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# Glens Falls, New York: An Industrial Perspective

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Glens Falls, New York: An Industrial Perspective  
Kathleen M. Tarrant

FINAL PROJECT SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
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### Abstract

This paper examines the decline and changing nature of work in the manufacturing sector in a variety of industries located in the city of Glens Falls, New York. A small industrial city, Glens Falls has experienced an overall decline in population, the number of industries, plant locations, and total manufacturing employment. An examination of eleven companies, including the history and nature of operations, confirms a cycle of manufacturing job creation and job destruction which ebbs and flows based on the restructuring activities of companies including shifting, consolidating and closing plants as they strive to maintain and increase profitability. In the community of Glens Falls, this has resulted in an overall decline in manufacturing jobs. Interviews with individual workers with long work histories in manufacturing jobs provide perspective on the changing nature of their work as new machinery and automation of processes have been implemented. Several workers also recount their experiences in declining industries, the loss of their jobs, and their inability to obtain similar employment. The existence of fewer manufacturing job opportunities has permanently altered the availability of employment for displaced factory workers as well as the next generation of workers in this and other industrial cities.

## Introduction

With the advent of the Industrial Revolution, the manufacturing sector of our economy has long been recognized as a stalwart force upon which empires and fortunes have been built. As Paul Kennedy (1987) suggests, the strength of a country's manufacturing base has determined the relative position of countries among the great powers of the world. National strength has become a factor of industrial productivity and manufacturing output (Kennedy, 1987). On the decline of industry, Bluestone and Harrison (1982) note, "The system that seemed so capable of providing a steadily growing standard of living during the turbulent 1960's has become totally incapable of providing people with ...a stable job and secure pension" (p. 2). They suggest that the deindustrialization of the U.S. as defined by disinvestment in basic productivity capacity has left behind "shuttered factories, displaced workers and a newly emerging group of ghost towns" (p.6).

Jobs in manufacturing are considered the "good jobs" as most manufacturing employment pays higher-than-average wages for the experience, education and occupations of workers (Kodrzycki, 1996). Wages in nonunion, nonmanufacturing occupations are far below those in unionized manufacturing jobs (Perrucci, Perrucci, Tang, & Tang, 1968). In New York State, manufacturing jobs pay an average of 20 percent more than all other jobs. For every 100 manufacturing jobs another 135 additional jobs in other support sectors are created, and every dollar generated by manufacturing creates another \$1.30 in other economic activity (Berg, 1997). While manufacturing jobs are in decline throughout the country, with three million jobs or 14 percent lost from the period of 1979 to 1992, 18 million workers are still employed in the manufacturing sector (Mittelhauser, 1994). One out of every seven workers is employed in manufacturing, and manufacturing still accounts for 30 percent of the total U.S. output and employment (Mittelhauser, 1994).

Based on a historical review of a local city's industrial base, the purpose of this paper is to examine the decline of factory jobs as well as the changing nature of manufacturing work in the context of a small but diverse industrial setting. The city of Glens Falls, New York, located in Warren County, approximately 60 miles north of Albany, was selected for this

project for several reasons: first, it has a long and rich industrial heritage based on its proximity to the Hudson River and the availability of certain natural resources including lumber and limestone, and second, because it is representative of the trend of other U.S. industrial cities as plants close and a sense of loss within the factory-based community prevails.

This analysis uses existing historical and other data available on individual companies in the city of Glens Falls. Although other vital and important area manufacturing firms are located in adjacent Queensbury and across the Hudson River in South Glens Falls, for the purposes of this project, the companies studied were limited to those located within the city limits of Glens Falls. While the stories of several of the companies selected document the decline and elimination of manufacturing jobs, industrial employment is still paramount to the economic viability of the city with several manufacturing companies exhibiting growth in employment, productivity, and sales.

As Davis, Haltiwanger, and Schuh (1996) suggest, manufacturing jobs are in a constant state of flux as companies move, close, and open for many different reasons. Jobs and workers are relocated to different areas resulting in a shifting of jobs as opposed to the creation of new jobs or the elimination of existing ones (Davis, Haltiwanger & Schuh, 1996). Tracing the long history of several companies from their origins in the nineteenth century provides information on the decline of jobs, the use of machinery to increase production, the obsolescence of certain products and the need to develop new ones, and the changing nature of factory work as plants became more automated. Interviews with several long-time workers in three different industries provide first-hand accounts of the nature of factory work, and worker reactions to significant events, including automation, plant closings and the loss of employment. While it is not possible to predict the future of manufacturing jobs in Glens Falls, an examination of the working factory of the past and the present enables a clearer understanding of the changes occurring within this important sector of our economy.

## **Part One**

### **Decline of Manufacturing**

Manufacturing employment has declined by 1.1 percent per year from 1972 through

1988 (Davis et al. 1996). As Kennedy (1987) suggests, due to the diversity of the American manufacturing sector, it is likely that, while some sectors and regions are in decline, others are experiencing growth. As Davis et al. (1996) argue, large-scale job creation and job destruction represent the norm in the United States economy. According to the Annual Survey of Manufacturers, for a twelve-month period, one in ten manufacturing jobs disappear and the same number of jobs open up but at different locations (Davis et al., 1996). The research of Davis et al. (1996) based on census data for the U.S. manufacturing sector from 1972 to 1988 suggests serious consequences for those jobs that are lost to a specific area. Most manufacturing jobs that disappear fail to open up again in the same location within a two-year period, resulting in permanent job loss for those workers leading to long-term unemployment or exit from the labor force. Twenty-five percent of job destruction is a result of plant shutdowns while new plant startups account for 16 percent of the job creation in the U.S.

As Howland (1988) suggests, structural changes within manufacturing industries have resulted in employment losses, especially in skill-intensive, high-wage industries. Manufacturing jobs are declining with 1.2 million lost jobs in the five-year period from 1981 to 1986 while the service sector grew by 4.5 million jobs in one year during the same period (Howland, 1988). Although Howland's (1988) research focused on only three industries, she concludes that there is little evidence that plant closures vary by region but only appear to due the heavy concentration of industry in certain areas. She suggests that, "Plant closure decisions appear to reflect the strategies and idiosyncrasies of individual firms" (p. 10). Davis et al. (1996) argue that job creation and destruction "vary only mildly across regions" with four main industries accounting for 40 percent of all manufacturing job creation and destruction (p. 43). They suggest that job creation and destruction vary more by industry than by geographic region but are also mostly affected by products, individual plants and companies rather than industries, regions or trends. The work of these authors has attempted to isolate factors which may predict job growth and job decline. Howland (1988) "...finds no evidence that the variables commonly believed to affect plant closures have an impact." Variables often considered include plant size, industry, geographic location, capital intensity, unionization, age



of plant, and wage levels, and branch versus headquarters. A branch location managed by a remote headquarters is the only variable that “consistently influences the probability a plant will close” with branch locations closing more frequently (Howland, 1988, p. 66).

The cross section of business selected for this study includes four companies which have closed, three of which are branch or subsidiary locations. These closures are a result of restructuring activities as firms are faced with increased competition and obsolete products combined with individual idiosyncrasies including the owner’s interests and poor management. One of the factories selected, the Glens Falls Paper Box Company, closed due to the retirement of the owner and the decline of the specialty paper box market, and a shirt manufacturer, the Troy Shirt Makers Guild, Inc. closed due to a combination of poor management and the availability of foreign labor and imported shirts. Consolidation of operations is another factor in plant closings as evidenced by the closure of Neles-Jamesbury, a valve manufacturer. The Clark Brothers glove factory was closed due to foreign competition and the demise of gloves as fashion.

News of closings and layoffs as well as new plant openings and job additions is always a front page event. However, the reasons for closing are varied and appear to be a combination of factors existing at specific physical plant locations. In addition, plant locations and employment in Glens Falls also reflect the concept of job relocation among geographic areas (Davis et al., 1996). Native Textiles, a lace manufacturer, closed a plant in Pennsylvania and moved its warp knitting operations to Glens Falls creating a highly publicized 100 new jobs in the city. Similarly, Flomatic, a valve manufacturer, moved its entire operation bringing 50 jobs from nearby Hoosick Falls to the vacated location of Neles-Jamesbury in the Pruyne Island Industrial Park.

The businesses presented here illustrate the ebb and flow of manufacturing jobs in a small industrial city. Based on the unique set of circumstances surrounding the operations of each company, it is difficult to predict the future industrial employment of the city. While the pattern of overall decline in factory manufacturing jobs is unmistakable, there are small pockets of the sector that are thriving. Ames-Goldsmith, a chemical processor, added five new jobs in

the last year as new products were developed. SCHNEIDER/NAMIC, a medical instrument manufacturer, has grown to one of the largest companies in the city, now employing 785 people; employment growth of 300 percent since 1984.

### **Automation and Unemployment**

As Garraty (1978) suggests, as early as the 1870's machines were replacing large numbers of workers, many of whom did not easily find new employment. In tracing the history of unemployment, Garraty (1978) also reviews the Marxist concept of the necessity of a reserve army of labor to supply the peak periods of the capitalist production cycle. Technological unemployment, or those workers replaced by machines, produced excess labor supply and a depressed standard of living which further aided capitalist exploitation. Garraty (1978) defines structural unemployment as the use of labor-saving machines and techniques to reduce costs in addition to increasing output. As Perrucci et al. (1988) argue, structural unemployment resulting from either the use of machines to replace human labor or plant closings, differs from frictional unemployment or those workers who are only temporarily out of work (Hall, 1994). Structurally unemployed workers will not be called back to work when business conditions improve and are considered displaced workers. Companies seeking more cost-efficient methods of production turn to machines as substitutes for the increasing cost, or higher wages, of human labor creating permanent unemployment. This new automated technology requires more highly skilled and higher paid workers, decreasing the demand for unskilled workers (Garraty, 1978). As Hall (1994) suggests, this has resulted in "unprecedented levels of unemployment among unskilled workers living in cities" (p. 19).

A number of the companies profiled in Part Two of this paper reiterated the need to increase the skills of their existing employees or the need to hire more highly skilled workers. As discussed, many displaced factory workers with long work histories, particularly in declining industries, lack these advanced skills, and face permanent unemployment. The implementation of automated equipment is also a recurring theme in the profiles of many of the companies selected for this project. As a result, many companies have improved productivity

with the same, or, in some cases, fewer workers.

As Bell (1956) suggests, the automation of processes or the use of devices to regulate the flow of work by eliminating direct human labor is an ancient concept, dating to the Romans' use of hydraulic valves to regulate water levels. Varying degrees of mechanization evolved over the course of the last century as steam power replaced the labor of men and horses, electricity replaced steam, numerically controlled equipment eliminated many manual processes, and computerization has even further improved automated operations. The type of automation in the profiles of the companies that follow include massive computerization of processes, the use of robotics in manufacturing operations, and the extensive use of numerically and computer-controlled equipment. The resulting productivity increases have enabled these companies to operate with far fewer workers, thereby stemming employment growth as well as downsizing the number of manufacturing jobs. Even companies which have exhibited dramatic sales growth have kept employment levels steady as they continually increase the automation of their production process. This has, as Rifkin (1995) argues, reduced the demand for labor, especially unskilled labor. Rifkin contends that "management's single-minded determination" is to replace workers with machines whenever possible (p. 86). As a result, manufacturing productivity in the United States increased by 3.3 percent in 1995, the highest annual increase since 1957 (Evans, 1995).

Manufacturing companies typically promote and publicize capital improvements in machinery and equipment as do most of the companies included in this study. The majority of company-provided publications tout numerous advances in technology in terms of higher quality products and lower costs. Among the workers interviewed for this project, reaction to their use of machines was mixed. Several people noted objections to specific machines and their operations, while others marveled at the improvements in speed and efficiency of new machines. Most accepted the equipment as a necessary part of their jobs. Contrary to what might be expected, no one voiced any objections in terms of machines replacing workers; one individual quickly denied that machines had eliminated jobs.

Several employers cited the quality of the work force in the Glens Falls area in making

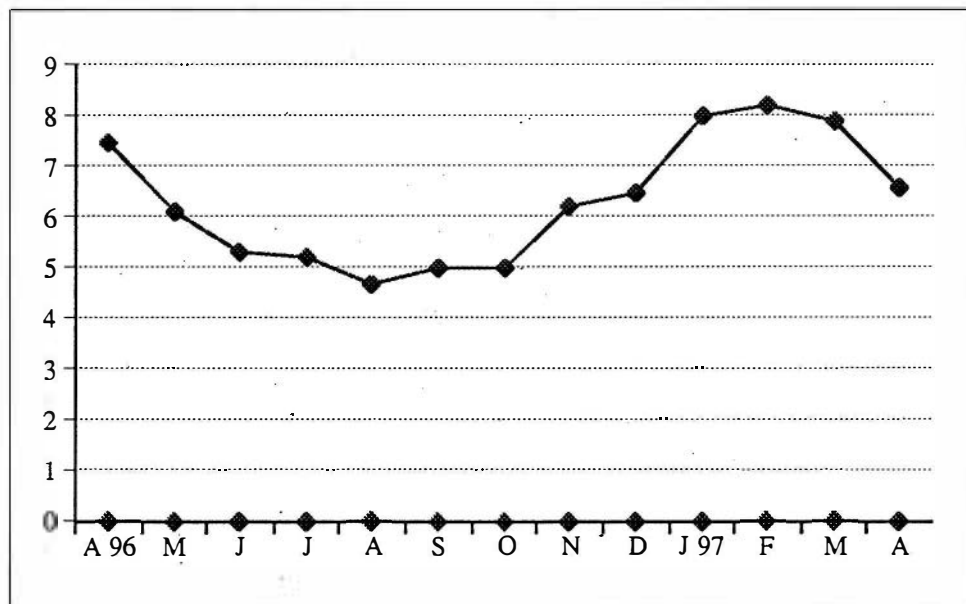
decisions to relocate or remain in the city. One article stated: “The state’s work force is known for its skill and is routinely considered 20 percent more productive than in southern states” (Blow, 1996). The same article reported that New York’s labor force was the second most productive in the country, second only to New Jersey’s.

The concept of unemployment was first recognized in the 1920’s and it wasn’t until the 1940’s that unemployment figures were accurately maintained for the U.S. Unemployment is generally considered to be that part of the labor force which is not currently working but is seeking work and is available to work or is waiting to be called back to work. The rate of unemployment measures labor force participation and is the total number of unemployed persons as a percentage of the labor force (Hall, 1994)., Today rates of unemployment are carefully monitored and highly publicized as important economic indicators (Garraty, 1978). Unemployment figures for the Glens Falls MSA are reported in the media on a regular basis and tend to be relatively high compared to the rest of New York State due to the loss of manufacturing jobs. In April 1997, the Glens Falls MSA had an unemployment rate of 6.6 percent, the 11th highest rate of 12 New York State MSA’s. The New York City PMSA had the highest rate with 8.6 percent, and nearby Albany-Schenectady-Troy ranked fifth with 3.8 percent unemployment. The rate for Warren County, the county in which the city of Glens Falls is located, was 7.2 percent, even higher than the combined rate for Washington and Warren Counties which comprise the Glens Falls MSA (Ross, 1997).

As shown in Figure 1 (see next page), unemployment rates reflect the seasonal work available in the Glens Falls/Lake George area as rates tend to improve during the summer months. James Ross of the New York Labor Department also suggests that the relative decline in unemployment is due to an increase in retail and other service-related jobs as 500 service sector jobs were added in the period from April 1996 to April 1997 (Richmond, 1997c). Unemployment data for only the city of Glens Falls is not available, requiring the use of combined unemployment figures for the Glens Falls MSA and Warren County as measures of the area’s unemployment trends. In addition, improvements in the unemployment rate appear to be the result of lower paying seasonal and service sector jobs. The area, however, still

suffers from a relatively high rate of unemployment. As Howland (1988) suggests, worker

**Figure 1. Unemployment Rates for Glens Falls MSA, April 1996 - April 1997**



Source: Ross, 1997

displacement and the resulting unemployment become a regional problem in areas of declining economies if new job creation is not strong enough to absorb laid-off manufacturing workers.

### Glens Falls “Hometown, USA”

Located in Warren County, New York, Glens Falls is a small city of approximately 3.9 square miles with a population of 15,023 (telephone conversation, mayor’s office, June 1997). The city is surrounded by the town of Queensbury “a thin ring of suburban growth” which is also the county seat (Packard, 1972, p. 210). The first permanent settlers arrived in 1763 led by Abraham Wing and the area was initially known by many different names including Wing’s Falls, Glenville, and Wing’s Corners. It was incorporated as a village in 1839 with a population of 1,000 residents, and incorporated as a city in 1908 with a population of 15,000 (Ellingsworth, 1996).

The Warren County Regional Economic Development Corporation calls the region “a manufacturing center” with approximately 180 manufacturing firms (Warren County Regional

Economic Development Corporation [WCREDC], 1997). The predominant manufacturing industries in the county are paper products and medical device manufacturing. Warren County and neighboring Washington County are designated as the Glens Falls Metropolitan Statistical Area (MSA) with a total population of 122,100 bordering the six-county Albany-Schenectady-Troy MSA.

The city of Glens Falls was selected in two separate cases as being representative of a small traditional U.S. town supporting my decision to use the city and its industry as the foundation for this analysis. The nickname of “Hometown, U.S.A.” was given to Glens Falls by Look magazine in 1943 as part of an annual article featuring a “typical American community, everyone’s ‘hometown’” which was distributed to American GI’s abroad (Metivier, 1993b). In selecting Glens Falls for their target city, Look declared, “Glens Falls contains in microcosm, every aspect of the American Ideal, every potential for achievement of the American ideal” (Metivier, 1993b, p.152). The article featured all aspects of life in the “paper making city” and showed photographs of paper workers at Finch, Pruyn & Co. William Nolan, a 24-year employee, was shown in the press machine room with Nelson Everets, a wood foreman, with the caption, “Workers and management know each other well. Labor leaders are intelligent, respected” (Hometown, USA, 1944, p.25). The Look article suggests that incomes were above the national average at that time, and manufacturing industries in the city included newsprint, paper bags, color pigments, wallpapers, chemicals, cement, dresses, gloves, shirts, machinery and toys.

Almost thirty years later in 1972, Vance Packard used Glens Falls as an “example of the more stable, traditional community” in his study of American communities (Dean, 1997). In contrast to high mobile towns or areas that experience high rates of movement in and out of the area, Packard sought a stable, long established, self-sufficient town outside the fringe of a metropolitan area. Other criteria he considered included towns that were not dominated by a large industrial plant of a national corporation, a university, or a military base. In selecting Glens Falls after months of research, Packard (1972) described the city as a “traditional town, a small-functioning world, a microcosm,” with 65 large and small industries and an insurance

company (p. 302). Glens Falls was a community that exhibited a sense of “rootedness,” with almost all jobs located within a few miles of the workers’ homes (p. 225). Packard (1972) also selected Glens Falls for his study because income in the city approximated the national income average. The average family income for Glens Falls in 1969 was \$9,152 compared to an average of \$9,137 for the United States (Packard, 1972).

In 1994, 15.95 percent of the total employed population of 62,250 in the Glens Falls MSA worked in the manufacturing sector (World class communities, 1997). Census data specifically for the city of Glens Falls for the year 1990 indicates that of the 7,149 persons, 16 years and older employed in the labor force, 1,446 persons, or 20.2 percent were employed in manufacturing, as shown in Table 1 (U.S. Department of Commerce, 1990). Of that total, 686

**Table 1. Employment by Sector - City of Glens Falls, New York, 1990**

<b>Sector</b>	<b># Employed</b>	<b>% Employed</b>
Professional & Related Services	1,841	25.7
Wholesale & Retail	1,541	21.5
<b>Manufacturing</b>	<b>1,446</b>	<b>20.2</b>
Finance, Insurance, Real Estate	470	6.5
Construction	420	5.8
Trans. & communications	363	5.1
Business & Repair Services	224	3.1

Source: U.S. Department of Commerce, 1990, p. 31

were employed as machine operators, assemblers, and inspectors. For the Glens Falls MSA, which includes the city as well as all of Washington and Warren counties, manufacturing jobs had decreased by 22.3 percent from April 1988 to April 1997 (Ross, 1997). For just the one-year period, from April 1996 to April 1997, the Glens Falls MSA lost over 500 jobs in manufacturing (Ross, 1997).

While census figures indicate an increase in the number of employed persons 16 years and older working in Glens Falls, the population of the city has gradually decreased. As shown in Table 2, (see next page) population has steadily declined in Glens Falls since its post-war prosperity of the 1950’s and 1960’s. By 1997, the population of the city was down by

23.4 percent or approximately 5,900 fewer residents compared with a population high of 19,610 in 1950 (U.S. Department of Commerce).

**Table 2. Population of Glens Falls, New York, 1900-1997**

Year	Total Population	Increase/Decrease	Annual % Change	% Change Since 1950
1900	12613	-	-	-
1910	15243	2630	20.9	-
1920	16638	1395	9.2	-
1930	18531	1893	11.4	-
1940	18836	305	1.7	-
1950	19610	774	4.1	-
1960	18580	-1030	-5.3	-5.3
1970	17222	-1358	-7.3	-12.2
1980	15897	-2683	-15.6	-18.9
1997	15023	-874	-5.5	-23.4

Source: Compiled by author from U.S. Department of Commerce figures.

### **Industrial Diversity**

Nardinelli and Simon (1992) define industrial diversity as the evenness of distribution of employment across industries within a city. A city is perfectly diversified if all workers are distributed equally among all industries, and conversely would be perfectly specialized if all employment were concentrated in one industry. Nardinelli and Simon (1992) suggest that on the average more diversified cities will have lower unemployment than highly specialized cities.

This concept is important in the analysis of the industry in Glens Falls as the city has always been considered industrially diversified with many different businesses. Although the paper mills established in 1864 provided the basis for the city's economy, it quickly attracted other industries based on its proximity to other natural resources, including black marble and limestone. By 1897, Glens Falls, also known as the Empire Village, was considered the "right place for manufacturers to locate." "It is as a manufacturing town that Glens Falls claims its foremost place in the ranks of the Villages of the State" (Industrial Edition, 1897). The Feeder



Canal, the railroad, and “unsurpassed water power” attracted many manufacturers (Industrial Edition, 1897). A 1906 brochure proclaimed the village “a great manufacturing centre” promoting the area’s success. “Between 10,000 and 12,000 persons are employed by the various establishments... and the manufacturers generally are in a prosperous condition.” A number of attractive manufacturing sites were still available with “abundant” money for real estate available (Warren Realty, 1906).

By 1923, Glens Falls was “the center of the greatest hydroelectric production” in the Albany area. Major industries in 1923 included newsprint, cement, silk products, and wallpaper (Paper and cement..., 1923). A 1939 article commented on a number of different industries that at one time had been featured prominently in the city but were no longer operating. These early industries included the manufacture of the famous “Glens Falls Buckboard Wagon” by Joubert and White and the “bicycles built for two” made by the Budd Brothers Manufacturing Company (Four decades bring ..., 1939).

In 1975 a state publication claimed that “diversity is the dominant feature of the thriving city’s industrial profile” manufacturing everything from bags to silos (New York State Department of Commerce, 1975). At that time, the Glens Falls and the surrounding area was home to 65 small and large industries employing 12,000 workers. As Nardinelli and Simon (1992) suggest, the mix of industry in a city changes slowly. The industrial mix of the Glens Falls MSA in 1997 is shown in Table 3. However, as manufacturers close and leave the city,

**Table 3. Employment by Manufacturing Sector, Glens Falls MSA, 1997**

Industry	% Employed by Mfg. Sector
Medical Instruments	24.8
Paper & Allied	20.2
Lumber & wood Products	10.4
Textile Mills	6.4
Printing & Publishing	5.9
Other	32.4

Source: Ross, 1997, p. 5

the diversity continues to decrease, and the remaining factory workers have fewer options and become more vulnerable to fluctuations and changes in fewer industries. Opportunities for reemployment also decline.

As Table 3 indicates, two industries, medical instruments and paper, account for 45 percent of the manufacturing sector employment in the Glens Falls MSA (Ross, 1997). The two largest industrial employers represent these two sectors: Finch, Pruyn & Company, Inc., a paper manufacturer, is the largest industrial employer, with 1,010 employees; and SCHNEIDER/NAMIC, a medical device manufacturer, is the second largest with 785 employees. As detailed in Part Two, the rate of employment growth at both companies has leveled off with neither firm currently adding additional employees. The implications for the increasing dominance of these industries and these two companies combined with the overall decline of the city's industrial diversity and the number of manufacturing jobs adversely impacts the employment prospects for manufacturing workers.

## **Part Two**

### **Selected Manufacturing Companies**

The second part of this paper will examine a series of manufacturing companies which are currently operating or have operated facilities in the city of Glens Falls. This group of eleven companies as listed in Figure 2 (see Page 19) was selected based on the following criteria: 1) each is representative of a sector of the industrial diversity within the city, 2) information was available either directly from the company or from archival collections, and 3) employees or others associated with the company were available for interviews. The companies selected include two large companies (more than 500 employees), nine small operations (less than 500 employees), as well as four plants which have closed, three “new” plants which have opened since 1960, and eight “old” facilities which originated in the late 1800’s or early 1900’s. A wide range of SIC codes is represented and, in the final analysis, this group represents an excellent composite of activities including automation, computerization, product obsolescence, new product development, plant closures, openings and expansions, and the creation and destruction of jobs historically found in the manufacturing sector.

The analysis of each company is intended to include a brief historical report of the origins, products, and location of the company combined with descriptions and commentary regarding the nature of factory work at the plant. Appendix 1 contains the questionnaire used to collect the general company information. Information was obtained from plant tours when possible and/or telephone and personal interviews as well as company-provided literature and newspaper reports. Four factory workers from three separate manufacturing companies, all with long work histories (40 or more years) at that particular company, were interviewed in conjunction with this project. These long-time workers were referred to me by contacts at the various companies based on my interest in interviewing employees who had experienced the working environment at a company over a substantial period of time. Appendix 1 also provides the questionnaire used as the basis for these worker interviews. The information from these interviews is included in the reports on Finch, Pruyn & Co., Inc., the Troy Shirt

**Figure 2. Selected Manufacturing Companies, Glens Falls, New York**

COMPANY NAME	INDUSTRY	SIC CODE	YEAR EST. (OLD/NEW)	OPEN/ CLOSED	CURRENT EMPLOYEES	OTHER
Finch, Pruyn & Co., Inc.	Paper	2621	1865 (old)	Open	1100	
SCHNEIDER/ NAMIC	Medical Instruments	3841	1969 (new)	Open	785	Originally NAMIC USA
Native Textiles	Lace/Tricot Fabric	2221	1928 (old)	Open	430	Originally H.& F. Binch
Troy Shirt Makers Guild, Inc.	Men's Dress Shirts	2321	1893 (old)	Closed (1996)	168	Originally McMullen-Leavens
Glens Falls Cement Co.	Cement	3241	1893 (old)	Open	130	
Clark Brothers	Fabric Gloves	2381	1920 (old)	Closed (1968)	68 (1968)	
Neles-Jamesbury, Inc.	Industrial Valves-paper	3491	1974 (new)	Closed (1996)	60 (1996)	
Flomatic Corp.	Industrial Valves-water	3494	1997 (new)	Open	50	Occupying site of Neles-Jamesbury
Ames Goldsmith Corp.	Silver Nitrates	3399	1851 (old)	Open	40	Originally M. Ames Chemical Works, Inc.
Jointa Lime Co., Inc.	Limestone	1422	1851 (old)	Open	29	
Glens Falls Paper Box Co.	Paper Box	2381	1907 (old)	Closed (1997)	8 (1997)	Originally John Legget & Son

Source: Compiled by author

Makers Guild Inc., and the Glens Falls Paper Box Co. Appendix 2 contains specific information on the locations of each company including a map of Glens Falls as well as current photographs of each company site. As the map shows, early industry in the city developed along the Hudson River and Feeder Canal which includes those companies with Warren Street addresses. The Pruyn Island Industrial Park, also home to several of the companies described here, is a tract of land located between the river and the canal which was initially developed in 1958 for industrial purposes. The other concentration of industry is in the eastern section of the city in the vicinity of Maple Street in close proximity to the now defunct railroad. The table in Appendix 2 also provides the exact address of each company, current ownership, and a brief description of each firm's physical facility.

Although information regarding the number of workers, wages, sales figures, productivity rates, and related information is generally considered confidential and is difficult to obtain, it is still possible to gather sufficient information which, when pieced together, offers a glimpse of life within the factories of the city today as well as in the past. These individual factories convey the rich and varied industrial heritage of the city of Glens Falls. Collectively they also help to explain the ever-changing nature of work within manufacturing environments and the cyclical nature of job creation and job destruction.

### **Finch, Pruyn & Co., Inc.**

Started in 1865 as a sawmill by partners Jeremiah W. Finch, David J. Finch and Samuel Pruyn, Finch, Pruyn and Co., Inc., today is the largest industrial employer in the city of Glens Falls with over 1,000 employees. It is the second largest employer in the city next to Glens Falls Hospital, which employs approximately 2,000 workers. In a series of articles celebrating Finch, Pruyn's 130th anniversary in 1995, the company was declared an "institution," and it was suggested that the development and prosperity of the city was inexorably tied to the success of the paper company (Finch, Pruyn's 130th..., 1995). The company remains privately held by local descendants of the original families, and sales in 1995 were \$267 million. The company maintains only one mill location at the site of its original

sawmills at the foot of Glen Street along the Hudson River. Operations are conducted in a series of brick, frame, steel and aluminum buildings of various sizes totaling more than one million square feet in addition to 150,000 woodland acres maintained in the Adirondack Mountains (Dun & Bradstreet, 1997).

The original sawmill operations also consisted of a lumber yard, a grist mill, a limestone quarry, a black marble quarry and a fleet of thirty canal boats (Finch, Pruyn's 130th..., 1995). In 1876, the company acquired Wing Sawmill, and by 1892 Finch, Pruyn was the largest lumber operation on the Hudson River, employing 1,000 workers. It was also the producer of the purest lime in North America. The logging business, combined with the creation of the Champlain Canal feeder, was the foundation of the city's industrial prosperity.

In 1885 Daniel Finch withdrew from the company, and Jeremiah Finch and Samuel Pruyn continued the operations of four companies: Finch, Pruyn & Co., The Glens Falls Company, The Glens Falls Company Mill, and the Associated Lime Companies. Jeremiah Finch, experienced in logging, supervised the lumbering operations and the company's finances (Finch, Pruyn & Co. organized..., 1939). The four companies were merged in 1904, and incorporated as Finch, Pruyn & Co. Jeremiah Finch died in 1904 and his son, George Finch, acted as Chairman of the Board from 1904 to 1906. Samuel Pruyn died in 1908 and his son-in-law, Maurice Hayes, became Chairman of the Board from 1909 until 1949.

The demand for lumber and building materials declined as construction moved westward. In 1904, under the direction of the last remaining original partner, Samuel Pruyn, then 83 years old, the company made its entry into the paper making industry, one of the leading industries in the area. The construction of a pulp mill and a two-machine paper mill enabled the company to produce its first paper product--newsprint. The economic benefit of this expansion was noted in a 1904 newspaper article:

During the year to come masons, stone workers, carpenters and laborers will find employment and then, when the pulp and paper mills are completed, permanent places will be found for many. Thus, almost from this hour, the new corporation will daily put money into the pockets of the laboring men of Glens Falls, who in turn will expend the same with the merchant. This all means additional business for Glens Falls (Glens Falls' new..., Glens Falls Times, 1904).

Production at the new mill began in the fall of 1905, and the first full year's output was almost 15,718 tons of paper and 13,506 tons of groundwood. A third machine was added in 1910, and in 1912 a steam sawmill replaced the water power mill at the Feeder Dam (Finch, Pruyn & Company organized..., 1939). The company had also generated the first electricity in Glens Falls in 1881 (Daley, 1995). Machinery played a vital role in the earliest operations of the paper mill. The grinding room, where two-foot lengths of pulp wood were chewed into the stock used for newsprint, contained "all elements of industry in its highest dramatic pitch... Ranged in long lines, with sliding pistons that gave them the appearance of artillery in massed formation, the grinders roar in deafening chorus..." (Paper and cement..., 1923, p. 16). The same article also describes a unique process using a Trembly mixing and metering machine for the assembly of groundwood pulp and sulphite pulp which took the place of many men and machines. In 1923, the daily output of the three paper machines at the mill ranged from 125 to 130 tons. The period of the 1920's saw the end of the black marble and limestone business for Finch, Pruyn, and in 1923 the last shipment of newsprint via the canal was made from Glens Falls to New York City (Paper and cement..., 1923).

By 1938, 300 were employed in the Glens Falls mill, and 400 in the company's woodlands operation. Finch, Pruyn newsprint was used for more than 50 daily newspapers nationwide (Daley, 1995). However, due to over capacity in the newsprint market throughout the country, and other factors, in 1940 Finch, Pruyn began their conversion from newsprint production to other paper products including high quality printing papers for magazines and books which currently continue to manufacture. A later article regarding a strike at the plant described the change in terms of the workers and their skills, "...we have made a great change in our mill by going from newsprint to fine grades--a change that requires great skills and teamwork" (No contract..., 1961). Many changes were made to adapt to the new techniques of manufacturing highly specialized grades of paper. The pulp and paper mills were "modernized" including the addition of screens of the "most modern type" in the screen room; the control and measure of pulps and chemicals by instrumentation of the latest type; new hoods and ventilation for each machine; and paper storage using the most modern methods of

paper handling (Finch, Pruyn & Co., Inc., to leave..., 1946). The purpose of these extensive modifications was to “insure full continuous operations and full employment of personnel” (Finch, Pruyn & Co., Inc. to leave..., 1946).

Another manufacturing breakthrough for Finch, Pruyn & Co. in 1957 was the implementation of new pulp technology for the conversion from softwoods to hardwoods, and the construction of a \$3.5 million neutral sulphite semi-chemical pulp mill. The mill, at 150 by 80 feet and five stories high, produced a bleached pulp from hardwoods utilizing a “unique combination of modern equipment design and automation,” with a capacity of 100 tons of pulp per day (Finch, Pruyn & Co., 1965). The new mill was equipped with “push-button control,” and employed about 30 additional men upon completion in 1957. This expansion benefited the economy of the entire Glens Falls area creating jobs for many others in related operations (Lay cornerstone..., 1957).

In 1959, Lyman A. Beeman, president of the company from 1949 until 1983, declared that the company was “upgrading at the steepest angle ever in the history of the company” (Finch, Pruyn host..., 1959). The neutral sulphite pulp mill was further expanded in 1960, and in 1962, electronics were installed to improve measurement and control of the paper machines (Finch, Pruyn important..., 1963). “One of the most advanced paper-making machines in the world,” the “Number 4” paper machine was installed in 1965 (Finch, Pruyn planning..., 1965). This new machine doubled the capacity of the existing plant from 200 tons of paper to 400 tons per day (Finch, Pruyn planning..., 1965). Already employing 600 workers at the mill 24 hours per day, six days per week, the city of Glens Falls, Warren County and the surrounding area anticipated the additional jobs to be created as a result of this increased production (Finch, Pruyn planning..., 1965). During the 12-month period prior to October 1965 it was reported that, “the company’s manufacturing personnel with the help of modern equipment had raised paper production 20 percent” (Finch, Pruyn & Co., 1965). Numerous other production improvements and product enhancements had been implemented with the goal, as stated by Beeman, of “improving quality control and ensuring the stability and growth of future employment in Glens Falls” (Finch, Pruyn expansion..., 1964).



By 1982, the company employed 1000 people in the mill, mostly men, a number which has remained steady since that time. According to Richard Nason, Woodlands Project Manager and company historian, new hires are limited to the replacement of retiring workers, and no new jobs are currently being added (personal interview, June 2, 1997). Nason also added that there are no plans for the installation of an additional paper machine due to existing oversupply in the marketplace. The “Number 4” machine was completely rebuilt in 1992 at a cost of \$20 million (Finch, Pruyn’s 130th ..., 1995). Business conditions within the market have become more competitive, according to Nason, due to the increase of foreign manufacturers in Brazil and China, and the use of foreign labor. In February of 1997, the “Number 2” machine was shut down temporarily due to a downturn in orders and about 100 workers were laid off for several weeks. This was the first layoff in many years at the mill (Randall, 1997).

The workers at Finch, Pruyn have been unionized since 1918, and currently 667 workers are represented by seven unions (Phillips, 1995). Locals 155 and 18 of the United Paper Workers International Union (AFL-CIO) represent the largest number of workers, totaling 473. The company claims that they have among the highest pay and most comprehensive benefits in the industry. Gross pay for the lowest hourly job of laborer, Local 18, averaged \$47,500 in 1995, and the job of machine tender in Local 155 averaged \$57,202 (Finch, Pruyn paper workers..., 1997).

Since 1960 there have been two major strikes at the mill. A bitter strike in 1961 lasting 86 days affecting 350 workers was said to be “the first formal rupture of union-management relations at Finch, Pruyn in 40 years” (Long strike ended, 1961). Again, in 1996, 665 workers went out on strike after contract negotiations failed to renew a five-year contract which expired on June 16, 1996 (Phillips, 1996; Post, 1996). The three-week strike ended on August 18, 1996. Because of the large number of workers and families affected, unrest is reported to exist still among the union workers (Richmond, 1997e).

It is difficult to obtain employment at Finch, Pruyn because, as Nason suggests, there is plenty of “quality labor” in the area. New hires are trained on the job or through programs at

Adirondack Community College, a local two-year school. Nason did say that some experienced mill workers were hired from Ciba-Giegy, a large chemical plant in Queensbury, when it closed in 1987. Finch, Pruyn has a reputation for providing good paying jobs with security, and it is not uncommon for workers to put in “30 or 40 years of service before retiring” (Daley, 1995).

Frederick E. “Ted” Moon had been employed by Finch, Pruyn and Company for 44 years until his retirement in 1986. On June 16, 1997, I met with Moon, a retired machine shop foreman, who had been employed by the company from 1941 until June 1986 with a four-year break for his service in the U.S. Navy. Moon, an affable man with a keen sense of humor, had worked in the mill’s maintenance department for most of these years following in the footsteps of his father, Edward Moon, who had also worked at the paper mill for 33 years.

Finch, Pruyn has employed many members of the same family, and by 1965 more than 18 second generations were represented (Finch, Pruyn important..., 1965). The Moon family has a long association with Finch, Pruyn & Co., with Ted Moon’s grandfather and three uncles also having been employed there at different times. Ted’s wife, Evelyn Tefft, also worked in the mill office for five years before her marriage. She noted that in 1940, of 300 mill employees, only ten were women, and they were not allowed entry into the mill itself unless accompanied. Both Ted and Evelyn grew up on Henry Street in Glens Falls in close proximity to the mill, and reminisced about their childhood recreation in the busy area of the Feeder Canal, an important mode of transportation for early industry in Glens Falls. They both walked to work during their early employment at Finch, Pruyn and used bus transportation after moving to South Glens Falls following their marriage in 1946. Moon’s paternal grandparents owned and operated a boarding house for early mill workers at the Feeder Dam in the 1890’s. Ted Moon’s mother, Julia Golden had also been employed as a machine operator at the McMullen-Leavens shirt factory.

Ted Moon started his working life in the mill at age 20 as part of the “bull gang” or the laborers in the maintenance department. He became intimately familiar with the machinery and the workings of the paper mill. In 1946 he started work in the machine shop; by 1961 he was

a salaried employee, and in 1964 he took over as a master mechanic, replacing his father. Edward Moon had been promoted to Resident Engineer in charge of constructing the new "Number 4" machine. Ted Moon's job required that he be on call and available for repairs 24 hours a day including most weekends, nights and holidays. He noted that paper machinery was not as reliable in the years he worked as it is now, citing the old dryer heads which broke frequently as an example. The weekend calls were frequent, and he sometimes received two to three calls per night; an aspect of the job that he found to be particularly demanding. His wife also echoed that sentiment as she recounted numerous unfinished Sunday dinners and virtually every Christmas holiday that her husband worked at the mill.

A highly skilled man, Moon was a member of the International Association of Machinists Local 2586, formerly Local 722, one of the craft unions represented at the mill with a small membership of 31 members in 1995 (Phillips, 1995). The equipment is the heart of operations at a paper mill, and Ted Moon experienced some major changes during his time at Finch, Pruyn & Co., Inc. The most sweeping changes in production evolved around the increased speed of the machinery. Moon recalled the "slow-moving machines" originally powered by steam engines that ran about 600 feet per minute. These were replaced with steam turbine power which increased speeds up to 1800-2000 feet per minute. Since his retirement in 1986, he added, speeds have increased even more. He spent much of his time installing and upgrading various machines and recalled several key installations on which he worked, including the startup of the "Number 4" paper machine in 1965. Among his mill memorabilia, Moon has the first piece of paper to come off the "Number 4" with the date and time written on it: October 5, 1965, 11:45 p.m.

Even in retirement, Ted Moon was called back to assist with the installation of computerized equipment utilizing his knowledge to input the data needed to convert to computer operation. Today he describes a modern, fully automated paper mill where the paper sheet is continuously measured and automatically adjusted for many production variables. This is in stark contrast to the old operations where the machines were not covered, and it was so hot and wet that paper makers worked barefoot. Among Moon's memorabilia is a circa 1920

photo which shows a group of mill workers shirtless and barefoot. He suggests that paper workers today, because of their training, rely on automated controls to ensure accurate paper production, and no longer have the same knowledge that older workers who used to “feel” the paper to make sure it was right had.

Using a very technical description of operations, Moon recounted the change from the use of softwood pulp to include hardwoods in 1957 with the construction of the neutral sulphite pulp mill. Other significant changes in the mill which he mentioned all centered on continuous improvement of the paper-making process. One example he used was the switch from solid steel “King” Bottom calendar rolls to hydraulic swimming rolls. This enabled the crown to be varied for the different finishes of paper without removing the roll thereby saving time and manpower. Another area of improvement was the implementation of several generations of sheet cutters, each faster than its predecessor. The Will sheeter replaced the Lenox sheeter, one of the first automated cutters used in the industry, and could cut up to five times as much paper. The Will sheeter was eventually replaced with a Penco, an even faster and more versatile cutter. Moon is quick to point out that these numerous improvements increased production rates and paper quality, but did not decrease or adversely impact employment of mill workers. With a company emphasis on safety, Moon never suffered any serious injuries at the mill, only a few minor cuts and scratches.

Ted Moon’s interest in the mill has not been diminished by his eleven years away from Finch, Pruyn as he fondly remembered the men he worked with and the importance of their work in keeping the mill machinery operating 24 hours a day. As evidenced by Moon’s recollections, the paper mill at Finch Pruyn has undergone and continues to undergo numerous production improvements to increase productivity and improve paper quality. Maintenance workers such as Moon are becoming increasingly important as factories become more automated and mechanized. As Blauner (1964) suggests, automated manufacturing has transferred the traditional craft skills away from day-to-day production to machine maintenance.

The long paternalistic relationship between Finch Pruyn, its workers, and the city of

Glens Falls continues to be a vitally important one for both the community and its industrial base. However, Richard Carota, president and CEO of the company since 1983, recently cautioned union workers that wage and benefit levels could not continue to increase as the company faced threats from several major competitors (Frost, 1995). Although the growth in employment and sales at Finch Pruyn has leveled off, employment at the paper mill, as the dominant employer in the city, will become even more important as other manufacturing opportunities in the area decline. As a single plant location, the paper company may be less likely to close than other multiple-location plants in the city. However, other factors such as demand, overall paper-making capacity, and the threat of lower-priced foreign competition in Brazil and China will determine the future of successful operations.

#### **Neles-Jamesbury, Inc./Flomatic Corp.**

The paper industry in Glens Falls has also supported a number of related suppliers, including those that make and repair machinery and parts for the paper mills. Neles-Jamesbury, Inc., a manufacturer of valves for the pulp and paper industry, was one supplier which maintained a small production facility at 145 Murray Street in the Pruyn Island Industrial Park from 1985 until it closed in 1996. Originally started as Kaymr Valves, the site was purchased in early 1997, and is now occupied by Flomatic Corp., a water valve manufacturer originally from Hoosick Falls, New York.

The Neles-Jamesbury facility in Glens Falls was only one of the Worcester-based company's four manufacturing plants. The company employs 900 people in its Worcester and Shrewsbury, Massachusetts plants, 90 in Warwick, Rhode Island, and operates a Mexican subsidiary (Hartley, 1992). Employing upwards of 100 people at one time in Glens Falls, by 1991 the valve manufacturer had cut back to 77 workers, citing poor business conditions (Hartley, 1992). When Neles-Jamesbury closed the Glens Falls facility on November 8, 1996, and consolidated the operation with its Shrewsbury, Massachusetts plant, only nine employees moved to headquarters jobs and 50 workers were left unemployed. The branch location in Glens Falls was a small operation of the Neles-Jamesbury Corporation. As

Bluestone and Harris (1982) suggest, branch locations managed by headquarters in remote locations are more likely to be consolidated and closed. Even after many improvements, the company permanently closed this factory and moved all equipment and operations to its Shrewsbury plant, a much larger facility with similar operations.

An article in 1992 featured the automation and inventory improvements made by Neles-Jamesbury in an effort to increase the company's productivity. Starting in 1990, the company had automated the turning, drilling, and threading of valve parts with computer numerically controlled (CNC) machines (Hartley, 1992). As a result, 95 percent of the plant's production was computerized with all lathes and drills fully CNC controlled. The use of robots, or fully automated machines, to drill and turn rough-cast valve parts was also part of the Neles-Jamesbury trend in automation. The robotic machines, at a cost of \$500,000 to \$1 million each, required only operator adjustments to their computer programs. The only other action required by a machinist was the final grinding of any burrs or other minor imperfections in the valve. In 1992, Arie Bregman, the president of the company, reported that productivity per person had increased by 12%: "We produced more valves with fewer people" (Hartley, 1992, p. E1). However, even huge capital investments and the resulting productivity increases were not sufficient to keep this plant open.

Flomatic Corp. announced in late 1996 that it would purchase the Neles-Jamesbury 48,000-square-foot facility for \$1.6 million, moving its entire operation from Hoosick Falls. Although Flomatic valve products are sold primarily for industrial water applications, many of the job functions in the two companies are similar and include machinists, assemblers and painters. The company eliminated its foundry 10 years ago buying the basic valve forms which are then milled and assembled. The workers are not unionized at this plant. Bo Andersson, the president of Flomatic since 1978, explained that the company's move to Glens Falls was based on a location suitable for expansion and the availability of a skilled work force. The company plans on adding 300 more jobs over the next decade and expanding the facility up to 600,000 square feet (Urrico, 1996). Flomatic currently runs two shifts with plans to start a third shift in the near future, adding six additional jobs (Richmond, 1997b).

When Flomatic moved to Glens Falls, Andersson was quoted as saying that the company “would like to absorb as many of the Neles-Jamesbury people as possible” (Urrico, 1996, p.8). By May 1997 the company was established at its new location, and had hired 24 former Neles-Jamesbury workers at comparable jobs. Andersson praised the site and the community noting that “local workers who were hired ‘were ready, willing and able to work and jump right in without losing a beat’” (Richmond, 1997b, p. E1). According to Andersson, the company provides a “superior” product, and has a strong emphasis on the continuous training of employees (Urrico, 1996). Since 1982 Flomatic has been a subsidiary of Danfoss, a Danish manufacturer of machinery with 34 subsidiaries, with 1,100 employees in the United States and 17,000 worldwide (Urrico, 1996).

Although the plant at 145 Murray Street no longer serves the paper industry, it has provided 24 permanently laid-off workers with work opportunities in a valve manufacturing facility. While this represents a net decrease in manufacturing jobs for the city of Glens Falls and a devastating loss for Hoosick Falls, the projected growth of Flomatic may ultimately provide a large and much needed increase in industrial jobs in the city. As a subsidiary operation, the Flomatic plant may be more likely to close than a single plant location and the projected growth in sales and employment is as yet unrealized.

### **Jointa Lime Company, Inc.**

The Jointa Lime Company is the last remaining firm in an industry that started in the 1830's, and continued for nearly one hundred years as a major economic force in the development of the city of Glens Falls. The history of the lime industry in conjunction with the lumber business is well documented in numerous historical accounts of the city (Glens Falls Historical Association, 1978; Hyde, 1936). “Glens Falls was noted for the superior quality of its lime...” due to the large deposits of limestone close to the surface in close proximity to the Feeder Canal (GFHA, 1978, p. 15). The first barrels of lime were exported from Glens Falls via the Feeder Canal in 1834 (Hyde, 1936). The availability of abundant scrap lumber to fuel the kilns was the other key factor in the successful development of the lime industry in the city.

One account compares the steel foundries of Pittsburgh with the “almost unrivaled economic position” of Glens Falls due to the combination of extremely pure limestone and the waste scrap from the lumber mills (GFHA, 1978, p. 57).

Wood-burned lime was used for numerous applications including sugar refining, bleaching flour, smoothing wire, agricultural use, and in the production of mortar, bolts, screws, rubber, leather, ledger paper, and bearings (Davidson, 1982). The word “Jointa” was originally used as a description of superior lime, and due to its superior characteristics, the lime from Glens Falls became commercially known as “Jointa lime” (Davidson, 1982). The lime industry in Glens Falls was characterized by many small firms with numerous changes in ownership, and by 1877 five of these companies had formed the Associated Lime Companies acting as a joint stock company (Davidson, 1982). By the late 1800’s, the lime business also supported a large barrel-making industry. “A cooper was seldom unemployed” (GFHA, 1978, p. 57).

The Jointa Lime Company was started in 1851 by John Keenan, an Irish immigrant who had started lime production at Smith’s Basin in nearby Kingsbury, in partnership with Halsey R. Wing. Keenan was also instrumental in the development of the railroad in Glens Falls, and served as the first president of the Glens Falls Railroad Company. The partners in the Jointa Lime Company changed over the next several decades, and by 1880 the business was thriving with the purchase of the Cool and Clark Lime Company by the Jointa Lime and Glens Falls Lime companies. Two new kilns were reported under construction and the company had built a switch connecting with the railroad which eliminated the expense of hauling the limestone to the depot (Hyde, 1934). On March 8, 1900, the Jointa Lime Company was incorporated under the ownership of Joseph Fowler, Charles Fowler, Stephen L. Goodman, Samuel B. Goodman, and Thomas Coolidge (Davidson, 1996).

The company and its quarry were located on a bend of the canal known as the “Black Snake,” a location previously on the outskirts of the city but now in the heart of the city, and the site of operations for the Jointa Lime Company today (GFHA, 1978, p. 56; Davidson, 1996). In 1903, Jointa Lime joined with the F. W. Wait Lime Company and “...occupied



twenty acres along the Hudson River and employed one hundred men” (Davidson, 1982, p. 2).

Early work in the quarry of the Jointa Lime Company was characterized by manual labor as limestone was mined and loaded onto horses and wagons. “Limestone in chunks was carted to the kilns in heavy wagons and thrown in by hand” (GFHA, 1978, p.57). The development of steam and mechanical power greatly changed work in the quarry. A 1928 photograph of operations at the Jointa Lime Company show a Marion Type 7 steam shovel loading stone into a dump truck without the assistance of any workers except the shovel operator (Davidson, 1996). Based on an early description of similar limestone quarrying operations at the nearby Glens Falls Cement Company, the purchase of a No. 61 Marion steam shovel in 1916 in that quarry replaced 25 to 30 men (Bayle, 1949).

The decline of the lime industry followed that of the lumber industry in the area. For a brief period coal was imported from Pennsylvania as fuel for the kilns until that was no longer a profitable operation. The last kilns operated until 1938, and John Davidson, vice-president of Jointa Lime, estimates that the company produced wood burned lime until sometime in the early 1900’s. At that time, the Jointa Lime Company, the sole survivor of the lime industry in Glens Falls, began the production of crushed limestone for road construction (Davidson, 1982). Currently the company also provides contract crushing service and sells to contractors and municipalities within a 40-mile radius of Glens Falls (Dun & Bradstreet, 1997).

The operations of the quarry at Jointa Lime have changed dramatically in the last several decades. In 1993 a new plant was built on the floor of the quarry, and the plant at the top of the quarry was eliminated. An undated photograph shows the old plant on the rim of the quarry, approximately five stories high, linked to the quarry by a conveyor system (GFHA, 1978). On June 29, 1949, the old plant was destroyed by fire and was rebuilt (Bayle, 1949). Moving the plant to the quarry floor increased productivity by eliminating the need to move the stone to the top of the quarry for processing, and reduced the work force by 50 percent. Currently the quarry operations of drilling, blasting, and moving the large limestone pieces to the crusher require the labor of only five to six men. The new equipment of today is safer and

more efficient, although as Davidson suggests, there is still some resistance from workers when changes are made (Personal interview, July 11, 1997). The quarry employees work one shift starting at 6:00 a.m. and work sometimes as late as five or six p.m. Employees are trained on the job, and new hires are usually referred by current workers. The employees are not and have never been unionized because, as John Davidson (1982) writes, "...they feel they are treated with respect in the company" (p. 7). Most of these workers are laid off when the quarry shuts down for one or two months during the winter due to the difficulty of crushing stone at cold temperatures.

The offices of the company are located at the rear of 209 Warren Street in a small building which dates back to the 1880's. The interior of this unassuming 1,200-square-foot office with its old oak roll-top desks and a carved oak mantel over the now dormant fireplace recalls the long history of this unique firm. The office also still houses one of the original scales used to weigh the trucks as they left the quarry. In 1988, the Jointa Lime Company was sold to the D.A. Collins Construction Company of Mechanicville, New York, which continues the limestone operations with a small but steady work force. Jointa Lime celebrated its 145th anniversary in 1996, and serves as an important reminder of a vital business in the early industrialization of Glens Falls. Product obsolescence, or a decline in the use of lime, has decreased the level of operations at Jointa Line. As a branch location of a larger construction company, the possibility of closure increases.

### **Glens Falls Cement Company, Inc.**

The natural limestone deposits along the "Great Bend" section of the Hudson River also provide the natural resources that are the foundation of another major industry in the city of Glens Falls, the manufacture of cement. The Glens Falls Cement Company, Inc., located at 313 Lower Warren Street only a short distance south of the quarries at the Jointa Lime Company, celebrated 100 years in business in June 1993. Frank W. Wait and Samuel Goodman of Jointa Lime originated the concept of using limestone from the Jointa Lime quarry for the production of cement. The Glens Falls Cement Company produces high-quality

Portland and masonry cement sold under the trade name “Iron Clad” for construction and road infrastructure. The company currently serves 400 customers in New York and the New England region and sells to contractors and pipe and block companies (Dun & Bradstreet, 1997). Due to the expense of shipping cement more than several hundred miles, the Glens Falls Cement Company relies primarily on the economic strength of the New York and New England construction markets. The first and oldest cement plant in New York State, the business has undergone drastic changes since it was first incorporated in the name of Joseph I. Fowler, F.F. Comstock, and Jennie F. Sheed on June 17, 1893 (Metevier, 1993a). With an emphasis on automation and process improvements, an account of the company’s progress declared: “While the process from quarry to pack house takes the same route it did in the beginning, the methods and equipment used have changed in ways that would cause early cement workers to marvel” (Metivier, 1993a, p. 35).

A detailed account of the operation and improvements at the cement plant from 1983 through 1949 is provided in a history written by Francis L. Bayle, the plant’s superintendent from 1922 until his retirement in 1962. Bayle was also the son of George F. Bayle, Sr., who served as president of the firm from 1905 to 1933 and is credited with the early success of the company. The senior Bayle was also responsible for the conversion of the plant from steam power to electricity in 1916 and for a massive modernization program in the 1920’s. An important community leader, Bayle was inducted into the Glens Falls Hall of Fame in June, 1993 (Metivier, 1993a).

As described in a company brochure, cement production involves an intricate series of processes which include crushing, preblending, raw milling, blending, burning, cooling, finish grinding and storage. Early cement activities were extremely labor intensive, and quarrying was a large part of the operation. Bayle (1949) reports in the period prior to 1906 that more than 600 men worked with horses and wagons in the old quarry, many of whom were eventually replaced by steam shovels and steam locomotives. In 1916, the first Marion steam shovel was purchased for use in the quarry replacing 25 to 30 men (Bayle, 1949). “The Marion steam shovel played a vital role in easing the tremendous labor in moving limestone to

the crusher” (Metivier, 1993a, p. 22). “By 1949, there were scarcely more than 30 men including the watchmen in the quarry” (Bayle, 1949, p. 14).

The original plant of the cement company was destroyed by fire in 1899, and a new facility with “a greater producing capacity with consequent lower cost of manufacturing” was operational by July 1902 (Metivier, 1993a, p. 4). As Bayle (1949) also described, the duties at the cement plant could be dangerous and required workers to act with caution: “The manufacture of cement at best has always been a hazardous undertaking...blasting, massive machinery, electricity, dust, and heavy repair jobs and construction make the work in a place of this nature very dangerous...” (p. 31).

The Glens Falls Cement Company originally leased quarrying rights from Jointa Lime until 1906 when increased capacity required the opening of a new quarry. The company established a 500-acre quarry directly across the Hudson river in the town of Moreau and constructed the only private bridge across the river which is still used by the company. By 1993, due to the many improvements cited above, the quarry produced sufficient limestone in a 40-hour week to operate the cement plant for a seven-day week, 24 hours a day (Metivier, 1993a). In addition to quarry workers, early operations of the cement company also employed 16 to 20 coopers making barrels until the barrels were replaced with cloth bags. In June 1949, cloth was replaced by the use of paper bags, and the bagging room was reduced from 20 men to only two.

For transporting the early barrels of cement, the company utilized the Feeder Canal until the last barge shipment in 1933 or 1934 (Bayle, 1949). The bulk shipment of rail cars using the Delaware & Hudson Railroad was started in 1922, and truck transportation of bags and bulk cement began in 1959 (Metivier, 1993a).

The company also operated a machine shop, a blacksmith shop and a tinsmith shop (Bayle, 1949). The foundry was discontinued in 1923. According to Bayle (1949) it was also around 1923 that the shift hours were standardized to three 8-hour shifts from two 11- and 13-hour shifts. Prior to this many men had also worked 7 days per week. Bayle’s (1949) account provides significant detail on the operations and the nature of the “heavy” work in the plant.

Anecdotal stories about several long-time workers in the first half of the century provide rich detail about workers in the plant. Bayle (1949) recalls an Irishman, “Paddy” Peters, retired in 1931, who worked for more than 30 years in the plant as chief mechanic and foreman of the machine shop. “One of the most interesting employees ever to be at the plant... ‘Paddy’ ...knew every bolt and nut in the plant and could give from memory such things as the pattern number of any pattern....the diameter and length of any shaft...” (Bayle, 1949, p. 28).

The capacity of the mill was doubled in 1923 and the new kiln chimneys, part of the conversion from a “dry” process to a “wet” process, at 250 feet high, quickly became city landmarks. Humphrey (1960) described the monstrous power of the kilns, as “...industrial giants, spewing angry white heat into their cavernous bellies...” Before the towers were felled in 1967, they were a symbol of the community’s prosperity, “...when smoke was coming from all three stacks, the business in the area--not just at the cement plant--was good” (Metivier, 1993a, p. 26).

A 1940 article reported that wages at the cement plant averaged \$1,500 per year or 25 percent higher than the U. S. average of \$1,200 per year. Also, 63 percent of the employees were over the age of 40 compared to a national plant average of less than 40 percent over 40 years old, demonstrating the longevity of employee service at the company (Firm here cited...,” 1940). The plant was unionized in the late 1930’s, and today the cement workers are represented by the Cement, Lime, and Gypsum Workers Union (Bayle, 1949; Hartley, 1991). From 1959 until 1981 the Glens Falls Cement Company was a subsidiary of the Flintkote Company, a national manufacturer of building material. In 1981 it was acquired by Moore McCormack Cement Company, and in 1988 the plant was purchased by Dyckerhoff AG, a German cement manufacturer.

In 1960 a local reporter toured the cement facility and described with awe the operations such as the narrow gauge train loaded with open box cars crossing the bridge across the Hudson, and the machine shop and electrical department which contained “...so varied and complex an assortment of technical switching equipment, we dared not get too curious...yet it is the heart of the whole” (Humphrey, 1960). The train and its driver “Blinker” Mead, who

drove the locomotive from the quarry to the mill for many years, were replaced in 1963 by a conveyor belt system (Bayle, 1949). Front-end loaders and end dump trucks also replaced the electric steam shovels and side dump trucks (Metevier, 1993a). By 1973, the “heart” of the plant was the new central control room manned by operators who could monitor and control many functions throughout the plant. The central control panel allowed operators to simultaneously monitor the quarry, crushing, reclaim, and raw grinding operations. Television cameras were used to monitor the kiln, and an X-ray analyzer-controlled kiln feed and cement quality.

Computerized automation of the plant was initiated in 1991. Today, operations at the company are highly automated, and feature one of the most advanced control monitoring systems in the industry. “Computers and video screens assist control operators in monitoring every operation in the facility” (Metevier, 1993a, p. 27). A photo in Metevier’s (1993a) account of the firm shows a single operator controlling the required output with the use of modern packaging machinery. A 26-ton load of cement can be loaded onto a track in only six minutes. The blackboards, once used throughout the plant to list the exact measurements and ingredients for cement making, have long been replaced by computer-controlled process systems (Humphrey, 1960; Metevier, 1993a). Operations at the company resemble the continuous-process technology of Blauner’s (1964) oil and chemical plants which Blauner suggests are the most highly mechanized forms of manufacturing and are characterized by enormous capital investment.

The ultimate goal of the company is to automate the cement manufacturing process fully. Michael B. Clarke, president of the firm since 1985 stated: “Automation will make the process easier; it will give us more information and a better capacity to diagnose problems. There may be a difference in the way of doing things, but it’s not going to change employment other than to add new skills, which we’re training for now” (Hartley, 1991). When the plant is running, it operates at full capacity 24 hours a day, seven days a week and shuts down only for an annual six-week maintenance (Hartley, 1991). The shutdown may be extended as it was in 1991 when business conditions were negatively impacted by the New England recession

(Hartley, 1991). However, even with business peaking in the summer and fall, employment remains steady and is not seasonally adjusted for production fluctuations (Dun & Bradstreet, 1997).

The Glens Falls Cement Company is one of only three cement manufacturers in the state of New York. Through continuous capital investments and ever-increasing automation, this massive facility exemplifies today's process manufacturing operations which require skills for monitoring computer controls and troubleshooting. Metivier's (1993a) booklet contains numerous descriptions of modern automation; the remote-control limestone scraper; the computerized dispatch shipping system; and the "nerve center" or control room which controls the crusher in the quarry to the finished cement product in the storage silos. Additional improvements also include a three-million-dollar investment in pollution control devices following a \$100,000 fine in June 1997 from the New York State Department of Environmental Conservation for excessive emissions of hydrogen oxide and visible dust (DEC fines cement..., 1997).

The Glens Falls Cement Company now employs 125 people with sales ranging from \$25 to \$30 million annually. This is a dramatic increase in sales from even the prosperous post-war era of the 1950's when sales averaged four to five million dollars per year and the company employed more than 200 workers. The history and operations of this firm are an illustration of increased productivity in process manufacturing through continued capital investment in automated equipment even as this plant has experienced several ownership changes. Bayle's 1949 account of the company contained many details of the employees and their work at the plant. In sharp contrast, Metivier's publication, prepared for the company's 100th anniversary in 1993, focuses almost exclusively on the addition of capital equipment and the numerous productivity improvements. More characteristic of the continuous process factory, the nature of work at this plant has changed from providing skill to accepting responsibility for the performance of the machines (Blauner, 1964). While Blauner (1964) suggests that this added responsibility incurred by workers adds a new source of dignity and worth to manual work, it also, as demonstrated by the decrease in employment at the Glens

Falls Cement Company, requires relatively fewer workers. Employment levels have remained constant and the company remains dependent on the construction market conditions within a 200-mile radius due to the costs of shipping cement. The company has successfully survived several ownership changes but is still susceptible to subsidiary consolidations.

### **Troy Shirt Makers Guild, Inc.**

The manufacture of shirts and collars was a mainstay of early industry and employment in Glens Falls. A brochure, "Glens Falls and its Enterprises," published by the Warren Realty Company in 1906, described the numerous shirt companies as employing large numbers of people and "... aiding the general prosperity of the whole community" (p. 2). The city directory lists nine shirt and collar companies in Glens Falls for the year 1915 (H.A. Manning, 1915).

The Troy Shirt Makers Guild, Inc., which closed its doors in 1996 due to a combination of poor management and increased foreign competition, had been in business for more than ninety years employing many in the Glen Falls area, especially women operators. The company was originally started as the McMullen-Leavens Company in 1902 by J. Robert McMullen and Walter P. Leavens who had both been previously associated with the Joseph Fowler Shirt and Collar Company located on Glen Street in the city (EBASCO, 1949). The Fowler Company was destroyed by fire in April 1902 and subsequently put 800 operatives out of work delivering a "...severe economic blow to Glens Falls" (GFHA, 1978, p. 109). McMullen and Leavens hired many of these displaced workers with the start-up of their enterprise in that same year, and by 1913 employed 500 workers (McMullen-Leavens Company..., 1939).

Leavens died in 1922, and J.R. McMullen became the sole owner of the business until his death in 1946 (EBASCO, 1949). The corporate minutes for 1926 through 1944, which are now in the collection of the Chapman Historical Museum, state that McMullen was paid \$10,000 for each of these years as general sales manager and purchasing agent. McMullen began the manufacture of dresses in 1935, and purchased the business of the Troy Shirt



Makers Guild in 1940 from Cluett, Peabody & Company (EBASCO, 1949). As detailed in a business study of the company, the McMullen-Leavens Company manufactured exclusive, high quality shirts and dresses under private labels for elite department stores throughout the United States. They had also built a reputation for specialty items which used exclusive fabrics unavailable from other manufacturers at that time (EBASCO, 1949).

As indicated in the EBASCO (1949) study, McMullen managed and supervised every aspect of the operation including styling, selling, and production, and "... upon his death no controlling head remained" (p. 12). His legal heirs took control of the business in 1946, and it was split into two operations. Anna Flood, his sister, controlled the McMullen dress business, and Mrs. Henry J. Mangan, a niece, operated the Troy Shirt business. The dress business changed hands several times, and under the ownership of the Malcolm Starr Corporation, a conglomerate manufacturer, was finally closed in 1975. The dress manufacturing was moved to a Hong Kong factory (McMullen's concludes..., 1976). Sixty-eight workers lost their jobs with the closing of the dress factory in 1968 although some found employment at the Troy Shirt Makers Guild (McMullen Co. sale..., 1976).

By 1939, according to an article in The Glens Falls Times, McMullen-Leavens was the largest employer in the city with 750 employed at the 71 Lawrence Street factory ("McMullen-Leavens Company is..." 1939). The company occupied an attractively landscaped 100,000-square-foot building, and operations were described in a local newspaper article:

Sun-lighted, airy rooms and all up-to-date factory conveniences provide, as nearly as is humanly possible, ideal working conditions...The process...is a model of painstaking care...which advances with such smoothness and efficiency as to be a marvel...In the stitching room high-powered sewing machines whir and drone as hundreds of operators perform their individual tasks on dress or shirt backs and fronts, on collars or cuffs, on buttons, yokes, or kindred parts" ("McMullen-Leavens Company is...", 1939).

A total of 702 workers were employed at the shirt factory in 1949. The turnover was high at the nonunion shirt and dress factory and a review of the wage rates was recommended by the EBASCO consultants. The EBASCO (1949) report also provides information regarding the industry at that time, and suggests that a large capital investment was not required as the

machine units were small and light, and could be housed in a few hundred square feet if necessary. The EBASCO Consultants (1949) report describes the process of manufacturing wearing apparel:

In their simplest form, the operations, which consist of designing the garment, cutting the cloth, sewing the pieces together and pressing the assembled garment, call for a pair of scissors, a hand needle or a foot-power sewing machine and a pressing iron. Present-day factory production of apparel, in its most mechanized form, makes use of high-speed electrically driven cutting devices, power-driven sewing machines and pressing machines (p. 23).

The study also suggests that unlike other industries which had transferred the pace and skill of the operator to the “ultra-modern” machine, “...the quality and quantity...still depends principally on the operator and how he guides and manipulates the materials and equipment” (EBASCO, 1949, p. 24).

The empty and neglected four-story, L-shaped brick building on the corner of Lawrence and Cooper Streets today bears little resemblance to earlier photos of the prosperous shirt factory. When the factory was closed in the spring of 1996, approximately 140 workers were permanently laid off (Richmond, 1996). Elizabeth “Betty” Regan Ormsby, who had been a machine operator at the Troy Shirt Makers Guild, Inc. for 50 years, worked up until the last day on March 22, 1996. She met with me on June 24, 1997, and talked about her work at the shirt factory. Originally from Hague, New York, Ormsby graduated from high school in 1936, and started work in the apparel business in the early 1940’s. Her first job was at Native Textiles, a manufacturer of lace located on Warren Street. Several of Ormsby’s relatives also worked in the apparel industry; her mother-in-law, Lily Regan, had once been a machine operator at the Clark Brothers glove factory, and her cousin, Agnes Whalen Zarneck, set pockets at the Troy Shirt Makers Guild, a process which Ormsby noted is now done by machine.

Berry Ormsby’s first job at Native Textiles was to separate lace by hand, a function which was soon switched to a machine operation. She indicated her dislike for the machine process, which also required fewer workers, and applied for a position at McMullen-Leavens. Ormsby seemed amazed that I would be interested in her factory experiences, and was

somewhat reticent about describing her functions at the shirt factory. She arranged to have one of her former coworkers, Beverly Bolster, also meet with me. Bolster has an equally long experience in the industry working at Hill-Day, a shirt and blouse manufacturer in South Glens Falls until that company closed in 1965. Bolster then worked at the Troy Shirt Makers Guild for 31 years until it closed. Bolster's family was also actively involved in Glens Falls industry; her sister, Betty Bolster Carpenter, had worked at the Clark Brothers glove factory, and her father, brother, and uncles had all been employed at Finch, Pruyn & Company at different times.

Betty Ormsby, 80 years old and still very active, started in 1946 at McMullen-Leavens as a presser. This job required pressing dresses in the ironing room using gas-heated flat irons which she described as very hot and heavy. She stated that these irons were eventually replaced with electric irons. Her responsibility was to spray and press the seams of the dress which could be a difficult task depending on the fabric of the dress. She remembered a cotton chambray fabric which wrinkled very easily and was difficult to press, and recalled that the work room became extremely warm due to the operation of the gas-heated irons.

In time, however, Ormsby moved to the cutting room stamping neck bands with the various store names. Using a hand stamping machine, she recounted the skill it took to make sure that the names were straight and centered on the collar; an operation that was eventually done by machine. Up until the time the factory closed, Ormsby trimmed collars and cuffs using a sewing machine fitted with a sharp cutting edge to trim the excess fabric from the collars and cuffs after they had been stitched. The machine was activated by the operator's knee while she was seated at the machine. Ormsby was the only collar and cuff trimmer at the factory, and told me that she "couldn't make too many mistakes or she would have been replaced." Many of the workers worked on a piece rate wage system, with Ormsby trimming 300 to 400 shirts per day. Wage ledgers for the company now on file at the Chapman Historical Museum show piece rate earnings for a worker in 1950 as \$31.00 for a 40-hour week, and \$41.11 for 43.25 hours of work in 1963. Ormsby said "she never got rich" at this job.

Beverly Bolster, now a spry 71 years old, operated a foot-pedal activated machine which notched the shirt collar with holes used to line up the body of the shirt for sewing, completing “hundreds per day.” The machines they used were all original equipment, and were frequently repaired and refurbished. Both women said the machines were difficult to learn but all training took place on the job. Once having mastered the machine, however, it was possible to talk and look around while working. They even recalled one woman who had placed a mirror on the wall in front of her so she could keep track of the room’s activities behind her. As they described it, this was a very social and cohesive group of women who had worked together for many years. The work was grouped by room, as described by Bolster, and employees tended to socialize and become friendly with the others in their room.

The facility was air-conditioned and the women worked Monday through Friday 8:00 a.m. to 4:00 p.m. with an occasional Saturday morning. Over the years layoffs were infrequent lasting only a short period of several weeks, and were always assumed to be temporary based on production requirements. Betty Ormsby remembered the company cafeteria and generally found the factory a pleasant working environment. Both women miss the work and would prefer their old jobs to forced retirement. Unable to find similar jobs in the past year, they have collected benefits under unemployment and Trade Readjustment Act (TRA) benefits provided for job loss due to foreign competition.

When the ownership changed in 1993 to the Tennessee-based Tom James Company, the cuff and collar room was rearranged for efficiency of the work flow and operation, but neither woman liked the new set-up, nor did they feel it improved production. The Tom James Company also implemented computerized cutting in the cutting room, but that also failed to produce the quality of products required. Of the companies studied, this is the only documented case of the failure of automation to improve quality and production. Many of the workers felt that the new management sacrificed quality, and as a result, the company lost almost half of its customer base (DeMasi, 1996a). The Lawrence Street operation was finally closed after three years of unsuccessfully attempting to attain their goal of \$15 million in sales and employment of 300 (Richmond, 1996). Most of the equipment in the building was moved

for use at the Tom James Company operation in New Orleans and the remainder was sold (Moving out..., 1996).

In 1992, Henry Pauquette, a former marketing and manufacturing manager at the Troy Shirt Makers Guild, branched out and purchased the Elena J. Shirt Corporation in Dunmore, Pennsylvania. Pauquette's father had started as a cutter at the Embassy Shirt Company which, as mentioned previously, operated until 1977 in the former Clark Brothers glove factory at 20 Elm Street. During his time at Troy Shirt, Pauquette remembers many family members working together and even recalled three generations of women all employed at the same time in the factory.

Pauquette now operates a small sewing operation as part of his larger Pennsylvania operation at 153 Maple Street in Glens Falls, which I visited on July 8, 1997. He employs about 30 former employees of the Troy Shirt Makers Guild, all women. As Pauquette describes, there are in excess of 100 operations in the manufacture of a high quality dress shirt, and he is able to utilize the skill and experience of these local workers. His is one of only three custom shirt manufacturers remaining in the United States. He was quick to note the finer points of manufacture as these shirts retail for an average of \$150 in certain new York department stores. His operation resembles the EBASCO (1949) description presented earlier; a small rented area on the second floor of what was originally a shirt factory with 30 sewing machines purchased from the Troy Shirt Makers Guild, circa 1940, lined up side-by-side. While the equipment is not state-of-the-art, it does the job and most of the women can perform routine maintenance themselves. This is labor-intensive and specialized work requiring skill starting with the cutting of the fabric to the final finish on the sleeve plackets and button holes. No union represents these workers.

Although Pauquette would like to enlarge his operation in Glens Falls, citing the availability and quality of the labor market, the closing of the Troy Shirt Makers Guild effectively ended a long era of apparel manufacture in the city. As a result of the consolidation of corporate locations, these jobs are no longer available in the city. Many of these displaced employees have long and successful work histories at the shirt factory. However, as Shafer,

Choppa and Siefker (1993) suggest, experience in a declining industry is not easily transferable to other industries. The ability to operate only older equipment makes it difficult for these workers to obtain jobs in more automated settings.

There is also a reluctance, as Smaller (1993) notes, on the part of older workers such as Ormsby and Bolster to seek vocational change following industry job loss as both only halfheartedly looked for retail jobs. It also became obvious through the course of our interview that it wasn't only the making of shirts that was missed, but the social aspects of the job were also very important to these workers. A successful vocational change would have to address this as well as other needs in order to attain the levels of job satisfaction previously experienced (Smaller, 1995). Unfortunately, as many have suggested, vocational change of older workers with long histories of work in declining industries especially women, is difficult at best, with few able to successfully locate viable and meaningful employment (Smaller, 1995; Shafer et al., 1993).

Of all the companies profiled for this paper, the Troy Shirt Makers Guild, Inc. demonstrated the fewest changes in terms of automation and productivity increases. The manufacture of high quality shirts is still done almost the same way it was 50 years ago. As several articles suggested, the attempts to automate and speed up production actually sacrificed quality causing the company to lose valuable business (DeMasi, 1996a; Richmond, 1996). Attempts to increase profitability with automation were unsuccessful in sustaining the operations and jobs of the Troy Shirt Makers Guild in the face of increasing low-cost foreign apparel manufacturers.

### **Clark Brothers**

Another apparel company that was a large employer in the city in the first half of the 20th century was the Clark Brothers glove factory. The business, a manufacturer of silk gloves, silk underwear and silk cloth, was started in 1920 by brothers Alfred S. Clark and Robert G. Clark as an expansion of a business located in nearby Saratoga Springs, New York. Joseph H. Clark, the father of Alfred and Robert Clark, had come to the United States in 1869

from England, and is considered to be one of this country's pioneer silk glove manufacturers. He formed the Clark Textile Company of Saratoga Springs which was sold in 1919 to the Van Raalte Company ("Foreign competition...", 1969).

The original Clark Brothers factory was located at the corner of Elm Street and Clinton Avenue in Glens Falls and was incorporated in 1943. Now owned by Adirondack Scenic, Inc., a creator of scenery for movie sets employing 65 people, the building is an impressive three stories high with 72,000 square feet. A tour of the factory building revealed few interior or exterior changes with the numerous windows to provide natural light for workers and the original hardwood floors still intact. In 1920, the facility was considered a very modern textile plant, "the newest of Glens Falls industries," and employed 200 workers (Clark Brothers Manufacturing Company..., 1959). An undated newspaper article described the labor market for glove workers: "Messrs. Clark are greatly pleased with Glens Falls and the cordial reception afforded them by Glens Falls folk. Particularly pleasing is the manner in which applications for employment have been coming in." Operations of the glove factory in 1939 were described as follows:

All the yarns received at the Clark Brothers plant reach Glens Falls in the raw state contrary to general belief. All weaving, dyeing, cutting, stitching, finishing, boxing and packing is done under the one roof of the plant. These products are sold through distributors and under the distributors' brands. The plant was equipped for the manufacture of silk goods but silk was extensively replaced by rayon. Additional machinery and equipment were installed. This was necessitated because of the different processes necessary in the handling of rayon against silk. (Clark Brothers plant..., 1939).

By 1939 Clark Brothers employed 350 people, and the work force consisted of many related family members, as did most other factories in the city. At that time the company manufactured fabric gloves, and silk and rayon piece goods for underwear and foundation garments, and was described as "one of the largest plants in this part of the country." A boycott in 1939 against German-made gloves increased the demand for domestic manufactured gloves (Clark Brothers plant..., 1939).

Robert G. Clark died on January 25, 1956 and his brother, Alfred, retired in May, 1956 ending 50 years in the textile industry. Upon his retirement, Alfred Clark stated that he

was “going to miss the very friendly associations I have had with the people in our organization--everyone of them” (Announce sale..., 1956). The business was sold in 1956 to Vanity Gloves, Inc., and became known as the Clark Brothers Manufacturing Corporation. A product which is now nearly obsolete, gloves were at one time considered a “most important mark of fashion,” and it was estimated that the average American woman owned ten pairs of gloves with a dresser drawer reserved solely for gloves. In 1956 the company produced 50 different glove designs in 35 different colors for each season at a rate of 20,000 pairs per week (Humphrey, 1958).

By 1958, employment at the plant was down to 200 workers from 300 in 1957 and a one-time high of 500. According to one article, domestic glove manufacturing had seriously declined due to increased foreign competition (Humphrey, 1958). Some job titles suggest the variety of work performed in the plant: foreman of the glove cutters, forelady of the sewing room, forelady of the laying-off room, and machinist (Clark Brothers, Inc., maker..., 1963).

The company was sold again in 1959 to Premiere Gloves, Inc. of Fultonville, and the downsized operation was moved to two adjoining one-story brick and concrete buildings at 20 Curran Street which had previously housed the Railway Express and the National Biscuit Company. The glove company became known as Clark Brothers, Inc. (Clark Brothers Manufacturing..., 1959). In December 1959 this building was destroyed by fire and rebuilt by the glove manufacturer (Fire wrecks..., 1959). The factory at 20 Elm Street was leased by Embassy Shirtmakers, Ltd. until that company also closed its doors in 1977 (History repeating..., 1977).

Employing 150 people in 1961, Clark Brothers secured a government contract to manufacture 77,000 pairs of gloves for the military and was still touted as “one of the largest glove-making facilities in upstate New York” (Clark firm given..., 1961). However, eight years later, in 1969, the company closed and competition from foreign imports, particularly products from Europe and Puerto Rico, was blamed. Sixty-eight workers lost their jobs, but all found other work in Glens Falls. Edward Rosenbaum, the president of Clark Brothers at that time, reported: “...anyone who wanted a job was placed.” Many were hired by area shirt



makers and another glove company in the city (Foreign competition..., 1969). The city directory for 1969 lists Warren Industries, Inc. at 9 Broad Street as the only other glove manufacturer. The Curran Street location was purchased by Perkins Recycling and is still used by that company.

Foreign competition as well as the demise of gloves as fashion were both factors in the eventual decline and ultimately the closing of the Clark Brothers glove business. Bluestone and Harris (1982) classify those industries which produce obsolete products as “sunset” industries. These declining businesses are also responsible for plant closings (Bluestone & Harris, 1982). However, the existence of other viable textile companies in the city in the more prosperous 1960’s provided employment opportunities for these displaced glove workers. This plant closing created a temporary layoff which was very different from the permanent layoffs now created by similar plant closings in this industry as workers are unable to locate area jobs in apparel manufacturing.

### **Glens Falls Paper Box Company**

A supplier to many of the apparel manufacturers in the city including Clark Brothers and the Troy Shirt Makers Guild was the Glens Falls Paper Box Company. The company was started in 1904 at 230 Maple Street, and was originally known as John Leggett and Son. On May 15, 1997, I spoke with Norman Radin, former owner of the Glens Falls Paper Box Company, regarding the history and operations of the company. The only factory of its type still remaining in Glens Falls, the company produced specialty boxes for shirts, gloves and other soft goods, and employed up to 35 people in the early 1900’s. The market for paper boxes was supported by demand from the apparel or soft goods factories in the Glens Falls area. Radin spoke proudly of the high quality apparel products once manufactured in the city. The company was purchased in 1935 by Bernard Radin, originally of Brooklyn, New York, from the estate of Walter Clarke. Radin moved to upstate New York in 1929, and also owned and operated the Bernie Paper Box factories in Albany and Troy. The company was operated by Radin’s son, Norman, from 1953 until it ceased operations in 1997. An article in The Post-

Star attributed the closing to economic reasons due to the loss of several large accounts as well as Radin's age. "I'm going to be 75 years old," said Radin. "I've been working here 43 years; I'm tired" (DeMasi, 1997, p. A1).

According to the Fourth Report of the Factory Investigating Commission, by 1915, the manufacture of paper boxes was a large industry in New York State with approximately 320 factories located primarily in New York City and Buffalo (State of New York, Vol. II, 1915). The commission was created in 1912 following the tragic fire at the Triangle Waist Factory in New York City "...to inquire into the conditions under which manufacturing is carried on in cities...of the state," and was primarily concerned with fire safety, child labor, factory sanitation, industrial accidents, wages and hours of work (State of New York, 1915, p. 2).

A 1915 state wage survey of paper box manufacturers included establishments in the city of Glens Falls and provided information on the scope of operations and conditions in paper box factories (State of New York, Vol. I, 1915). The 1915 Glens Falls city directory listed three box companies: one cigar box manufacturer, John Leggett & Son (Glens Falls Paper Box Company), and the Warren Box Company (H.A. Manning, 1915). According to the report, the growth of the industry stemmed from the increased use of boxes to replace paper bags for groceries, and the use of boxes for a wide range of items including cigarettes, writing paper, candy, and newer products requiring the protection of a box such as electric light bulbs . Employment in these factories increased 48 percent from 27,000 to 40,000 workers in the ten-year period from 1899 to 1909. The commission reported in 1915 that 72 percent of the factory workers in the industry were females (many of them minors) and classified paper box making as "women's work" with New York State employing 8,000 women in the industry (State of New York, 1915, p. 528).

Under the management of Norman Radin, automation of the many manual operations at the 14,000-square-foot plant was undertaken. As the Report of the Factory Investigating Committee reported in 1915, there was a certain amount of "hand work in the trade," but the machine work was increasing. Automatic machines were used for cutting, scoring, grinding, and corner cutting and staying. "Corner staying" or "ending" was the process of fastening the

corners of the box with glued strips of paper, and these machines were generally run by women. The cutting and scoring operations were usually performed by men. Many of the operatives worked on a piece rate basis.

The Glens Falls Paper Box Company became a highly automated operation, and by 1960 employed only 18 workers. By the time the business closed, a work force of only eight employees maintained production rates which Radin told me were three and four times greater than in the less automated environment. During our conversation, Radin used the wrapping machine as an example of the new technology used to improve efficiency and production. The wrapping machine, which laminates the paper to the box, was originally a two-man operation while the new wrapping machine required only one operator.

During his tenure of more than forty years, Norman Radin also purchased the accounts of several local box manufacturers, and continued to provide rigid paper and set-up boxes to numerous industries for gloves, pharmaceuticals, candy, department stores, and other soft goods. However, the market for specialty boxes in the Glens Falls area in recent years had declined with the closing of needle trades such as the Troy Shirt Makers Guild, Inc., and the Clark Brothers glove factory. Also, the advent of malls with limited and expensive storage space resulted in the use of compact, fold-up boxes rather than the use of paper boxes in many department stores. The manufacture of fold-up boxes, according to Radin, is a completely different manufacturing process, which he expressed no interest in pursuing. All of these factors contributed to Radin's ultimate decision to close the company on Friday, January 3, 1997. The machinery was purchased by the Ultimate Box Company of Green Bay, Wisconsin, and three days were spent dismantling and loading the equipment into four large moving vans for transporting to Wisconsin. Jarish Paper Box Inc. of Massachusetts bought the remaining inventory and accounts (DeMasi, 1997).

On May 29, 1997, I met and interviewed Tina M. Nichols, a 50-year employee of the Glens Falls Paper Box Company. Nichols, now 68 years old, started work in the box factory in 1946 at the age of 16. She was not interested in finishing high school at the time and was anxious to get a job, one of seven children from a large Italian family living on Prospect Street

in Glens Falls. Her family members also worked in several other Glens Falls factories. Her father was employed at one time as a blacksmith at the Glens Falls Cement Company, Inc., and both her mother and aunt worked at the Troy Shirt Makers Guild, Inc. Born Concetta Madonna, her starting wage at the box company was a meager \$16.00 per week, and she walked to work for many years. According to Nichols, there was never any union representation at the company although there was at least one unsuccessful attempt to organize. The factory worked only one shift, and the regular hours were 8:00 a.m. to 4:30 p.m. five days a week except during the busy season which required some overtime. Business typically increased in August in anticipation of the holiday season.

During her 50-year tenure at the company, Nichols worked almost all the different box making equipment at one time or another with the exception of the “ender” which she firmly stated that she did not like. “While running the ender, you had to keep your eyes on the front and back of the machine to make sure it was running okay; otherwise you would have some bad clean-up to do,” she informed me. Nichols described the operation at the box factory in the 1940’s and into the 1950’s as semiautomated with many machines which cut, folded, pasted and wrapped the sturdy, high-quality paper boxes. Although she was able to sit while operating the equipment, the job required some heavy lifting. The machinery could also be hazardous as she mentioned the time she “took a chunk out of her thumb” resulting in a trip to the hospital emergency room. The acquisition of fully automatic equipment, such as the wrapping machine mentioned above, she recalled, did make the work much easier to perform. The old wrapping machine required the operator to “spot” the box in position for the paper to be glued while the new machine automatically positioned the paper on the box.

Box making started in the basement where the flat boards were cut to different sizes, the corners were cut out, and then sent upstairs for forming and wrapping of the box top and bottom. Nichols reminisced about the “boys in the basement” and the “girls upstairs” as she showed me pictures of her coworkers at the factory from the pages of an old photo album. A series of shots from a holiday party in 1947 show the employees sitting at makeshift tables surrounded by boxes enjoying the party as Nichols identified some old friends: Shirley Yule,

Helen Harding, Eleanor Jones, sisters Flora and Mary Bush, Howard Taylor, George Chandler and foreman Bert D'Avignon, most of whom are since deceased.

In 1953 Nichols married Ruby Frank Nichols who, following a medical discharge from the Navy in 1957, was also employed downstairs at the box company until 1975 cutting board for the different size boxes. A widow since 1976, Tina Nichols continued to work at the factory until it closed in January 1997. She adamantly states that she would continue to work if there were any similar operation in this area. As Smallen (1995) suggests, the theory of external continuity as applied to older displaced workers implies that workers, such as Nichols, build a continuity of skills, people, and environment including location and specific work stations which is difficult to replace with changes in jobs and vocations.

Nichols admits that she still inspects boxes to see "how good a job they did." Patiently explaining the box making process to me, she proudly displayed several samples of boxes from the company. She recounted the story of a worker at the Troy Shirt Makers Guild, which was located several blocks away on Lawrence Street, who would walk down the railroad tracks to the box company to personally rectify a box that wasn't quite up to his standard.

A quiet-spoken and pleasant woman, Nichols beams when she remembers the "fun and good times" she had working at the box company. She fondly remembers the songs they sang and the camaraderie of the group as they congregated for work each day. Nichols clearly enjoyed reminiscing about her work and friends, and even hummed a tune the group used to sing. Several candid photographs from her neatly organized photo album showed smiling, attractive young women poised on the front steps behind the old metal gate and leaning out of the upstairs windows of the now vacant building.

Notified on the day the factory closed, Nichols and seven others lost their jobs. Nichols now seems mostly disappointed that the opportunity to work at a box factory simply doesn't exist in this area. Although the past several years had seen a downturn in business with occasional layoff days due to lack of work, she had not anticipated that the plant would close. Her disappointment obvious, she still remembers the hard work combined with the good times at the factory, and just seems sorry that it is over. She expressed no interest in

working in another factory in the area, telling me she was “too old” and, citing health problems, did not feel up to starting over again.

The original three-story brick building which housed the Glens Falls Paper Box Company at the corner of Maple and Orchard Streets now stands for sale. Built four bricks thick with 12” by 12” beams, it serves as the last reminder of a small but unique business that evolved with the growth and industrialization of the city. An employer to a small group of dedicated workers for almost 100 years, this company survived the transition from manual labor and horse and wagon deliveries to a successful and automated factory. However, the decline in the demand for specialty boxes and the inability of this factory to manufacture the newer style boxes without extensive capital investment to purchase additional machinery ultimately caused the company to close. Unlike some of the other companies presented in this paper which have kept up with changing markets and the investment required to manufacture new products, Radin, in light of his desire to retire, and lacking a successor, opted rather to close the factory. Increased product obsolescence, the owner’s age and retirement interests, and the decline of the apparel industry in the area were all key factors in the demise of this business. As Voster (1995) suggests, not only are jobs lost when plants such as Clark Brothers and the Troy Shirt Makers Guild close, but the suppliers to these plants such as the box company and other components of the community system are negatively impacted.

### **Native Textiles**

Native Textiles, one of the largest U.S. producers of Raschel lace and tricot fabrics used in lingerie and active wear, is located at 211 Warren Street in Glens Falls. The Glens Falls location of Native Textiles is generally reported to have been started in 1916 as H. & F. Binch, Inc., by brothers Herbert Binch and Francis Binch of England. One article, however, reported the starting of the firm in 1885 at this site and employing 40 people (Humphrey, 1958).

Herbert Binch died in 1935, and the complete management of the firm was assumed by Francis Binch as president and treasurer of the company. Florrie Binch, the daughter of

Herbert Binch, acted as vice-president and secretary. In 1943 the stock of the company was sold to Native Lace Works, Inc., which was founded in 1934 by entrepreneur Leon Birnbaum in Hightstown, New Jersey. At that time it was "...the desire of Francis Binch to relinquish the management due to his advanced age and uncertain health" (H. & F. Binch, Inc., is acquired..., 1943). By 1946, Native Laces & Textiles, Inc., operated several mills in the east including mills in Dallas, PA; Middletown, CT; Hydestown, NJ; the Bronx; and Lawrence, MA, as well as the Glens Falls location.

As Humphrey (1958) reported, by 1958 the manufacture of lace by machine had almost eliminated the process of hand-made lace. She described the lace-making machine as "one of the marvels of the manufacturing world." Humphrey (1958) detailed the mystery of these machines:

It is almost impossible to comprehend that the mammoth, complex machines, which operate at an ear-shattering, eye-dancing pace, coupled with the frightening look of these mighty monsters being fed constantly with lovely threads could turn out such delicate, soft beautiful fabrics.

The company became famous for its duplication of imported lace designs which were so perfect that they were difficult to distinguish from hand-made lace. By 1958 the company employed 500 people in Glens Falls operating 24 hours a day, seven days a week. (Humphrey, 1958).

In 1976 the company was acquired by the Hanson Trust Ltd., a British holding company which owns a number of foreign and domestic companies, and Native became a division of Hanson's Carisbrook Industries. In 1993, Native Textiles and 33 other Hanson companies were reorganized into a new U.S. conglomerate, U.S. Industries, Inc., which is listed on the New York stock exchange with total annual revenues of about three billion dollars (Lang, 1997b).

Native Textiles consolidated its operations in 1995 by moving the knitting operations from Dallas, Pennsylvania to a new 116,000-square-foot facility on Corinth Road in Queensbury. One hundred new jobs were created in the Glens Falls area. The company cited the increasing cost of transporting fabric from Pennsylvania to the Warren Street plant for

dyeing and finishing as the major reason for the construction of the \$6.5 million facility (Lang, 1997b). The company provided me with a Pennsylvania newspaper article which detailed the operations of the plant in Pennsylvania in 1982 touting the company as one of that area's "prime industries" (Luke, 1982). In Dallas, Pennsylvania, Native had employed 155 workers with an average age of 46, and an average length of service of 17.5 years. Twenty-seven percent of the work force was female with "a number of women working in the plant's knitting department, which historically was reserved for men" (Luke, 1982). The workers were represented by two unions, Local 401, Teamsters Union, and Local 1824, Amalgamated Clothing and Textile Workers. Although the move created employment for the Glens Falls area, it actually was a decrease in manufacturing jobs overall supporting the argument of job relocation across geographic locations rather than actual creation of new jobs (Davis, et al. (1996).

While some Dallas employees moved, requiring worker relocation, many were permanently unemployed as their jobs were moved to the Glens Falls region. It is also interesting to note that this textile plant chose to move operations to the Northeast and to a facility with union representation. The Glens Falls workers are represented by the Communications Workers of America, Local 1139. In response to the company's move north, Bill Paculavich, General Manager, was quoted as saying, "While many northeastern textile mills have moved south, Native remains committed to the area, and we see a strong indication of growth for our future" (Lang, 1997b, p. 10). On the union, Paculavich said, "The union members are responsible people who understand that increased production equals increased profits that benefit everyone" (Lang, 1997b, p.11).

Continuous improvements in technology at both the Dallas plant and the Glens Falls location were emphasized in several articles written about the company. In the early 1980's an average of two million dollars was being spent annually on the modernization of the Warren Street plant. By 1984 the plant had computerized dyeing and color matching equipment with computerized knitting of lace predicted for the near future. The skill of the worker was still important, however. Philip Cassella, plant manager at that time, commented: "Dyeing still



remains an art...the colors that we produce have to be matched to the buyer's specifications by the dyer's eye" (Native Textiles, 1984). Increases in the speed of the knitting machines at the Dallas plant resulted in knitting speeds of 1800 revolutions per minute compared to 275 revolutions with the old machines. The plant manager was quoted as saying, "You can barely see the movement on the new machines" (Luke, 1982).

Facing ever increasing global competition, "...Native continues with research and development, more advanced technology, and continued modernization and improvement..." (Lang, 1997b, p. 10). The company operates three production facilities with ten departments, three shifts per day, five days per week. Much of the company's success is attributed to its dedicated work force, referred to as associates, and the significant number of highly skilled and easily trainable people in the area. The company has a policy of promoting from within, and utilizes an active training program which includes extensive computer training.

Quality is an important component of the company's success, and Native recently received the prestigious "Lace Supplier of the Year" award from Sara Lee Intimates. Recognized worldwide for its quality products, Native exports 40 percent of its lace products to the Orient, Australia, and South America. In 1983 the company employed 425 people with annual sales of \$58 million and in 1995 employing approximately the same number, annual sales ranged from \$85 to \$90 million. Annual output has also increased from 250,000 pounds of fabrics and laces in 1984 to 300,000 pounds in 1997 (Lang, 1997b).

Native Textiles has shifted jobs from one geographic location to another and the city of Glens Falls has benefited from these additional jobs. However, in 1982, the company had employed 400 area residents and 155 employees in the Dallas, Pennsylvania factory which is actually a total decrease of 130 jobs. A successful operation, the company has increased productivity through automation and computerization with an overall reduction in labor. The consolidation of operations by Native Textiles, however, created additional manufacturing jobs for the Glens Falls area, and the company appears fully committed to growth in sales and employment as required. It is not clear whether Native Textiles left Pennsylvania due to labor or union issues; however, the company cites the availability of skilled workers in the Glens

Falls area as a primary factor in their success. One of the only textile companies remaining in the city of Glens Falls, the company offers entry-level employment opportunities in knitting, thread draw and dyeing machine operators, inspectors, maintenance, cutting and shipping functions (Expo, 1982).

### **Ames Goldsmith Corporation**

Ames Goldsmith Corporation, a leading manufacturer of silver-based products, is a small company with a long history in the city of Glens Falls. Located at 21 Rogers Street, across from an abandoned silk mill, this chemical company is the third largest of only six silver processors in the country. The company processes 20 percent of the total silver consumed in the U.S. According to a company brochure, the company manufactures a variety of high quality silver compounds used in numerous applications such as silver nitrate for photographic film and electronic materials, silver oxide for batteries, catalysts, and water purification, and silver powder and silver flake used in electronic components.

Founded in 1861 by Merritt Ames, a preacher and “gifted orator,” the company was originally known as the M. Ames Chemical Works, Inc., and started in a small frame building on Sherman Avenue. Based on a keen interest in photography, Ames is credited as being among the first to commercially develop methods of recovering precious metals from waste based on his successful recovery of silver from the wet baths of early photographers. One article reports that Ames first did his refining in the kitchen fire, but soon “...stepped into what was the latest thing in a modern refining plant” (M. Ames Chemical Works, 1961). The original location of the company on Sherman Street is near what is now the Ames Apartments. An 1890’s photograph shows a small two-story wooden building with Merritt Ames standing in the doorway, and raw materials being delivered by a horse-drawn wagon. Ames was active in the business until his death in 1910 at the age of 85. In 1933 the operation was moved to the present location on Rogers Street in a small industrial area which is adjacent to the original tracks of the Glens Falls railroad.

On July 11, 1997, I spoke with the great-grandson of founder Merritt Ames, Ames

Barber, who was active in the business for many years. He served as president of the chemical company from 1967 until 1972 following the death of his father, William Barber, in 1966. William Barber, a grandson-in-law of the founder, had been affiliated with the family business since 1916. The company was sold to GAF Corporation in 1972, and in 1975 the plant was completely shut down. In 1979 it was purchased and reopened as the Ames Goldsmith Corporation by Ronald Davies, Donald Goldsmith, and George Benvegno (Dun & Bradstreet, 1997).

Ames Barber recounted the times before more modern communications, and how he obtained current silver prices via telegraph versus the on-line computer capabilities used today. During his tenure the company employed about 50 people; men worked the factory jobs and a few women were employed in the laboratory and the office. Silver processing at that time was labor-intensive, requiring much heavy lifting as silver bars weigh almost 70 pounds each. Workers were required to wear special gloves and heavy rubber aprons for protection and worked two, overlapping shifts to complete the 17-hour process. With the exception of one unsuccessful unionizing attempt, during Barber's tenure, there was no union activity at this company.

Barber spoke with respect for the men who had worked for him, saying that the work could be "dirty" and that they were all "fully aware of the dangers associated with hazardous chemicals". "These were decent men," stated Barber as he recalled one man in particular, James Cotter, who had been employed at the chemical company for 43 years from 1929 until his retirement in 1972. Cotter, now 91 years old, started at the M. Ames Chemical Works soon after graduation from high school and worked at many jobs throughout the plant. In a telephone conversation with Cotter on July 11, 1997, he remembered very little machinery being used in the factory and referred to the kettles that were used to melt, heat, and dry the silver salts.

In May 1967 the entire facility was totally destroyed by fire, and limited production was not resumed until August of that year. Temporary facilities were set up using several Quonset huts. Prior to the fire, 44 workers had been employed at the plant, but afterwards only 19

were employed due to these limited production capabilities. However, Barber was quoted in a newspaper article regarding these unemployed workers, "Most employees were successfully located in new positions due to the cooperation of other employers in the area" (Nason, 1967). The "capable system" of the 1960's created an abundance of manufacturing jobs and was able to absorb these displaced workers.

Today this successful company employs 53 people in a 40,000-square-foot building at the Rogers Street site. I met with Ronald Davies, president of the firm, and William Hamelin, comptroller, on July 9, 1997. Both men emphasized the technological advancements and computerization which has enabled the company to double production over the past five to seven years and increase employment by 15 percent. Five processes have been converted to computerized operations in as many years, and Davies predicts additional process developments in the future. These changes in the chemical processing operations require workers skilled in the operation and monitoring of computer controls as well as maintenance and troubleshooting of these systems. All workers are recruited locally, and Davies suggested the possibility of training for this type of work through educational programs in cooperation with Adirondack Community College, the local community college. Reinforcing the current trend of workers requiring additional technical skills, Davies predicted that more knowledge-based skills would be required in the not so distant future for most workers at Ames Goldsmith.

The quality and purity of the silver product is of critical importance in the silver refining operation, and the company operates under the rigorous ISO 9000 quality standards as they continue to develop new products and improve production techniques. In 1984, the company developed a method to chemically strip silver and aluminum from spent alumina catalyst, enabling the recycling of a catalyst which is widely used in the manufacture of anti-freeze and polyester. This type of innovation allows the plant to operate in an efficient manner with no waste by-products (Blow, 1991).

In June of this year, the company was one of only six companies in New York State to be awarded the New York State Governor's Award for Pollution Prevention. This is awarded

annually to those companies which develop “methods to further prevent, reduce, or eliminate pollutants” (Soule, 1997, p. 3). In 1993, in conjunction with the New York State Energy Research and Development Authority, Ames Goldsmith expanded their refining production capacity by 100 percent while decreasing production costs through waste minimization and energy efficiency. A company-provided release reported that through the efforts of this program, the company developed “new sludge-drying technology, NOx monitoring and feedback control system for the direct combustion unit, a heat recovery system, and an innovative new catalyst-refining process.” (company news release, 1997). Five new jobs were created at the company as a result of the increased production from these improved processes. With continued emphasis on technological improvements and market growth, employment opportunities for skilled workers at the Ames Goldsmith silver processing plant seem assured as this progressive company prepares for business in the twenty-first century. The ever increasing skills required for employees at this company reinforces the research that suggests patterns of technological change will continue to reduce the demand for less skilled workers and increase the demand for more knowledgeable workers (Davis, et al., 1996). The development of new products combined with the implementation of advanced technology has enabled the success of Ames Goldsmith and provided additional manufacturing jobs for the city of Glens Falls, albeit on a relatively small scale. The continued growth and success of the company will be based on its continued ability to produce silver for new products particularly in the electronics market.

### **SCHNEIDER/NAMIC**

Glens Falls is the original headquarters location of SCHNEIDER/NAMIC, a manufacturer of medical instruments. The second largest industrial employer in the city, the company maintains an office complex on Pruyn’s Island with its main manufacturing facility in the Glens Falls Industrial Park on Dix Avenue. The company employs approximately 785 people with 35 employees at an assembly plant in Ireland, another 100 in a Puerto Rican subsidiary, and the remainder in the United States. Started in 1969 by Philip Morse, a former

sales representative for U. S. Catheter, Inc., the company has experienced tremendous growth in the last two decades (Lang, 1997a).

The medical instruments industry is well established in and around the Glens Falls area, frequently referred to as the “catheter capital of the world” (Cambareri, 1992, p. 18). U.S. Catheter and Instruments Company was started by David Sheridan in Queensbury in 1941 with the entry of the United States into World War II which created a demand for American-made catheters (Cambareri, 1992). As Bluestone and Harris (1982) suggest, medical instrument manufacturing is a high technology, “sunrise” industry, which includes those new industries started after World War II, and offers reindustrialization opportunities for the United States.

The North American Instrument Company (NAMIC) was established based on an invention of Morse’s for a transparent manifold system for cardiac catheterization, a concept which had earlier been rejected by U.S. Catheter. Resigning from U.S. Catheter, Morse founded NAMIC in May 1969 in a 300-square-foot office in downtown Glens Falls. Table 4 traces the growth of the company in employment and square footage from 1969 until 1997.

**Table 4. Growth in Employment and Square Footage at NAMIC, 1969-1997**

<b>Year</b>	1969	1977	1979	1984	1988	1991	1994	1997
<b>Employees</b>	1	7	70+	200	430	510	620	785
<b>Area (sq.ft.)</b>	300	11,000		83,000		150,000		160,500

Source: Compiled by author from company-provided information and newspaper articles. The introduction of the disposable MORSE Manifold in 1981, and completely disposable, custom cardiac catheterization kits in the early 1980’s, provided a foundation for the dynamic growth of the firm (Lang, 1997a).

The clean, humidity-controlled environment of medical instrument manufacturing is a far cry from the paper mills of Finch Pruyn and the cutting rooms of the Troy Shirt Makers Guild. In conjunction with this project, I met with Derry Cooke, the company’s Director of Manufacturing, on July 18, 1997 and had the opportunity to tour the SCHNEIDER/NAMIC manufacturing facility in the Glens Falls Industrial Park. The 150,000-square-foot plant

employs about 335 hourly employees, or associates, as all NAMIC workers are called. Operations consist mainly of assembly and machine operations as much of the plant utilizes automated, computer-controlled production equipment. The company also maintains a machine shop, a large injection molding operation, and a group of maintenance workers responsible for maintaining and repairing the company's large investment in automated equipment. In the medical instrument industry, as Cooke states, NAMIC's production operations are considered "state of the art."

The manufacture of NAMIC's products are completed under strict cleanliness and FDA regulations. The plant operates within three levels of environmental control. Type I, the most stringent area, is strictly controlled requiring specific gowning and hand washing. The air supply in Level I areas is filtered with an AGPA filtration system. Type II is an intermediate level of control and includes the injection molding operation. Areas such as warehousing are Type III with lower levels of environmental controls. All workers and visitors in the highly controlled areas are required to wear lab coats with their uniforms or a white jumpsuit, booties or shop shoes which never leave the premises, and hair nets.

The component parts of NAMIC's products are used in both noninvasive and invasive cardiology procedures including coronary angioplasty, and coronary angiography requiring extremely close tolerances and high quality in addition to clean standards. The company has rigorous performance standards, and workers are held accountable for their work performance as measured by indicators including scrap removal, material usage and labor efficiency rates.

Entry-level jobs are available in assembly, and new workers are trained via a written training manual. Experienced associates are used as floor trainers. A large percentage of the assemblers are young, single mothers, while the more senior positions of machine operator are held by mostly skilled men and a limited number of women. Numerous opportunities exist for advancement through a job posting system. The company operates three shifts seven days per week. Some equipment, such as the injection molding machines, run 24 hours continuously for optimum production.

Assembly functions consist mainly of repetitive operation which are reviewed

periodically and analyzed for potential automation. According to Cooke, automation of these procedures is a key strategy in maintaining the profitability of the company. As one company spokesman summarized, "...the ability to thrive in the face of significant pricing pressure has been by reducing manufacturing costs through selective automation and robotics" (NAMIC, 1995, p. 13). Once an operation has been identified for automation, the workers involved are provided a minimum of six months advance notice, and arrangements are made for transfer to another equal position on the same shift. The company has an open policy regarding their automation requirements, and maintains a dialogue with the work force concerning all changes. Some operations are already into the second and third generations of automation.

While on our tour, Cooke pointed out a machine which produced 18,000 syringes per day with the aid of four operators; an operation which he suggested could be automated even further. He also indicated one operation that had been switched from a semiautomated machine which required six operators per day producing 12,000 parts over three shifts to a fully automated setup. The new setup required only one operator with a production rate of 12,000 parts per shift; a dramatic increase in production with a third of the labor. The new automated process featured sophisticated computer controls which continuously monitored the quality of production and provided the operator with diagnostic information. The sole operator, a woman, was actually working off the line packaging the individual parts. As Cooke explained, the operator has a fundamental understanding of the equipment and can perform minor adjustments. A maintenance associate would be required for more serious problems. Another area that had recently been reautomated using a much smaller and compact machine was a packaging process. Cooke admitted that the operator, who had also operated the old equipment, would find this much less challenging.

The company is currently recruiting for a maintenance worker "maintenance A" for its third shift operations. According to an employment ad in The Post Star, this individual should have "... eight to ten years experience in electromechanical area...read and follow electronic/electrical, plumbing and hydraulic blueprints and schematics." As Cooke suggested, this is a highly skilled position and few in the field are experienced in the full breadth of



computer-controlled mechanical operations. The position may be difficult to fill from the local area; relocation assistance is offered.

Most employees live within an hour radius of the plant, and experienced workers are available from the labor force developed by the numerous medical instrument manufacturers in the area. In 1992 Mallinckrodt Medical announced that it would shut down its plant in nearby Argyle, and in 1997, 400 jobs were eliminated there (Richmond, 1997c). Although business cycles create slow periods of production, NAMIC avoids layoffs and maintains steady employment for its workers. There is no union at this facility.

In 1994, NAMIC was acquired through a stock merger by Pfizer, Inc. and became part of Pfizer's Medical Technologies Group. With an emphasis on worldwide opportunities, Pfizer restructured the group, and NAMIC became a unit of Schneider Worldwide (Lang, 1997a). Daily operations have not been significantly affected by either affiliation, and SCHNEIDER/NAMIC continues to pursue growth and profitability in a growing market faced with increased competition. Employment here is projected to remain steady and holds a promising future for those workers willing to learn and master the continually evolving technologies developed by this company. Medical instruments and supplies is an industry projected to have output growth of 6.1 percent per year from 1992 to 2005 and job growth of 79,000 additional jobs during the same period. This reflects an annual employment growth of 2.4 percent for the industry, making it one of the fastest growing industries of the manufacturing sector (Mittlehauser, 1994). However, with a significant emphasis on automation and the need to maintain production costs in the threat of added competition, I would suggest that the relative rate of employment growth at SCHNEIDER/NAMIC will continue to decline. The acquisition of the company by Pfizer, a large, remote conglomerate also creates uncertainty regarding the future of operations in Glens Falls.

## Conclusion

The histories of these industrial companies provide a fascinating montage of operations, products and employees. Many similarities exist among these manufacturing entities including the endless pursuit of increased productivity with the implementation of new equipment and computerized machinery, and the establishment of maintenance and repair workers to maintain these enormous capital investments. Virtually every company still in operation has also made a commitment to provide a product of very high quality in its marketplace, and expressed the need to continuously educate and upgrade the skills of employees to operate new technology. Many of these companies came to Glens Falls and stayed in the city due to the abundance of a good labor pool in the area, with many workers possessing years of experience, and the skills or aptitude to work in these various industries. Most of these businesses have also been acquired by large corporations which are headquartered outside of the Glens Falls area, making the Glens Falls locations more susceptible to future closings.

As documented, historically the Glens Falls area originally attracted business and industry due to its multiple natural resources including abundant supplies of lumber, black marble and lime combined with proximity to the Hudson River as a source of power and a mode of transportation. As the early population increases of the city demonstrate, labor was plentiful and the area offered employers generations of workers willing and able to work in a variety of industries. Even today many of the companies which remain and those which have shifted jobs to the city, laud the availability and skills of the local labor force.

The factories throughout the city have employed generations of men and women in the Glens Falls area. Most men worked at the Finch, Pruyn & Co., Inc. paper mill at some point in their lifetime, and the textile and apparel mills provided stable work and reasonable wages for women in the community. However, unlike past generations, the children of these workers are no longer obtaining work in the same plants that employed their parents. For many, the factories that employed prior generations are either closed or the availability of jobs has diminished as many companies increase the automation of their operations. Ted Moon, the retiree from Finch, Pruyn told me that he was unable to obtain summer employment for his grandson at the mill--job

opportunities are much tighter now. Also, as Smaller (1995) indicates, the “one-life, one-career” imperative of the older generation no longer exists among younger workers.

The ebb and flow of industrial and manufacturing jobs in the city of Glens Falls reflects the restructuring activities of corporations as companies both expand and contract operations based on the movement of capital or plants to maintain profitability in response to factors such as increased competition, product obsolescence, new product development, technological advances, and labor force issues in combination with the idiosyncrasies of the plant. This paper examined eleven companies of which four ceased operations, one decreased the level of operations, and six increased sales and/or employment. Of the four plants that closed, three were branch or subsidiary locations, and of the six still in business, five are also branch locations.

The glove manufacturing operations of the Clark Brothers were closed as the result of product obsolescence and the impact of foreign imports. By the time the company ceased operation in 1968, the plant was a branch location of a Fultonville glove manufacturer, and employment had dwindled from an all-time high of 500 to 68 workers. The closing of the Troy Shirt Makers Guild, which by 1993 was a subsidiary location of the Tom James Company, was the result of a consolidation of operations following an unsuccessful attempt to improve the profitability of the Glens Falls location in the face of foreign competition in the apparel industry. Neles-Jamesbury, a branch location of a large valve manufacturer, was also closed due to corporate consolidation. Even after increased automation and improved productivity, in an effort to further increase profitability, the operations in Glens Falls were absorbed or shifted to other existing locations of the company. The Glens Falls Paper Box Company, a single plant location, had achieved high productivity and success in a declining market. However, the owner was not interested and unwilling to make the additional capital investment necessary to pursue newer box products, resulting in the closing of the operation.

While the Jointa Lime Company is still conducting business, the level of operations has decreased dramatically from its earlier success due to the decline in the use of lime for numerous products. The company now produces only crushed limestone for road construction, and has also been purchased by a larger construction company increasing the probability of closure.

The additional six companies studied have demonstrated an increase in operations or a shifting of resources to the Glens Falls area. Both Native Textiles and Flomatic moved facilities and shifted manufacturing employment to the city without creating new jobs. Native Textiles cited the need to eliminate transportation costs and the availability of labor in the area. Flomatic required large production capabilities to satisfy increased demand for their products. The growth in medical technology and cardiac procedures has provided Glens Falls with almost 800 manufacturing jobs, but relatively little recent job growth as automation is continually implemented at SCHNEIDER/NAMIC.

The Glens Falls Cement Company has also been successful in the production of quality cement products and dramatic increases in sales, but extensive automation has actually decreased the total number of jobs at the plant. Employment at the plant is also vulnerable to demand for cement in the New England and New York construction markets. An increase in manufacturing at Ames Goldsmith has also resulted in a modest increase of five manufacturing jobs in Glens Falls as the result of new product development and new market opportunities. The company has also recently opened a southern location. All five of the above companies are currently branch or subsidiary locations increasing the eventual probability that they may close or be consolidated with other operations.

Finch, Pruyn, the only company of the six with increased activity that is a single plant location, offers the largest number of industrial jobs in the city, but employment levels have remained constant and job growth is not anticipated. The company is also faced with increased low-cost foreign competition and fluctuating demand for its paper products.

As this report reached completion, yet another company, CAE Screenplates, Inc., a supplier to paper manufacturers which is located on Pruyn's Island, announced on September 4, 1997 that it was eliminating its Glens Falls production facilities. Eighty-eight workers at this plant were laid off at the end of September as the Toronto-based company consolidates operations at its Lennoxville, Quebec plant (Richmond, 1997a). The day of the announced closing, I spoke with Diane Barber, the Economic Development Director for the City of Glens Falls. Barber did not indicate that she knew of CAE's planned shutdown as we discussed the recent business "success

stories” of the city. According to Barber, the city offers economic incentives for new business including low interest loans as well as the availability of attractive real estate at reasonable prices. Barber reported that 40 new businesses have opened in the city since 1994, three of which are manufacturing companies. Of these three, one was Flomatic with 50 jobs and two other small firms, CNC Machinery and Powdered Metallurgy which accounted for nine additional jobs. With the closing of CAE Screenplates, the job creation and destruction of just these four firms still resulted in a net loss of 29 manufacturing jobs for the city.

The service sector, however, seems to be growing in the Glens Falls area. Just one week prior to the announced closing of CAE Screenplates, Travelers Property Casualty Corp., an insurance company located in adjacent Queensbury, announced that it would be doubling its work force, hiring 400 additional workers over the next two years (Richmond, 1997d). These are customer service and other service sector jobs which pay from \$17,000 to \$21,000 per year, a far cry from the manufacturing wages of the Finch, Pruyn paper workers. Manufacturing jobs and plants in the city of Glens Falls continue to gradually decline as jobs throughout the U.S. shift to the service and knowledge sectors.

A five-year report completed in June 1997 by Robert Washington and Robert Christopherson of the School of Business and Economics at the State University of New York at Plattsburg on the economic condition of Warren County was inconclusive. Although the unemployment rate had declined and the net formation of businesses in the county had increased from 595 in 1995 to 676 in 1996, the number of unemployment claims had risen eight percent from 1995 to 1996 (Ertelt, 1997). Economic indicators and front page news stories make it difficult to discern the quality of work available in Glens Falls as the nature of manufacturing and work itself changes. Corporate information regarding employment levels, consolidations, closures, and profitability is kept extremely confidential.

Based on information presented in this paper, however, the evidence suggests that while manufacturing jobs still exist in Glens Falls, it is impossible to predict how many and for how long. The loss of jobs in manufacturing, particularly for those older workers with years of work experience in declining industries, as evidenced by the interviews presented here, is dramatic and

represents a serious void in reemployment opportunities. As more and more firms are acquired and operated as subsidiaries or divisions of large corporations, concern increases over the future operations of these companies in the city. Howland (1988) argues that branches are 8 to 32 percent more likely to close than single plant locations. Although the largest industrial employer, Finch, Pruyn & Company, Inc., is still privately owned and is the company's only mill operation, its employees are still vulnerable to market trends and economic conditions. The growth of jobs in medical instruments at SCHNEIDER/NAMIC has provided valuable employment for the area, but the high degree of automation has slowed the rate of job growth even in this successful business. Therefore, while a base of industrial work still exists, the gradual dwindling of "good" manufacturing jobs creates an uncomfortable uncertainty for the future of workers in the city, as area residents are forced to accept lower paying service jobs or leave Glens Falls to pursue other manufacturing employment opportunities as the decline in the city's population might indicate.

Appendix 1  
Questionnaires Used for Company and  
Worker Oral History Interviews

**COMPANY PROFILE**

**COMPANY NAME:**

**ADDRESS:**

**SIC CODE:**

**TELEPHONE #:**

**FAX #:**

**YEAR STARTED:**

**YEARS AT THIS ADDRESS:**

**HEADQUARTERS LOCATION:**

**# OF TOTAL EMPLOYEES :**

**AT THIS LOCATION:**

**SQUARE FOOTAGE AT GLENS FALLS LOCATION:**

**PRIVATE OR PUBLIC OWNERSHIP:**

**UNIONS:**

**DESCRIPTION AND HISTORY OF OPERATIONS:**

**SPECIALIZED/DIVERSIFIED PRODUCTS OR OPERATIONS:**

**EMPLOYMENT TRENDS:**

**HISTORY OF LAYOFFS/DOWNSIZING:**

**TECHNOLOGY IMPROVEMENTS:**

**FUTURE PROJECTIONS (JOBS, PRODUCTS ETC.):**

Source of information:

Worker Oral History:

Date:



**WORKER ORAL HISTORY**

**NAME:**

**ADDRESS:**

**SOLE SUPPORT/SPOUSE'S EMPLOYMENT:**

**COMPANY:**

**YEARS EMPLOYED:            DATES OF EMPLOYMENT:**

**HOW/WHY STARTED WORKING FOR THIS COMPANY:**

**OTHER FAMILY MEMBERS EMPLOYED HERE:**

**STARTING WAGE:**

**DISTANCE & TRAVEL MODE TO WORK:**

**POSITION(S):**

**UNION:**

**SUPERVISORS:**

**TYPE OF WORK:**

**PLANT DESCRIPTION:**

**HOW WORK CHANGED DUE TO TECHNOLOGY IMPROVEMENTS OVER THE YEARS:**

(Noise, Standing, Lifting, Tools Used, Days/Hours Worked, Shifts, etc.)

**HISTORY OF LAYOFFS:**

**IF STILL EMPLOYED:**

FUTURE SECURITY OF JOB:

RETIREMENT PLANS:

**IF PLANT CLOSED:**

FEELINGS/COMMENTS:

HOW NOTIFIED:

HOW MUCH NOTICE:

ANY PRIOR INDICATION PLANT WOULD CLOSE?

FUTURE PLANS:

RETRAINING/CAREER CHANGE:

UNEMPLOYED--HOW LONG:

**OTHER:**

Appendix 2

Profiles of Selected Manufacturing Companies

Including Map, Locations, and Photographs

**Figure 1. Selected Manufacturing Companies Including Address, Location and Ownership.**

COMPANY NAME	ADDRESS (GLENS FALLS)	LOCATION DESCRIPTION	OWNERSHIP
Finch, Pruyn & Co., Inc.	1 Glen Street	1,000,000 square ft., various buildings, private siding on D & H railroad, headquarters/single location	Privately owned
SCHNEIDER/ NAMIC	Pruyn's Island Industrial Park Glens Falls Technical Park (Dix Avenue)	57,000 square ft. Pruyn's Island-headquarters/office 150,000 square ft. manufacturing facility (Dix Ave.)	Subsidiary of Pfizer, Inc. (1994)
Native Textiles	211 Warren Street	400,000 square ft. total mfg., 2 plants at Warren St. location, warehouse on Pruyn's Island, plant at Corinth Rd., Queensbury	Owned by Hanson Trust Limited, a British holding company (1976 )
Troy Shirt Makers Guild, Inc.	71 Lawrence Street (Corner of Lawrence & Cooper Sts.)	100,000 square ft., 4 story brick building, vacant/for sale	Owned by Tom James Co. (1993)
Glens Falls Cement Co., Inc.	313 Lower Warren Street	Various buildings at this location single location; 500-acre quarry in Moreau	Subsidiary of Dyckerhoff, Inc., a German cement manufacturer (1988)
Clark Brothers	20 Elm St. (Corner of Elm & Clinton)	72,000 square ft., 3 story brick building, now owned by Adirondack Scenic, Clark Bros. moved to 20 Curran St. 1959	Premiere Gloves, Inc. (1959)
Neles-Jamesbury, Inc.	145 Murray Avenue, Pruyn Island Industrial Park	48,000 square ft. building, one of multiple locations	Owned by Repola, US Finnish company Headquarters Worcester, MA
Flomatic Corp.	145 Murray Avenue, Pruyn Island Industrial Park	48,000 square ft., purchased former site of Neles-Jamesbury	Owned by Danfoss Group Danish mfg. company (1982)
Ames Goldsmith Corp.	21 Rogers Street	40,000 square ft., one-story building, 9,000 square ft. warehouse on Maple St.	Privately owned
Jointa Lime Co., Inc.	209 Warren Street (rear)	1,200 square ft., one story office building	DA Collins Construction Company (1988)
Glens Falls Paper Box Co.	230 Maple Street (Corner of Maple & Orchard Sts.)	14,000 square ft., 3 story building vacant, for sale single location	Privately owned

Source: Compiled by author



Figure 2. Map of Glens Falls, New York, with locations of selected manufacturing companies.

**LEGEND**

- |                                  |                               |
|----------------------------------|-------------------------------|
| 1. Finch, Pruyne & Co., Inc.     | 6. Clark Brothers             |
| 2. SCHNEIDER/NAMIC               | 7. Neles-Jamesbury, Inc.      |
| 3. Native Textiles               | 8. Flomatic Corp.             |
| 4. Troy Shirt Makers Guild, Inc. | 9. Ames Goldsmith Corp.       |
| 5. Glens Falls Cement Co., Inc.  | 10. Jointa Lime Co.           |
|                                  | 11. Glens Falls Paper Box Co. |



Figure 3. Main office of Finch, Pruyn & Co., Inc., at 1 Glen Street built in 1919 of limestone from the company's quarry.



Figure 4. SCHNEIDER/NAMIC headquarters building located in Pruyn Island Industrial Park.



Figure 5. Office and factory location of Native Textiles located at 211 Warren Street.



Figure 6. Native Textile warehouse located in Pruyn Island Industrial Park.



Figure 7. The now vacant mill of the Troy Shirt Makers Guild, Inc., and the former McMullen-Leavens Company at 71 Lawrence Street.



Figure 8. Sign from the retail outlet at the Troy Shirt Makers Guild, Inc. located at the Cooper Street entrance.





Figure 9. Office building of the Glens Falls Cement Company, Inc., at 313 Lower Warren Street built in 1920 of Portland cement.



Figure 10. The plant of Flomatic Corp. at 145 Murray Street, Pruyn Island Industrial Park, formerly owned by Neles-Jamesbury, Inc.



Figure 11. Original factory of Clark Brothers Gloves, Inc., at 20 Elm Street now owned by Adirondack Scenic.



Figure 12. Ames Goldsmith Corp. building at 21 Rogers Street rebuilt in 1968.



Figure 13. Office building of Jointa Lime Co., Inc., at 209 Warren Street (rear) circa 1880.



Figure 14. Now vacant plant of the Glens Falls Paper Box Company at 230 Maple Street.

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