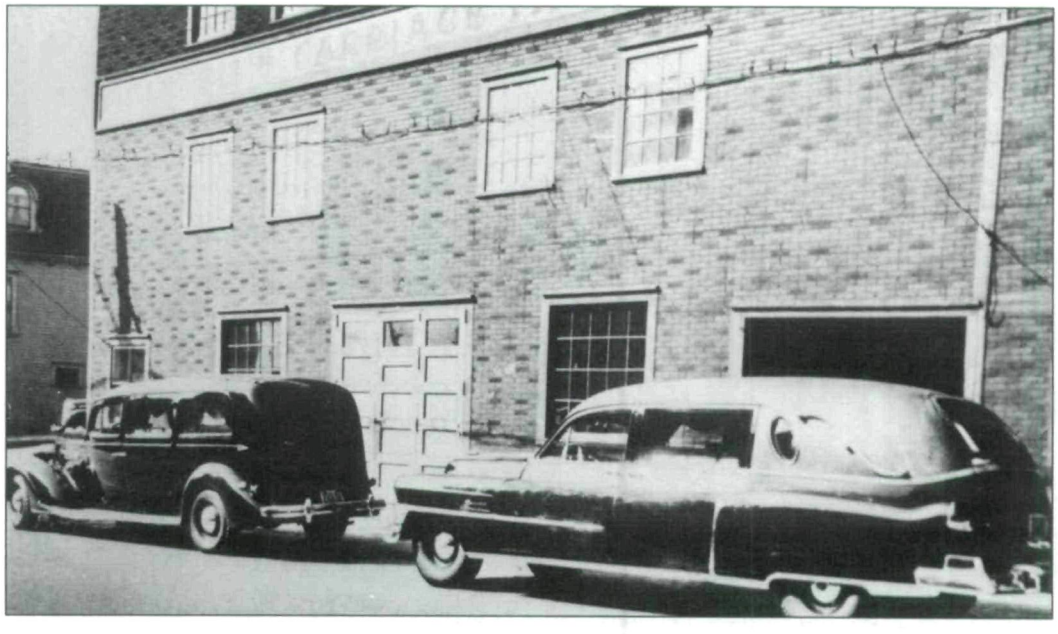


Fig. 2
Carnell's Carriage Factory in the 1950s. (Photograph courtesy of Robert Butt)
▶

leaving the business to son, Andrew. In 1935 Geoffrey, Andrew's son, inherited the factory and managed it until 1966, when it closed down. The building became a warehouse in 1966, a restaurant in 1978 and burned to the ground in 1979.

Little information has been found concerning the first factory operated by Carnell's; however, the second factory is closely examined here. Built after the 1892 fire, this building was three stories high with a flat roof (fig. 2). An alcove on the east side of the facade led to the forge, situated in a small building behind the factory. One former worker provides an excellent verbal description of the interior of the factory:

> The one [factory] we had was three stories and the bottom story was the, ah, carriage-making plant, if you like, with all the machinery and everything. The second story was, ah, a storage room where you stored, um, spokes and rims and extra boxes and shafts for wagons, and all of that kind of stuff. And um, keep your lumber there and keep hub junks, as I mentioned before for making the hub junks out of, and then on the top of, that was usually the um, well, in our factory, the one we had was the paint shop and upholstering shop where you did all that work.[33]

The materials and products were lifted from level to level by a hand-operated elevator of about 3 m by 5.5 m. Along three walls were long work benches, approximately 4.5 m long and 1.2 m wide. A hatch in the floor to the half basement served as a chute where wood shavings were disposed. These shavings were used as fuel for the stove located in the centre of the room. This stove was a metal drum with the front cut out and a stovepipe going from the top through to the roof. Craftsmen's tools were stored on the walls facing the benches. The machinery in the room consisted of three planers, a band saw, a circular saw and a small lathe. All machinery was powered by a small gasoline engine connected to a web of belts running along the roof of the factory. This was an extremely dangerous system; many of the craftsmen working here received severe injuries to hands and fingers because of these moving belts.[34]

In the post-1892 Carnell's Carriage Factory, and most likely in the earlier factory, an apprenticeship system existed. Some of the individuals who began working for Carnell's at this period lived in the Carnell house, located near the factory on Cochrane Street for five years, and received room, board and a subsistence fee in return for their work. These apprentices were assigned to specific craftsmen—a wheelwright, blacksmith, painter or upholsterer—for a five-year training period. After this, the young apprentices moved out of the house and were officially designated members of their trade. The age of an apprentice ranged between 12 and 15 years.

The apprenticeship system was modified over time. By the 1940s, the length of study time required by craftsmen had decreased to a year. Robert Butt began working at Carnell's in 1942. He was assigned to "Uncle" Sam Harris, a wheelwright who had been with the firm since 1918. Mr. Butt describes how he obtained the position with Carnell's:

> The situation was, this was in the early forties, 1942, just coming out of the depression when the war started and I was the oldest of five children, and I felt that I wanted to go out to work to help out with the family. I didn't really have to, my father always worked with a good job, but I felt that I did, and I wasn't that fussy about going to school. So I just seen an ad in the paper one night and I applied for it.[35]

Mr. Butt obtained this job in a non-traditional manner, yet he learned the trade in a traditional way—by observation. The many nuances of the trade could only be learned by watching Sam Harris closely and attempting to follow the example set by the older craftsman. Mr. Butt says:

> You just learned by experience and many times you learned the hard way, let me tell you.... They [the older craftsmen] told you once by the way, that's all. They were very jealous over their trade.... so you had to learn by observing and watching. They [the craftsmen] were hard men to work for, very hard. As a boy I had to do a man's work. And they used to take great delight in making you work hard.[36]

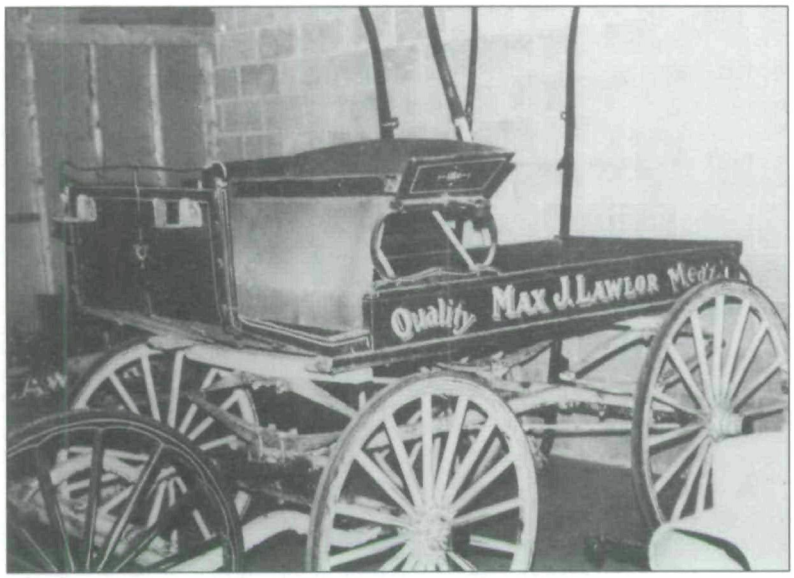
Questioning the craftsmen about how to perform certain tasks was not the sanctioned way of learning. Few words were used to describe the processes performed.

At Carnell's, some craftsmen-client interaction occurred. A buyer was able to discuss the kind of vehicle he wanted with the craftsmen within the factory. In some cases buyers were even allowed to enter the factory and oversee the construction process. One worker describes a particular case:

> There used to be a firm in St. John's, ah, Lawlor's Meat market, I don't know if they're still in business.... And they had at that time [1930s and 1940s] two or three butcher shops around town and they were always noted for having the nicest horses in St. John's, the best waggons, and when you'd make a waggon for these people they'd be in every day watching the progress, and if they seen a flaw in the wood they'd say, 'no b'y, you'd better put another piece over there'. They'd be in picking over the wood and make sure you use the wood with no knots into it

and stuff like that. And they followed right through to the paint shop with the painter. . . . Although they were very fussy they weren't hard to please, but they just wanted things right.[37]

This craftsmen-client interaction enabled the workers to become familiar with the local needs and preferences of St. John's residents and to provide a quality product for the consumer (fig. 3).



▲
Fig. 3
Express Wagon, Lawlor's Meats. (Collection: Newfoundland Museum; photograph courtesty of NM)

In the early years of the nineteenth century, according to oral tradition, some business was conducted on a barter system.[38] For example, if a grocer needed a wagon repaired or constructed, he could make an agreement with the owner of the factory to supply groceries for a certain length of time, rather than pay in cash. While Carnell's ledgers were not always detailed, they do provide excellent illustrations of the role the barter system played in the early nineteenth-century economy. The following is a good example of a record-keeping system that was still in place in the 1940s when a work-order arrangement was introduced:

> Well, when I first started, um, a person came in and wanted a wheel repaired, right, so they say, you repair this wheel, ah fine, so I take this wheel and we had a piece of wood about this size [he holds his hands in front of him and shows the size of wood—approximately 1 foot by six inches], a piece of pine wood. And if I repaired a wheel I marked down after I had the wheel repaired, J. Smith, if you like, and I put down, 'repairing wheel, 2 spokes, 2 rims, ah, three 5/16ths inch carriage bolts' and so on and so forth and then when I was finished with it and the time I was at it, two hours or one hour. I'd just run a line through it and I'd start next with the other line. When my, my board got filled out . . . he'd [the owner] mark it up in the ledger. And then I'd get my plane and I'd plane it off and start all over again.[39]

Like boat building and other traditional crafts, patterns and molds were used within the factory. These were made of iron and wood and stored in the rafters on the first floor of Carnell's factory. Molds were available for every vehicle type and for the various wheel sizes. They did not, however, destroy the creative abilities of the craftsmen. If a mold was not available for a particular type of vehicle, the craftsmen were able to design what was needed. For example, Robert Butt describes how he designed a horse-drawn ambulance:

> They gave me a rough idea, they wanted something that'd weather, you know, to put the person in out of the weather. And I made them something on the style of the station wagon, I guess. Ah, basically the body, the running gear and the frame, we'll say, that I built the ambulance on was much the same as any standard wagon only a bit larger. Um, ah, they said 'well make something', so I said 'O.K.' So I just went ahead and tried to figure out something in my brain, er, wrote it down on a sketch on a piece of paper and sort of got something that I thought I liked. And when I had it made, it turned out really good.[40]

This passage shows craftsmen did have much control over the design process in the factory and that they could combine their creativity with the opportunities improved technology provided. Thus, this business was a craft.

Even though the factory was divided into various rooms, a great amount of interaction occurred during the construction process. The workers frequently talked with each other and discussed problems encountered while vehicles were being produced. The organization can best be described as a team. This interaction enabled each worker to become intimately familiar with the many work processes within the factory. For example, a wheelwright was familiar with a painter's or blacksmith's duties. While the wheelwright did not possess the level of skill of these other craftsmen, if necessary, he could still construct an entire vehicle himself.

This case study of Carnell's Carriage Factory shows that even though the factory was located in an urban setting and that machinery was extensively used, workers still possessed many characteristics often attributed to rural craftsmen: the factory itself was passed on in a patrilineal manner from father to son for generations; the factory workers had to go through a formal apprenticeship system; factory workers learned their respective trades in a traditonal way—by observing more

experienced workers; close craftsmen-client interaction occurred within this factory; some business was conducted on a barter system and only the most basic record-keeping procedures were common; the individual workers used templates and molds, yet were able to have some input into the design process; and although a certain amount of occupational specialization occurred in the factory, each worker was expected to know how to perform the tasks of the other workers.

Some of the major characteristics of Carnell's Carriage Factory are identical to many of those often attributed to so-called rural, handmade crafts. This shows the limitations of the term *handmade* in determining what is or is not a craft. A more insightful concept to use is the notion of workmanship put forth by the design historian David Pye. In *The Nature and Art of Workmanship*, Pye delineates two kinds of workmanship—workmanship of risk and workmanship of certainty.[41] Workmanship of risk includes any kind of construction process where the quality of the work depends on the care, judgement and dexterity of the maker. In this kind of construction process, the product can be ruined at any time. In contrast, workmanship of certainty is any construction process where the quality of the work is completely predetermined.[42] The more a construction process is similar to a fully automated, assembly-line factory, the less input the maker has into the objects being made. Carnell's Carriage Factory is an example of workmanship of risk. The hand tools, machines and patterns used by factory workers are shape-determining devices that predetermine, to a degree, what is being constructed in the factory. However, the many characteristics possessed by the factory workers and the way this business operated show that the workers made a great contribution to the final product. If crafts and industries are viewed in terms of workmanship rather than whether or not they are handmade, better understanding of people in relation to the objects they fashion will result.

The carriage-making industry is only one of many similar, small-scale businesses that prevailed in Atlantic Canada in the mid-nineteenth and mid-twentieth centuries. Cabinet making, furniture making, chair-making, coopering, blacksmithing and boot and shoe making are only a few of the occupations that may have been organized on the same pattern as the St. John's carriage-making industry. Only when scholars rethink the notions of "craft" and "factory" will serious attention be paid to these small but extremely important folk industries in many regions of Canada.

Notes

I would like to thank Gerald Pocius, Memorial University of Newfoundland, Terry MacLean, James St. Clair, and Norman MacDonald, University College of Cape Breton, for their helpful advice and suggestions.

1. For studies focusing on the mercantile industrial transition in the region, see L.D. McCann, "The Mercantile—Industrial Transition in the Metals Towns of Pictou County, 1857–1931," *Acadiensis* 10 (1981): 29–64; D. Frank, "The Cape Breton Coal Industry and the Rise and Fall of the British Empire Steel Corporation," *Acadiensis* 6 (1977): 3–34; D. MacGillivray, "Henry Melville Whitney Comes to Cape Breton: The Saga of a Gilded Age Entrepreneur," *Acadiensis* 9 (1979): 44–70. For a material culture study in Ontario of the transition from craft to factory, see W. John McIntyre, "From Workshop to Factory: The Furnituremaker," *Material History Bulletin* 19 (1984): 25–35. For a study of Newfoundland furniture factories, see Walter Peddle, *The Forgotten Craftsmen* (St. John's: Harry Cuff Publications, 1984). For a study of transition in the Scottish Highland Harris tweed industry, see Francis Thompson, *Harris Tweed: The Story of a Hebridean Industry* (Newton Abbot, U.K.: David and Charles, 1969), pp. 137–54.
2. Victor S. Clark, *History of Manufactures in the United States*, vol. 1 (New York: McGraw-Hill Book Company, 1929), p. 476. Recent research using the detailed 1871 Canadian census is revealing much about late nineteenth-century manufacturing industries of this type in Canada. See Elizabeth Bloomfield and Gerald Bloomfield, "Mills, Factories and Craftshops of Ontario, 1870: A Machine-Readable Source for Material Historians," *Material History Bulletin* 25 (1987): 35–47.
3. Carl Bridenbaugh, *The Colonial Craftsman* (1950: reprint, Chicago: The University of Chicago Press, 1961), p. 126.
4. For a description of a large Nova Scotia carriage factory, see David E. Stephens, *Forgotten Trades of Nova Scotia* (Halifax: Petheric Press, 1973), p. 53. According to Stephens the Nova Scotia Carriage Company of Kentville, Nova Scotia, was the fourth largest carriage factory in Canada. By 1890 it supposedly employed more than 50 men and produced over 1,000 carriages per year. For an excellent photograph of a small carriage factory in Liverpool, Nova Scotia, see J. Lynton Martin, "Wagon Wheels in Nova Scotia," *The Occasional: An Occasional Journal for Nova Scotia Museums* 4, no. 1 (1976): 18.

5. Atlantic-Canadian directories are often extremely useful for locating carriage factories and craftsmen. See, for example, The MacAlpine Directory Company, *McAlpine's Gazetteer and Guide, Maritime Provinces and Newfoundland 1898* (Saint John, N.B.: The McAlpine Directory Company, 1898), pp. 19, 21, 25, 27, 29, 47, 49, 55, 64, 65, 1046.
6. Herbert Read, *Art and Industry: The Principles of Industrial Design* (New York: Horizon Press, 1954), p. 4. For an overview of the history of machinery, see Sigvard Strandh, *A History of the Machine* (London: Arrow Books, 1984). A study has been done on early trades and manufacturing in St. John's; however, the carriage-making industry was not included in this work. See John L. Joy, "The Growth and Development of Trades and Manufacturing in St. John's, 1870–1914" (M.A. thesis, Memorial University of Newfoundland, 1977). W. John McIntyre found that as early as the 1830s some furniture factories in Ontario were using various kinds of machinery in the production process. See W. John McIntyre, "From Workshop to Factory: The Furniture-maker," *Material History Bulletin* 19 (1984): 31.
7. A historical reconstruction of this farm community has recently been completed. See Robert MacKinnon, "The Growth of Commercial Agriculture in St. John's: A Study of Local Trade in Response to Urban Demand" (M.A. thesis, Memorial University of Newfoundland, 1981).
8. For a discussion of the fire, see: D.W. Prowse, *A History of Newfoundland* (London, 1895; reprint, St. John's, Nfld.: Dicks and Company, 1971), p. 518.
9. For a discussion of the Bell Island development, see Donald R. Woodford, "Bell Island, A Community Study," Ms., Maritime History Group Archive, Memorial University of Newfoundland, St. John's; David William Mercer, "Bell Island: An Economic Analysis" (B.A. thesis, Memorial University of Newfoundland, 1963).
10. See David Alexander, "Newfoundland's Traditional Economy and Development to 1934," in *Newfoundland in the Nineteenth and Twentieth Centuries*, ed. James Hiller and Peter Neary (Toronto: University of Toronto Press, 1980), p. 23.
11. A newspaper account states, "At the present time the improved style of tricicle [sic]—for which a patent was taken out a few days ago by Mr. Monsieur Des Isles, Consul for France in Newfoundland—is being constructed at Oke's factory. The principle [sic] feature in the machine by which it differs from the ordinary tricicle [sic], is that, the seat is very much lower and the means of propulsion is slightly different. The circumference of the wheel is much larger than in the steel model. There are two seats so arranged that the occupants will sit back to back. If the machine works in the manner anticipated by the Consul, it will very likely become popular; for it being made mostly of wood, it will be much cheaper, in fact, it will not cost more than quarter the price of the other." See "Our Local Industries," *Daily Colonist*, 9 July 1887.
12. George Sturt, *The Wheelwright's Shop* (1923; reprint, Cambridge: Cambridge University Press, 1974), pp. 17–20. This diversity of products seems to have been very common. See Luigi G. Pennacchio and Larry B. Pogue, "Inventory of Ontario Cabinetmakers, 1840–ca. 1900: Work in Progress," *Material History Bulletin* 18 (1983): 41.
13. *McAlpine's St. John's Directory* (Halifax: McAlpine Publishing Company Ltd., 1909); *St. John's City Directory, 1924* (St. John's: The St. John's Directory Company, 1924).
14. A short description of Carnell's Carriage Factory appears in a newspaper account in 1908; see "Our Local Industries," *Evening Telegram*, 15 September 1908, p. 5.
15. Warren Roberts points out that census records are usually not reliable indicators of the number of craftsmen in a region. See Warren Roberts, "Turpin Chairs and the Turpin Family: Chairmaking in Southern Indiana," *Midwestern Journal of Language and Folklore* 7 (1981): 99. A recent study of furniture making in Newfoundland makes this same point. See Walter Peddle, *The Forgottten Craftsmen* (St. John's, Nfld: Harry Cuff Publications, 1984), pp. 10–11.
16. The 1921 Newfoundland census indicates that there were three carriage-making factories in St. John's that year. These employed 30 workers, with buildings valued at $70,000, invested capital of $40,000 and value of goods manufactured listed at $90,000. Newfoundland Department of the Colonial Secretary, Census of Newfoundland/Labrador, 1921.
17. Paul O'Neil, *A Seaport Legacy: The Story of St. John's, Newfoundland*, vol. II (Erie, Ont.: Porcepic Press, 1976), pp. 512–13.
18. Memorial University of Newfoundland Folklore and Language Archives (MUNFLA), 79–321.
19. For examples of typical studies, see Albert H. Eaton, *Handicrafts of the Southern Highlands* (1937; reprint, New York: Dover Publications, 1973); Allan Jobson, *Household and Country Crafts* (London: Elek Books, 1953); Dorothy Hartley, *Made in England*, 3rd ed. (1939; reprint, London: Methuen and Company, 1951); Freda Derrick, *Country Craftsman* (London: Chapman and Hall, 1945); E.J. Stowe, *Crafts of the Countryside* (1948; reprint, Yorkshire, England: E.P. Publishing Limited, 1973); John L. Jones, *Crafts from the Countryside* (Newton Abbot, U.K.: David and Charles, 1975); John E. Manners, *Country Crafts in Pictures* (Newton Abbot, U.K.: David and Charles, 1976); Simon J. Bronner, *Chain Carvers: Old Men Crafting Meaning* (Lexington, Ky.: University Press of Kentucky, 1985).
20. This list of characteristics is from Warren Roberts, "Folk Crafts," in *Folklore and Folklife: An Introduction*, ed. Richard M. Dorson (Chicago: University of Chicago Press, 1972), pp. 233–40.
21. See Allen H. Eaton, *Handicrafts of New England* (1949; reprint, New York: Bonanza Books, n.d.), pp. 337–38. According to Eaton, "there are roughly two general divisions of handicrafts—one, those made entirely by hand, including the preparation of all materials and sometimes even the shaping of the tools required; and two, those which in their early stages may be formed by machines but which are finished by the hand and given the unmistakable characteristic of handwork."

22. Examples of artifacts made with the use of machinery, yet classified as handmade objects are found in James Arnold, *All Made by Hand* (London: John Baker Publishers, 1970); Sigmund A. Lavine, *Handmade in England: The Tradition of British Craftsmen* (New York: Dodd, Mead and Company, 1968).
23. See Jean Gimpel, *The Medieval Machine: The Industrial Revolution of the Middle Ages* (New York: Holt, Rinehart and Winston, 1976).
24. See the definitions of craft by the following: James Arnold, *The Shell Book of Country Crafts* (London: John Baker, 1968), pp. 47–48; Warren Roberts, "Folk Crafts," in *Folklore and Folklife: An Introduction*, ed. Richard M. Dorson (Chicago: University of Chicago Press, 1972), pp. 233–40; J. Geraint Jenkins, *Traditional Country Craftsmen* (London: Routledge and Kegan Paul, 1965), pp. 1–6; Norman Wymer, *English Country Crafts* (London: B.T. Batsford Ltd., 1946), pp. 5–7. Only a few studies recognize that craftsmen often use complicated machinery and exist in urban settings. See, for example, J. Geraint Jenkins, ed., *The Wool Textile Industry in Great Britain* (London: Routledge and Kegan Paul, 1972); J. Geraint Jenkins, *The Craft Industries*, Industrial Archaeology Series, no. 10, ed. L.T. Rolt (London: Longman Group Limited, 1972); Kenneth Hudson, *The Archaeology of Industry* (New York: Charles Scribner and Sons, 1976).
25. Arnold, *The Shell Book of Country Crafts*, p. 53. In a recent study of Halifax carpenters, Ian MacKay quotes both a mill owner and union leader who contend that the introduction of machinery in the late nineteenth century was a destructive force: "New machinery tended to break down the carpenter's traditionally rounded skills"; Ian MacKay, *The Craft Transformed: An Essay on the Carpenters of Halifax, 1889–1985* (Halifax: Holdfast Press, 1985), p. 12.
26. W.B. Honey, Introduction, *British Craftmanship*, ed. W.J. Turner (London: Collins, 1948), p. 6.
27. Jan Harold Brunvand, *The Study of American Folklore* (New York: W.W. Norton, 1968), p. 279.
28. J. Geraint Jenkins, *Traditional Country Craftsmen* (1965; reprint, London: Routledge and Kegan Paul, 1978), p. 5.
29. Michael Owen Jones, *The Handmade Object and Its Maker* (Berkeley: University of California Press, 1975), p. 95.
30. Michael Owen Jones, "'There's Gotta Be New Designs Once in a While': Culture Change and the Folk Arts," *Southern Folklore Quarterly* 36 (1972), p. 59.
31. St. John's Registry of Wills, 9 November 1850.
32. Samuel's retirement notice appeared in a local St. John's newspaper: "Notice is hereby given that the undersigned, Samuel G. Carnell, has retired from the business heretofore carried on by him which will be continued in future (dating from the 1st January, 1880) by and solely on account of John T. Carnell, who will pay all liabilities of, and is authorized to collect all debts due by the said Samuel G. Carnell, in connection with the said trade and business. January 19th, 1880, Samuel G. Carnell, John T. Carnell. Witness J.H. Bourne, Solicitor. I take this opportunity of tendering to all who have so generously favored me with their extensive patronage for such a long period of years, my sincerest thanks; and would at the same time respectfully solicit a continuation of that patronage to my successor, Samuel George Carnell." *Royal Gazette*, 20 January 1880.
33. MUNFLA, 79-321.
34. It seems that the three-story plan was common for St. John's carriage factories. A newspaper account reveals that the second factory operated by Oke's on Duckworth Street was similar to the plan of Carnell's Carriage Factory: "The carriage factory of Messrs. W.R. Oke and Sons is situated on Duckworth Street, just east of the Atlantic Hotel. The building contains three storys and a basement, the latter of which is below the level of Duckworth Street. The premises proper is 40 feet wide. The shed is used for storing carriages, wheels and other articles incidental to the trade, left for repair . . . The basement is used wholly as a forge, where all the iron work of the firm is done . . . The second flat, the entrance to which is from Duckworth Street, is called the wood shop, and here all the woodwork of the trade is done . . . The next flat, higher up, is used as the stock room, where the goods used in the trade are kept before being used or worked into orders. The top story is used as a paint shop, and it is here that all orders before leaving are varnished and painted . . ." "Our Local Industries," *Daily Colonist*, 9 July 1887.
35. MUNFLA, 79-321.
36. Ibid.
37. Ibid.
38. Ibid.
39. Ibid., 79-321, 81-637
40. Ibid, 79-321
41. David Pye, *The Nature and Art of Workmanship* (Cambridge: Cambridge University Press, 1968), p. 4.
42. Pye, *Nature and Art*, p. 4.