

PRIVIES AND PRIVILEGE: HEALTH AND SANITATION IN 19TH-CENTURY  
BUFFALO, NEW YORK

---

A Thesis

Presented to

The Faculty of the Department of Anthropology  
The College of William and Mary in Virginia

In partial fulfillment  
Of the Requirements for the Degree of  
Master of Arts

---

by

Jacqueline Denmon

1998

APPROVAL SHEET

This thesis is submitted in partial fulfillment of  
the requirements for the degree of

Master of Arts

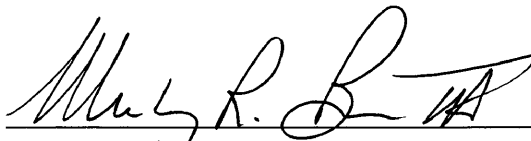
  
Jacqueline Denmon

Approved, March 1998



---

Norman F. Barka



---

Marley R. Brown, III



---

Elizabeth S. Peña

Dean & Barbour Associates, Inc.  
College at Brockport, State University of New York

## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	vi
LIST OF PLATES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
INTRODUCTION	2
CHAPTER I. THE ARCHAEOLOGY OF THE PRIVY	5
CHAPTER II. HISTORICAL BACKGROUND	19
CHAPTER III. 19TH-CENTURY HEALTH AND SANITATION	37
CHAPTER IV. THE MARTIN PHILLIPS SITE	58
CHAPTER V. 19TH-CENTURY CONSUMER BEHAVIOR	105
CHAPTER VI. DISCUSSION AND CONCLUSION	109
BIBLIOGRAPHY	114
VITA	125

#### ACKNOWLEDGMENTS

The author wishes to express her appreciation to Norman F. Barka, Marley R. Brown, III, and Elizabeth S. Peña for their guidance on this project, Warren T. D. Barbour, Chris Hughes and Frank Tucci for their illustrations, Chris Longiaru, Tracy Wright Mauer, Dena Bauer, Gerard Thomas, Cynthia Jackson, Lilli Sentz of the Robert L. Brown History of Medicine Collection of the State University of New York at Buffalo, Ann M. Triggles of the Pharmacy Museum of the State University of New York at Buffalo, and to Jack Kahn for his infinite patience. Any mistakes are my own.

LIST OF TABLES

Table		Page
1	Chronology of Ownership and Use of 68 Ohio Street	62
2	Embossed Medicine Bottles, Feature 3	82

## LIST OF FIGURES

Figure		Page
1	Map of New York State, Indicating the Location of Buffalo, Albany, and New York City	20
2	1853 Ward Map of Buffalo, Indicating the Location of the First Ward	23
3	1884 Map of the Outer Lots of the City of Buffalo	59
4	Partition Map of 1840, Indicating the Location of 68 Ohio Street	60
5	Martin Phillips Site Map, Indicating the Location of Feature 3 and Feature 4	65
6	1890 Catalog Advertisement, Medicine Bottles	86
7	Catarrh Remedy Bottle, Feature 3	88
8	Catarrh Remedy Demonstration Sketch	90
9	1890 Catalog Advertisement, Rubber Syringes	101
10	1890 Catalog Advertisement, Glass Syringes	102

## LIST OF PLATES

Plate		Page
1	John Howell Bottles, Feature 3	72
2	Unembossed Medicine Bottles, Feature 3	84
3	Dr. A. Boschee's German Syrup Bottle, Feature 3	87
4	Radway's Ready Relief Bottle, Feature 3	92
5	Holloway's Ointment Pot, Feature 3	94
6	Syringes, Feature 3	100

## LIST OF ABBREVIATIONS

BBOH	Buffalo Board of Health
BCA	Buffalo Commercial Advertiser
BCD	Buffalo City Directory
BCWW	Buffalo City Water Works
BE	Buffalo Express
BEN	Buffalo Evening News
BME	Buffalo Morning Express
BMSJ	Buffalo Medical and Surgical Journal
BN	Buffalo News
COB	City of Buffalo
CCB	Common Council of Buffalo
EN	Engineering News
OED	Oxford English Dictionary
PMC	Pharmacy Museum Collection-State University of New York at Buffalo

## ABSTRACT

The purpose of this study is to investigate ideas of health and sanitation in a working-class 19th-century Buffalo, New York residence. These perceptions will be discussed in terms of their relevance and connection to the socioeconomic and ethnic status of the occupants. Using the soda and mineral water bottle, medicine bottle, and medical-related paraphernalia assemblages of two privies associated with a lodging house in Buffalo's First Ward, perceptions of health, sanitation, and disease proliferation will be addressed. The specific hypothesis addressed by this study is that the members of the household were concerned with hygiene and the evasion of disease, and that their beliefs concerning disease influenced their behavior as consumers.

PRIVIES AND PRIVILEGE: HEALTH AND SANITATION IN 19th-CENTURY  
BUFFALO, NEW YORK

## INTRODUCTION

In 19th-century Buffalo, New York, city ordinances regulated the construction and maintenance of privy vaults. Privies excavated by Dean & Barbour Associates, Inc. at the Martin Phillips Site, located in Buffalo's First Ward, afford an opportunity to explore the ways in which the predominantly Irish working-class population responded to sanitation concerns, and the extent to which the artifacts recovered inform us of their beliefs about hygiene.

The artifacts that make up the archaeological record denote actions on the part of the occupants of a site. The remnants of products recovered on historic sites represent items purchased by consumers. The motivations behind consumer behavior have typically been explained in economic terms. This thesis represents an attempt to delineate the ways in which beliefs about sanitation and hygiene also influenced consumer behavior.

Through the analysis of the items discarded into two privy vaults and the examination of the privy features themselves in historical context, a concern for sanitation and the abatement of disease will be shown to have been an active concern for members of a 19th-century Buffalo

household. The specific hypothesis addressed is that the members of the household were concerned with hygiene and the evasion of disease, and that their beliefs concerning disease influenced their behavior as consumers.

The documentary research included the examination of Buffalo City ordinances, Common Council records, United States and Erie County census data, city directories, Board of Police records, water works records, sanitary reports and historic maps. These provide a template against which the archaeological evidence can be compared, and serve to elucidate the differences between the ideal, or expected conditions, and the actual or experienced.

Research facilities consulted for this project included the Buffalo and Erie County Historical Society, the Buffalo and Erie County Main Library's Local History Collection and Rare Book Room, the Records Center of Buffalo City Hall, Lockwood Memorial Library-State University of New York at Buffalo (UB), Health Sciences Library (UB), the Pharmacy Museum and Apothecary (UB), the Charles B. Sears Law Library (UB), and the History of Medicine Collection (UB). Oral history gathered from an interview with Kevin Doyle, a descendant of Martin Phillips, will also be included.

Chapter I of this investigation will present a review of the literature pertaining to the study of privies.

Chapter II will provide an early history of Buffalo, particularly the city's First Ward, the predominantly Irish neighborhood in which the Martin Phillips Site is located. Chapter III will address 19th-century concepts of health and sanitation, the impact of infectious disease in Buffalo, as well as the history of professional and proprietary medicine in the area. Chapter IV will present the archaeological evidence from the Martin Phillips Site. Chapter V will present possible interpretations of the privy assemblages in light of consumer choice theory. The concluding chapter will then synthesize the information gathered, addressing the validity of the stated hypotheses.

## CHAPTER I

### THE ARCHAEOLOGY OF THE PRIVY

Countless archaeological studies have utilized information recovered from privy contexts. These structures, because they were often capped off at the time of their abandonment, form distinct contexts, making them good "time capsule" features. Only a handful of studies, however, have treated the privy itself as an artifact worthy of analysis. The privy, in terms of its construction, pattern of use and abandonment, the distribution of artifacts found within, as well as the artifacts themselves, helps to reveal the behavior and attendant concerns of its long-departed builder and users.

Clark (1996:1) reminds archaeologists that the privy vaults excavated on historic sites represent the remains of a structure that was both above-ground and subterranean. The privy was a part of domestic space, and should be considered as such: "The privy, as a human construct, encodes many cultural attitudes and practices. These include attitudes and practices regarding privacy, modesty, status, cleanliness, and sanitation" (ibid:1). As domestic spaces, privies can be as telling an indicator of past behavior as

the home. Furthermore, the feature must be examined within the cultural context in which it operated.

#### THE PRIVY VAULT SYSTEM

The privy vault system was the primary means of waste disposal during the 19th century. Privies, which serve as receptacles for human excrement, are pits dug into the ground beneath outhouses. Privies are variable in terms of their method of construction, ranging from shallow unlined pits to deep impermeable brick-lined structures (Tarr, et al 1984:288-9). Lining the privy improved the stability of the unit by preventing the earthen walls from caving in, inhibiting the flow of waste materials into the surrounding soils, and facilitating the cleaning process (Barlow 1992:6). Variation in privy vault construction may be attributed to several factors. Privies located in waterfront areas tend to be more shallow than those further inland because of the higher water table. A shallow privy may also have been a reflection of its users' high social status, since it required more frequent cleaning (Geismar 1993:57). Stottman (1996:4) interpreted 1853 Louisville, Kentucky, city ordinances requiring privies to be between 12 and 30 feet in depth as reflecting an "Out of sight, out of mind"

philosophy. Deeper vaults inhibit the omission of offensive odors and the potential overflow of the privy's contents.

The materials from which a privy was constructed may also have been indicative of its users' social standing. Wealthier individuals, with greater access to more substantial building supplies than their lower status counterparts, might construct privies differently (Bryant 1988:75). For example, wealthier homes favored brick or stone-lined privies, while wood-lined, and even unlined privies are associated primarily with poor families.

Once a privy became full, it may have been emptied and reused, or abandoned in favor of a new privy. Abandonment was more feasible in rural contexts than in urban ones, where space was limited. Throughout most of the 19th century, the primary method for removing the waste from privies involved dipping out the contents and carting it away in buckets (Tarr, et al 1984:229). Those responsible for the removal of the waste were referred to by many names, including scavengers, night scavengers, night men and gongfermors (Wright 1980:103-8). The term gongfermor originated from the word gongfarmer. Gong referred variously to the contents of a privy as well as to the privy itself. Gongfarmers removed the gong from the vaults and carted it away (Oxford English Dictionary [OED] 1971:286).

The waste the scavengers carted away was called "night soil". Night soil was disposed of in a number of ways. Local farmers often purchased the waste for use as fertilizer and livestock feed (Bell 1987:60-1; Geismar 1993:60-1; Roberts and Barrett 1984:108; Smith and Young 1993:8; Tarr, et al 1984:229). Scavengers also sold the night soil to fertilizer manufacturers. The supply of night soil tended to exceed the demand, however, and the surplus waste was often dumped into local waterways (Tarr, et al 1984:229).

Various mechanical means of cleaning privies were attempted. A cone-shaped nozzle, patented in 1870, was used to remove waste, but was probably incapable of removing larger objects (Geismar 1993:65). That this type of cleaning did indeed occur may be evidenced archaeologically by a preponderance of larger artifacts and sherds, and a scarcity of smaller items. Another apparatus, the "odorless excavator", was a vacuum pump which drew the privy's contents into an airtight container mounted on a horse-drawn sewage removal truck (Duffy 1974:35; Tarr, et al 1984:233).

Many cities placed laws in effect that regulated the frequency and method of privy cleaning. These laws stemmed from a concern for sanitation and disease prevention. In 1832, the Washington, D.C., Laws of the Corporation, while permitting residents to remove waste from their privies and

bury the contents in their yards, required that the waste first be rendered harmless through the use of lime or other chemical substance (Crane 1997:4). The 1853 Louisville, Kentucky, city code required that any removal of a privy's contents be performed at night, and that all waste be taken out of the city and/or dumped into a river. The same law required the bi-weekly sprinkling of lime over a privy between the spring and fall (Stottman 1996:4). The 1843 Buffalo City Ordinances prohibited the removal of waste from the vaults between 4 am and 11 pm (Common Council of Buffalo [CCB] 1843:19, 32). By 1870, the Buffalo ordinances required the consent of the City Scavenger prior to the removal of night soil (CCB 1870:136).

#### THE HISTORY OF THE PRIVY

Excavations on Sumerian sites have revealed that privies were used as early as 4,500 B.C. (Reynolds 1974:19; Strombeck 1980:6). Ancient Jewish texts refer to the vault as the "House of Honour". These documents also provided detailed instructions for the disposal of waste (Reynolds 1974:21). The Talmud specified that streets were to be cleansed on a daily basis. By 800 B.C., Jerusalem had been equipped with both a sewer system and clean water supply (Melosi 1981:5).

Ancient Roman privies were for public use (Strombeck 1980:6). The vaults were part of a complex sewage disposal system, which by 300 B.C. included aqueducts that enabled them to separate the water supply in relation to its purity, saving the purest for the drinking provisions (Duffy 1990:6). As early as 600 B.C., a system of sewers was used to drain the city (Stone 1979:284). The Romans also used large cisterns to store urine, which was sold to dye makers and laundries (Strombeck 1980:7), and solid waste which was sold for use as fertilizer (Melosi 1981:6).

During medieval times, English privies were often built into a wall, allowing the user to dispose of the waste into the open air, often into a river or moat below. (Strombeck 1980:14). These "pitless" privies, called garderobes, generated understandable trepidation on the part of many Londoners (Geismar 1993:59). Public privies were also made available to merchants and tenement residents at this time (Strombeck 1980:14). These receptacles were often built over rivers, and by 1355, as a result of this practice, the Fleet River became so inundated by the waste that it no longer flowed (ibid:18).

During the early and mid-19th century, privies were still in common use in the United States and Europe. Wright (1980) estimated that in 1840, during a widespread cholera

epidemic in London, a single privy served up to twenty dwellings. These pits were to be found in yards and at times within the houses themselves. Nightmen, successors of the gongfermors, carried the waste away in buckets (Wright 1980:102). Public privies were improved during this time, some being built underground, while others, built above ground, had decorated facades and lighting (Strombeck 1980:22).

Demographic as well as technological changes during the mid-19th century contributed to the overburden and eventual breakdown of the privy/scavenger system of waste disposal. The population boom in America's urban areas was one of the primary factors leading to this disintegration (Tarr, et al 1980:61). Overflow from privies and cesspools created health hazards by polluting the nearby wells (ibid:61). The implementation of running water systems, while improving some sanitary conditions, exacerbated others. Cities became reliant upon water pumped in from distant places because of the contamination level of their own supply. The emergence of running water also gave way to the adoption of the water closet, which had been patented in England earlier in the century (ibid:62). The water closet was patented in the United States in 1833. In 1863, of the 87,000 Boston homes being supplied with water, 14,000 had water closets. By

1874, 5,191 Buffalo households were being supplied with water, and 3,310 of these had water closets. Approximately one-fourth of all urban American homes were fitted with water closets by 1880 (Tarr, et al 1984:231-2).

#### THE ARCHAEOLOGY OF THE PRIVY

Archaeologists who have considered the privy as a distinct entity have taken varying approaches to its examination. In 1974, Lee Hanson wrote a primarily descriptive account of 14 privies excavated in Rome, New York. Each privy was described in terms of construction, dispersal of artifacts, and date of abandonment. Hanson concluded that economic status was the determinant of stone versus wood lining in privy vaults, with stone-lined vaults correlating exclusively with wealthier households (Hanson 1974:41-2).

Subsequent studies of privy contexts have attempted to delineate other factors that influence privy architecture and content. Bryant (1988) outlined chronology and ethnicity in addition to economic status as areas which privy construction may help to clarify. Geismar (1993) examined two 19th-century New York City privies in light of city ordinances regarding vault construction, use and maintenance. Working between the documentary and

archaeological records, Geismar was able to delineate actions and choices on the part of the residents, both in terms of adherence to regulations, as well as in attitudes toward health.

Stottman (1996) expands upon the idea of a connection between privy deposits and the attendant beliefs they reflect pertaining to health and sanitation. According to this study of 19th-century Louisville, Kentucky, privies were perceived not only as receptacles for human waste, but were symbolic of impurity in general. Items thrown into privies were old, outdated, or broken items such as ceramics, evidence of clandestine behavior such as liquor bottles and weapons, animal carcasses, etc. (Stottman 1996:3).

Stottman also uses privy architecture to elucidate perceptions of sanitation. Analyzing construction materials, vault depth and water permeability, Stottman concluded that the residents had no knowledge of the actual methods of disease proliferation, as evidenced by their unsealed privies which were purposefully dug to the depth of the water table. This lessened the need for privy cleaning, since a large proportion of the waste was drained by the ground water. Rather, these users, in keeping with the "Out

of sight, out of mind" philosophy, were concerned only that filth not be readily noticeable either visibly or by scent.

Clark (1996) attempted to reconstruct the spatial orientation of a 19th-century New York City privy. Through the analysis of artifact dispersal within the feature, Clark was able to hypothesize as to the location of seats in the above-ground structure no longer in existence, as well as the possibility of differential use of the outhouse. Because of the "mucky" nature of the privy contents, items thrown into the vault would tend to remain where they landed. Examination of the orientation of items within the vault can help to reconstruct the arrangement of the seats within the structure. Furthermore, the dispersal of artifacts would also be indicative of any differentiation of use. For example, if the outhouse were divided by sex, a greater number of domestic-related items might be expected on the women's side (Clark 1996:9-11). Information gleaned through this type of analysis may help to increase the understanding of gender and class in the 19th century.

Bell's (1987) investigation of health and sanitation at the Boott Mills Boardinghouses Site in Lowell, Massachusetts, focused upon the factors involved in the improvement and eventual abandonment of the privy vault system. Through the analysis of records and regulations of

the Lowell Board of Health, Bell found that changes in laws pertaining to privy architecture, use, and maintenance often reflected a concern on the part of city officials that the privies constituted an impediment of technological progress, rather than a health hazard for residents (Bell 1987:63). In addition, Bell found that corporate paternalism at industrial boardinghouses was influenced primarily by an interest in economic gain rather than worker health and safety. Manufacturers complied with local health-related laws in a effort to "[S]ecure the stability of the working population, as well as aiming for the positive public image needed for continued recruitment of new workers" (Bell 1987:58).

#### PRIVY DEPOSIT FORMATION PROCESSES

Although the privy's primary function was to serve as a receptacle for human waste, these vaults were used in a number of ways. The formation of the privy deposit is an important process for archaeologists to consider and interpret. The stratigraphy and dispersal of artifacts within the feature represent action, whether on the part of the user, a cleaner, a sewer pipe, or a bulldozer. These actions must be recognized archaeologically and understood in order to most accurately interpret the data recovered.

Archaeologists have offered several explanations for the process of privy deposit formation. According to Bryant (1988:73), artifacts found in privies were typically deposited after abandonment of the feature. These accumulations may be indicative of a change in household residents. Later tenants may have filled an old privy with items left behind by earlier residents, digging a new vault for themselves (Stottman 1996:3).

Privy artifact deposits may also have accumulated concurrently with the deposit of human waste. Hanson (1974:30) found that outhouses excavated in Rome, New York, were closed ca. 1870 and that most trash dumps associated with the same residences contained post-1870 refuse, indicating a change in the trash disposal system. Clark (1996:9) also found that artifacts deposited in a 19th-century privy in New York City were disposed of during the privy's active period of use.

Items may also have been deposited into privies for the purpose of percolation. The deposition of large quantities of objects in a single dumping episode helped to disperse liquid into the surrounding soil. Privies in which this type of percolation system was used were typically of double-shaft construction. Artifacts were generally concentrated in the lower shaft, which was smaller in diameter than the

upper shaft. Once organic waste reached the level of the artifact fill, it was filtered into the surrounding strata (Roberts and Barrett 1984:110-1).

Beyond primary depositional processes, privies often encounter disturbance, such as cleaning activity. These actions leave traces in the archaeological record which, if recognized and carefully analyzed, can help to reconstruct privy use. The distribution of artifacts within the feature may indicate that the privy was cleaned at some time. For example, if the vault were cleaned using a bucket or other scooping instrument, items located against the walls or in corners would have been difficult to remove. Evidence of such actions can help to inform the archaeological interpretation of past behavior.

City ordinances often prohibited the disposal of trash in privy vaults. That these laws were broken has been documented archaeologically. Geismar (1993) noted that despite 1860 New York City laws prohibiting the disposal of garbage into privy vaults, artifacts found in privy contexts dating to this period indicate that the laws were not always obeyed. These infractions leave archaeologists with some of the most telling evidence pertaining to diet, health, and product availability (Geismar 1993:68).

Privies should be excavated and interpreted with the variation of human beliefs and behaviors in mind. Each household recovered archaeologically is representative of "both 'normative' and idiosyncratic expressions of society's most basic unit in its interaction with society as a whole" (Beaudry 1984:27). Local ordinances provide the researcher with the desired social conditions, but responses to these laws will vary according to the household's attitudes and beliefs. Some households may show evidence of having strictly adhered to the laws, while others may not have conformed at all. Still others may have renegotiated the laws, choosing which to uphold, and which to ignore. The actual formation processes of privy features may be as varied as archaeologists' interpretations.

## CHAPTER II

### HISTORICAL BACKGROUND

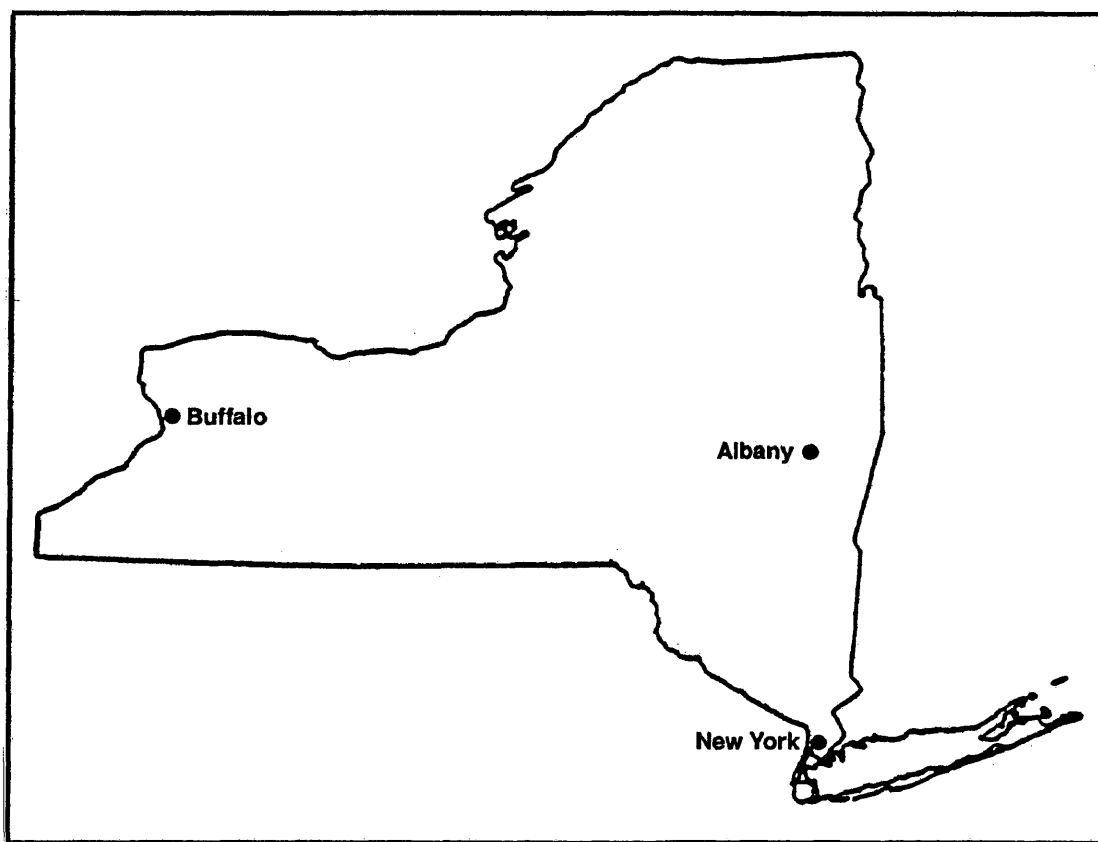
#### EARLY BUFFALO HISTORY

The land that encompasses the present-day City of Buffalo (Figure 1) was purchased as part of a 1.3 million acre parcel in 1797. The Seneca Nation of Indians sold the plot, which included all but 200,000 acres of Western New York, to the Holland Land Company for \$100,000. Joseph Ellicott, an agent of the company, soon led a survey of the purchase. When this was completed, he began to lay plans for a city he envisioned just north of Buffalo Creek (Brown and Watson 1981:14-5).

Ellicott patterned the city's layout after that of Washington, D.C., which his brother had helped to design. The town, originally named New Amsterdam, was completely laid out by 1801, but it was not until 1804 that Ellicott sold the first lot. This was soon followed by a rapid influx of manufacturers, physicians, lawyers and tradesmen. By 1811, the village had a population of between 400 and 500. These citizens began to call the area "Buffalo". No consensus exists as to why that particular name was chosen. Soon after, they changed all of the Dutch street names to

FIGURE 1

MAP OF NEW YORK STATE, INDICATING THE LOCATION OF  
BUFFALO, ALBANY, AND NEW YORK CITY



words which they could more easily pronounce. All of this enraged Ellicott, who denounced the village and made plans to build his dream city elsewhere (Brown and Watson 1981:17-22).

The War of 1812 soon put an end to all of the village's planning and development. In 1813, British troops, along with their Native American allies, crossed the Niagara River from Canada and fought their way from Black Rock south to Buffalo, where they burned all but four buildings in the village. Most of the residents managed to flee the area during a brief but failed negotiation period between the British and a local physician (Brown and Watson 1981:22-3).

Soon the people of Buffalo returned to their village and began rebuilding their homes and businesses. In 1817, the news of the approaching Erie Canal helped to foster a sense of optimism among Buffalonians. The digging of the canal had begun in Rome, New York, earlier that year. No decision had been made, however, about where the canal would enter Lake Erie. Buffalo and the neighboring Village of Black Rock were both anxious to host the port. The village chosen as the terminus would boom, while the other would fade away. In 1819, after much deliberation, state officials decided that Buffalo would be the terminus for the canal. The opening of the canal in 1825 would give Buffalo the

boost it needed to become not only a city, but one of major importance during the first half of the 19th century (Brown and Watson 1981:27-30).

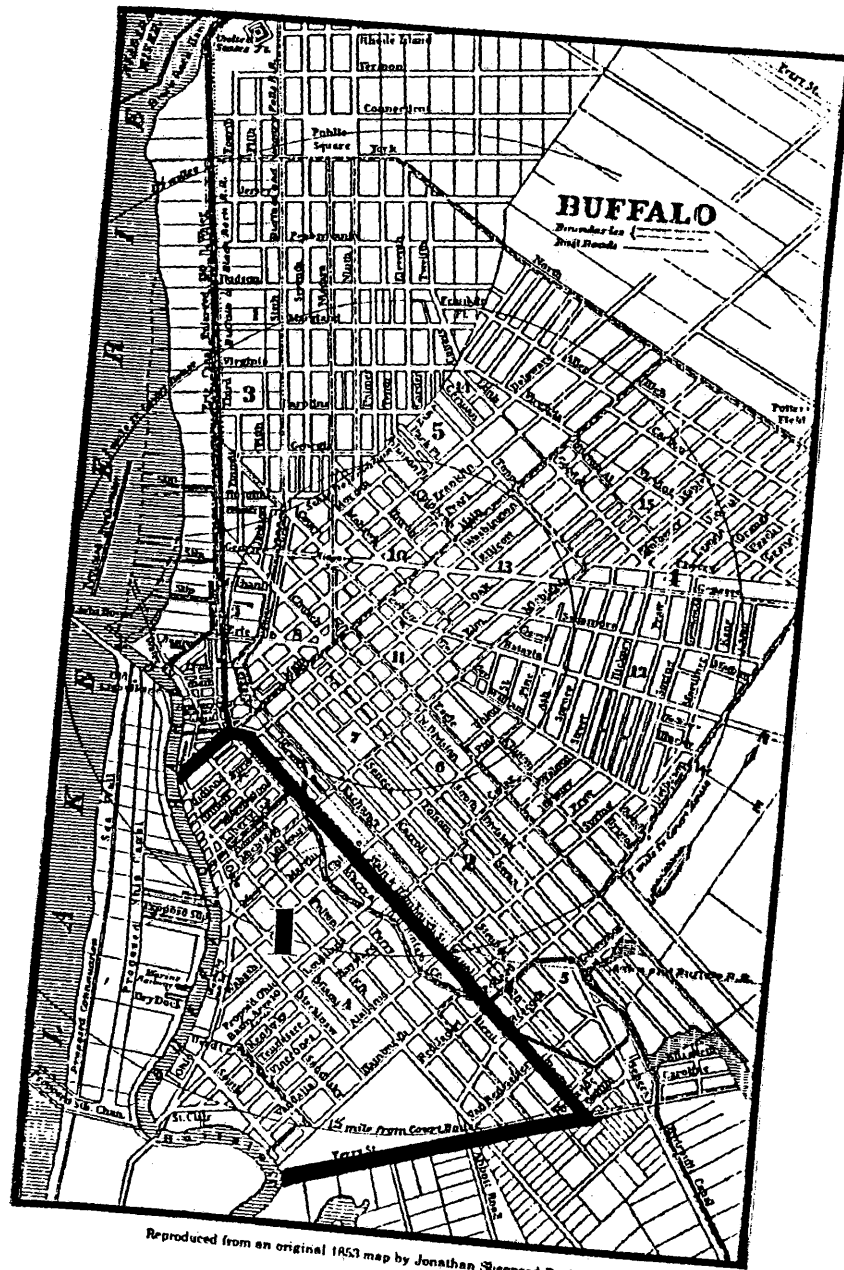
Among the people who came to break ground and begin the digging of the canal in Buffalo were many Irish laborers (Brown and Watson 1981:32). Irish workers were involved in the excavation of every stretch of the canal (Johnson 1966:20). The work was dangerous and low paying, but this did not stop the flow of immigration for workers who saw this as an opportunity to establish themselves economically in a way that was impossible in their homeland.

#### THE IRISH IN BUFFALO

Irish settlement in Buffalo began as early as 1817. Most of these early immigrants were Protestants (Gerber 1989:122). They settled with their families in the waterfront area south of Exchange Street, known as "the Flats", where they worked as laborers for the canal and lake trades. With the increase of waterfront industry, the growing Irish community relocated to the Old First Ward, where they remained for several decades (Buffalo News [BN] 1980:J-1) (Figure 2).

An even greater number of Irish arrived in Buffalo following the Irish potato famine in the 1840s (Eberle and

FIGURE 2  
1853 WARD MAP OF BUFFALO, INDICATING THE LOCATION  
OF THE FIRST WARD



Reproduced from an original 1853 map by Jonathan Sheppard Books, Albany, NY 12220.

Grande 1987:74; Johnson 1966:7). Fleeing political as well as economic oppression in their homeland, approximately 4.25 million Irish people immigrated to the United States (Metress 1990:148). Many had their passage to the New World paid for by their landlords, who covered voyage costs in order to rid their properties of these debt-ridden tenant farmers (Robins 1995:151). The journey to America took an average of 35 days. The trip was a dangerous one for the travelers. Disease spread easily among the passengers, and many died on the journey (Johnson 1966:7).

Many Irish immigrants settled in Buffalo, particularly in the waterfront district (Seller 1979:26). Many of the poorest Irish lived in wasteboard huts along the shore of Lake Erie. Others lived on abandoned boats. These ill-constructed homes were often destroyed by brutal waterfront storms (Gerber 1989:124). Families often kept animals for their own use as well as for family-based dairy industries (Local History Scrapbook-Buffalo and Erie County Library Local History Collection), and the 1875 census for the 4th district (part of the First Ward) lists 21 horses and 4 mules in addition to 13 cows (Erie County Census 1875).

Even given the poor quality of the dwellings they inhabited, many Irish could not afford to own their homes. In 1855, 30 percent of Buffalo's Irish household heads were

homeowners, compared to 54 to 56 percent for German-and American-born households, respectively. These figures are even more astounding given the fact that Irish homes, which were typically of wood plank construction, were of lower financial value than others (Gerber 1989:124).

Buffalo's First Ward was a separate entity within the city. The foreign-born Irish community, which constituted 62 percent of the ward's population, was close-knit (Gerber 1989:114). While the community was vulnerable to economic highs and lows, a strong ethnic and religious bond gave individuals a stable support base. Irish immigrant households consisted of large extended families who lived together in often cramped dwellings. The neighborhoods of the First Ward were composed of residential, industrial, and commercial establishments, and streets were often densely populated (Goldman 1983:78-9).

The First Ward had a reputation for prostitution, drinking, a high crime rate, filth, and squalor. Conflicts between ethnic groups, first between the Irish and Germans, and later the Irish and Italians, made the ward a volatile place (Gerber 1989:136). Violence also erupted frequently between canal workers, sailors and local laborers. The First Ward was located in Buffalo's Police Precinct No. 1, which had the city's highest number of police officers and arrests

(Dolan 1893:318). The majority of the arrests made citywide were for disorderly conduct, drunkenness, and vagrancy (Board of Police 1887:63-8).

Residents of the First Ward were referred to as the "Shanty Irish" (Cullinan 1974:7). The area south of Ohio Street was known as Rogue's Hollow, and was reputed to have been inhabited by thieves. The region bounded by Louisiana, Elk, Sidway and South Streets was known as Haker Town. This neighborhood took its name from a fish found in the waters off the coast of County Cork, Ireland, where many of Haker Town's residents were born (McCarthy 1962:1-2).

The settlement patterns of the Irish in 19th-century Buffalo were driven by two important factors. First, poverty dictated that the population settle in the most inexpensive part of the city. This was the waterfront area, along the docks and the canal sector. The second factor, proximity to Irish workplaces, which were typically waterfront industries, was of major importance not only for settlement patterns, but for the development of the community as a whole (Gerber 1989:123).

#### OCCUPATIONS

Occupation and ethnicity were intrinsically linked in mid-19th-century Buffalo (Stern 1987:35):

The impact of socioeconomic processes upon ethnic group formation was reinforced at Buffalo, because the functional division of labor was also a cultural division of labor, since each of the major ethnic solidarities tended to dominate a sector of the occupational structure (Gerber 1989:118).

Irish occupations were often in seasonal industries, which led to and perpetuated their financial and social instability. Irish immigrants typically worked as laborers on dangerous railroad and canal building projects (Johnson 1966:20). These jobs required of them only physical strength and endurance, and afforded them little opportunity for skills acquisition and professional advancement. This stands in contrast to their German counterparts, who, while also representing a large part of the unskilled labor force, were often placed in apprenticeships, where they had opportunities to master a skill and advance in the job market (Gerber 1989:125). Stereotypes of the Irish worker as lazy and shiftless, as well as prevalent anti-Catholic sentiment, led to the preferential hiring of members of other groups in skilled professions (Seller 1979:26-27).

In Buffalo, many Irishmen worked as scoopers for the city's booming grain industry. The grain elevator, along with its Lake Erie waterfront location, secured the city's hold on the industry. Scoopers were needed to load and unload the crop into barrels which were then lifted from

lake and canal ships (Levy 1940:2). Male hand labor earned \$1.25 per day in 1875 (Erie County Census 1875), though scoopers were paid by the number of bushels offloaded (Gerber 1989:126).

In Buffalo, grain scoopers were forced to participate in the saloon boss labor system. Saloon bosses, apart from fulfilling their roles as saloon owners, also served as boss scoopers at the nearby grain elevators, were active in local politics, and frequently operated lodginghouses. As bosses, these men supervised gangs of scoopers, who were paid weekly in the boss's saloons. Each boss scooper could fire the workers according to his own likes and dislikes. The saloons owned by these bosses were located near the elevators, frequently in the same neighborhoods where the majority of the scoopers lived. Scoopers spent much of their earnings on liquor in these establishments, often purchasing on credit. The saloon bosses deducted any outstanding balance from the scooper's pay. It was not uncommon for a scooper to owe more than the sum of his pay. There were many cases in which a scooper's boss and saloon proprietor was also his landlord. Because bosses wanted to maximize their profit, they favored heavily-drinking single men as boarders and scoopers, and aimed to have as many of these men as possible in a single gang (Levy 1940:8). Less organized recruitment also took

place in the saloons, as stevedores and contractors hired Irish men for day labor (Gerber 1989:134). At least one of the saloon/lodging houses at the Martin Phillips Site worked on the boss system: Martin Phillips himself was reputed to have been a scooper boss, providing scoopers for the nearby Wells Elevator (Kevin Doyle, personal communication, 1994).

Scoopers were not entirely powerless to this system of exploitation. In 1899, the scoopers held a strike, protesting their indenture to the saloon boss system. They were joined by the local longshoremen, community religious leaders, and political reformers. The strike lasted one month, and ended with the recognition of the newly formed Local 109 International Longshoremen's Association, as well as an agreement that workers would no longer be hired or paid in saloons (Goldman 1983:159-60). This did not, however, end the connection between saloon bosses and workers. At the turn of the century, 63 of Buffalo's 69 union organizations held their meetings in local saloons (Schlereth 1991:226).

A combination of factors, including low wages and seasonality of work, led to a kind of exclusiveness within the trade. Scooper union books were handed down through families. Because the majority of scoopers were Irish, this practice lent itself to a form of ethnic restrictiveness as

well. German, Italian and Polish men, however, sometimes became part of the union when they married into Irish families. In this way, an Irish father could ensure that his family would be cared for (Continelli 1996:E-2).

Many of the Irish residents of the First Ward were sailors. Because their occupation required technical knowledge of navigation, they were considered skilled workers. These men were a close-knit group, who often shared living quarters when docked. Their solidarity was generated and reinforced by working closely together while aboard ship, as well as their intense loyalty during periodic strikes. Though they were not unionized, hundreds of sailors would organize and participate in strike rallies and demonstrations (Gerber 1989:275-6).

Nineteenth-century Buffalo lacked the major industries, such as textile manufacturing, which employed women in other regions of the country (Gerber 1989:127). The city's economy was fueled by heavy industry, in which the workforce was predominantly male. In 1870, the city's labor force was 92 percent male, above the state average of 81 percent (Stern 1987:29).

This is not to say that women did not play an important role in the local economy. In fact, women's contributions to household income were often of great importance, given the

transitory and seasonal nature of much of the men's work in the First Ward. In many cases, it was the women who conducted most of the lodginghouse business. By 1900, 359 women, as opposed to 30 men, kept boarding and lodging houses in Buffalo (Wolfe 1913:38). With the exception of prostitution, very few job opportunities were available to women outside of housecleaning and boardinghouse keeping. While prostitution flourished in the nearby Canal District (Vogel 1993:47,374), no women are listed as boarders in the boarding houses of the Martin Phillips Site, and no brothels are indicated on the Sanborn Insurance maps.

Irish women in Buffalo often were employed as domestic servants. Their ability to speak English gave them an advantage over other immigrants competing in this job market. Most were employed in wealthy American homes, while others found work in hotels (Gerber 1989:127). Irish girls as young as 11 years old left home to begin domestic service. In 1855, more than half of the Irish girls in Buffalo aged 18 to 21 years were live-in domestic servants (Glasco 1977:135). Domestic service, however, was not considered an occupation for older Irish women, and most left this type of work during their late teens and early twenties, many to marry and establish their own households (Glasco 1977:137).

After marriage, many Irish women contributed to household income by taking in laundry and lodgers. This was the case in 19 percent of Buffalo's Irish households in 1855 (Gerber 1989:128). While lodgers contributed to the household income, they required a considerable expenditure of labor by the women of the household, in cooking, washing, and cleaning, chores that often involved hauling water and fuel (Seifert 1991:163). Irish women also sold milk from the family's cows (Gerber 1989:128).

As hardworking as they were, Irish women made up a disproportionately large percentage of Buffalo's poorhouse population (Gerber 1989:130). The primary explanation for this occurrence is that a large number of Irish women were single, many with children. Death of a spouse, separation, and desertion were all contributors to the situation (Gerber 1989:131). In 1855, 13 percent of Buffalo's Irish households were headed by female single-parents (Gerber 1989:131).

#### THE BOARDINGHOUSE SYSTEM

The boardinghouse often served as a substitute for family life, protecting migrating workers from outside forces: "It was the family's agent in city, guiding the young migrant from the family home to marriage while keeping ties to family and community intact" (Peel 1986:813-4).

Boarders often established relationships of "fictive kin" with their landlords (Beaudry and Mrozowski 1989:291). Boardinghouse keepers often felt responsible for shielding their boarders from the degenerative forces of the urban environment (Peel 1986:814). The extent to which this was true for the boarders on the Martin Phillips residential block is uncertain. The scooper boss system indicates a degree of control over the lives of boarders, but the scope of this control is unknown. Many of the boarders were sailors, who may have worked independently, or had their assignments determined for them by a boss (Barbour, Peña et al. 1997:13).

Although the term boardinghouse is commonly used, there is a distinction between boarders and lodgers. Boarders were provided with meals. Their actions were supervised and the structure of boardinghouse life simulated that of the family. Boarders congregated in common areas for supervised interactions and recreation. Conversely, lodgers lived in rented quarters and were responsible for their own meals and entertainment. They usually lacked access to cooking facilities, and were sometimes discouraged from using the parlors and other common areas in the lodginghouse. Because of this, they spent the majority of their time away from the

lodginghouse in saloons, recreation halls, and the streets (Duis 1983:194).

It is not known whether the boarders of the Martin Phillips block were classified as boarders or lodgers. The Buffalo City Ordinances classified a lodginghouse as

...a building in which persons are accommodated with sleeping apartments for a single night or more, and includes hotels and apartment houses where cooking is not done in the several apartments (Almendinger 1893:91).

The existence of a saloon and lodging within the same building indicates that the Martin Phillips residences are better classified as lodginghouses. In addition, these lodgers were not housed by a corporate entity, but rather by an independent family unit.

The majority of sailors in the Great Lakes region were nonresident workers. When working on the docks for extended periods, they tended to live together in local boardinghouses. Often ostracized by their host community, the men frequently boarded at the homes of former sailors. These boardinghouse keepers would often extend credit to sailors and assist them in finding work while ashore (Gerber 1989:275-6).

In 1855, 55 percent of Buffalo's unmarried population lived as lodgers or boarders (Glasco 1978:165). Forty percent of Irish men in Buffalo, the vast majority of them

single, lived this way. These Irish lodgers typically were newly migrated to the city, and tended to board with families of the same ethnic background (Glasco 1977:127-8). Twenty-nine percent of Buffalo's Irish households had boarders in 1855 (Gerber 1989:128). Immigrant Irish women also tended to lodge with Irish families. Twenty-one percent of Irish women in Buffalo were lodgers (Glasco 1978:172). Of these, one-fourth resided with relatives. Others, who were able to find work in domestic service, lived in the homes of their native-born employers (ibid:165).

The bulk of Buffalo's lodging population was concentrated in the downtown commercial district, with over a third residing in the predominantly Irish First Ward. The Ward was highly commercialized, and contained a number of boardinghouses as well as hotels. The 1875 census of the First Ward lists 24 inns, hotels, and taverns. Most boarders lived in these commercial establishments (Glasco 1978:170).

By the late 19th century, reformers began to speak out against the lodging system. Lodginghouses were often associated with crime, gambling, and prostitution, and its environs were thought to promote these behaviors in unwitting young people (Wolfe 1913:136-7,141-2). Lodging was also perceived as a sign of the decline of a neighborhood. Neighborhoods with few or no lodginghouses were associated

with strong native families, acculturated immigrants, and morally pure children and young adults (Modell and Hareven 1973:469).

Reformers also warned against the physical effects of the cramped living conditions, as well as the moral degradation caused by unrelated people living together (Harris 1992:331; Wolfe 1913:35; Duis 1983:192).

The lodging house, like the tenement, has a sanitary problem, but one far less pressing and of a different nature. It is a question whether the unsanitary conditions of the tenement do not arise from the character of its inhabitants as conditions of the tenement itself. In the lodging house, on the other hand, the problem comes mainly from the house and its unsuitability for the purposes to which it is put (Wolfe 1913:35).

Bathing facilities in the majority of lodginghouses were considered insufficient because they did not allow each resident to bathe daily (Wolfe 1913:35). The inadequacy of accommodations along with the increasingly crowded nature of boarding and lodging establishments made them frequent targets of blame whenever epidemic disease appeared.

## CHAPTER III

### 19th-CENTURY HEALTH AND SANITATION

During the mid-19th century, the miasmatic theory of disease was the prevailing paradigm. This theory held that diseases were caused by gases which rose from damp earth, sewage, and other waste materials (Melosi 1981:26). Health was also perceived to be linked with moral character. The putrid living conditions of the poorer segments of society were blamed on personal vices, such as gambling and prostitution (Ford 1994:49). Families left their windows open year round because of their belief in the prophylactic properties of fresh air. It was commonly held that disease could be fought through the use of proper ventilation, sunlight, and dryness (Bell 1987:59), and would be eradicated when waste was disposed of properly. This belief, known as "environmental sanitation", while effective in terms of improving the living conditions of the population, did not succeed in abating disease (Melosi 1981:26).

An opposing viewpoint of the time was the "contagionist" explanation. Contagionists believed that specific contagia were solely responsible for epidemic diseases and infections. Limited contagionism, a viewpoint

which merged the miasmatic and contagionist theories, held that contagions could only act in conjunction with other elements, such as atmospheric conditions. This position remained fairly popular until the last decades of the 19th century (Rosen 1993:264).

In 1856, *A Report on the Sanitary Police of Cities* accounted for the number of zymotic disease-related deaths which occurred in American cities. The report defined zymotics as diseases "which are propagated by emanations, from the ground, from decaying animal or vegetable matter, from cases of previous disease, or from over-crowded human beings, diseases which are, or may be epidemic, endemic, or contagious". In Buffalo alone, for the year 1854, 1,321 deaths were attributed to zymotic disease. This represented 45 percent of the total deaths for the year. In 1855, 1,853, or 30 percent of the total deaths were attributed to zymotic disease (Newman 1856:9).

The relationship between disease and water pollution was first articulated in the 1850s by Dr. John Snow, a London physician. Prior to this work, water quality was assessed by visual inspection. Clear, scentless, flavorless water was determined to be safe to drink. Dr. Snow warned against this superficial testing, and announced that cholera

could be spread through a contaminated water supply (Hastings 1974: 110).

The discovery of bacteria in the late 19th century led to an increased understanding of the origin of disease (Melosi 1981:26). It also raised awareness of prevention, which entailed not only a concern with personal cleanliness, but an interest in the hygienic state of the community as well (Ford 1994:50).

The first cholera epidemic to strike the City of Buffalo took place in 1832. The outbreak was blamed on Irish immigrants who came to the United States via Quebec and the Great Lakes (Goldman 1983:48). Approximately 250 cases were reported in the city, half of which resulted in death. At the time, there was no known cure for the disease, so it simply had to run its course. Many remedies were tested however, including the wearing of a piece of camphor in a bag hung from the neck (Lockie 1968:15).

Homeopathic treatment also grew in popularity in Buffalo during the 1840s. This type of treatment involved the introduction of microdoses of animal, plant and mineral matter in order to stimulate the natural healing response (Bellavite and Signorini 1995:8). This approach to medicine had been well-known in Europe and larger American cities since the beginning of the century. It gained popularity in

Buffalo as a result of the cholera epidemic of 1832, which modern medicine had failed to curtail. Another outbreak of the disease occurred in 1849, which local homeopathic physicians were able to abate with their treatments. Because of its increased popularity in the city, many homeopathic physicians relocated to Buffalo during this period. During the 1860s, the Buffalo Homeopathy Society was formed. By 1870 there were 20 homeopathic physicians practicing in the city. In 1872, the Buffalo Homeopathic Hospital opened (Lockie 1968:16,19).

Buffalo's worst cholera epidemic took place in 1854. Between May and November of that year, 572 of the total 1,036 reported cases resulted in death (Buffalo Board of Health [BBOH] 1855:39). In a desperate attempt to assuage the outbreak, local doctors suggested treatments which ranged from bloodletting to large dosages of opium. The scourge, which struck all of Buffalo's ethnic and socioeconomic groups, was especially devastating in the Irish community (Goldman 1983:86). The Irish were stereotyped as a dirty group who lived in filth. Many had been rural dwellers in Ireland, but settled in cities after immigrating to the United States. This change of lifestyle may have been difficult to adjust to, and may explain why urban Americans perceived their customs to be unclean

(Robins 1995:183). Local physicians blamed the Irish and other destitute immigrant populations for the outbreak:

Our city from its situation, the hordes of emigrants constantly passing through it, and the large resident foreign population, with their peculiarities of habits, most certainly contains within itself the soil for the development of the disease... (BBOH 1855:41).

Cities and towns all along the Erie Canal attempted to enact regulations that would prohibit immigrants from disembarking from boats at their ports. Many desperate immigrants jumped overboard and passed through the canal locks, despite efforts by the military to stop them (Hastings 1974:105).

Eleven cholera cases were reported on Ohio Street, the location of the Martin Phillips Site, between July 9 and September 3 of 1854 (BBOH 1855:51). Buffalo City ordinances of the late-19th century held lodginghouse keepers partially responsible for the spread of disease. These homeowners were to report all sick sailors lodging within their homes to the Board of Health (City of Buffalo [COB] 1885:7). Laws such as these were clearly aimed at the lower classes.

Mid-19th-century responses to disease prevention were typically more closely related to engineering than medical science. Efforts were focused on cleansing the physical environment of disease-bearing filth. Street cleaning and regulated inspections became common practices during this time. The commonly held belief was that along with the filth

and debris carried away from the city would also go the disease.

Buffalo's responses to disease were numerous. The Buffalo Board of Health, which was founded in 1832, made efforts to wash the city's sewers in reply to the cholera epidemic of 1854 (BBOH 1855:42-3). Since the majority of the city's neighborhoods did not have access to the sewer system, however, the benefits of the cleaning were limited. Local sanitarians were still complaining about the unclean nature of cities, and the role of sanitation in disease prevention in 1873. Cities were urged to clean up all sections within their limits in order to eradicate cholera.

Every city and town sends up its deleterious gases...which combines with the poisonous principle with which the atmosphere is already impregnated, and thus a compound is generated, which may be the fatal cholera-poison...therefore sanitary measures should be promptly instituted for the thorough purification of the gas-generating foci all around us in full blast; from offal in vacant lots; from the alleys reeking with pollution; from the gutters and back yards of tenement houses...This is where the sanitary labors should begin...Timely and thorough cleansing and disinfecting is what "stamp out" Asiatic or sporadic cholera, better than any other means yet known to civilization (Buck 1873:29).

In 1887, the Buffalo Street Commissioner decided to take action against people who neglected to keep their sidewalks free of refuse (BE 1887:24). In July of that year, the City Council passed several street-cleaning specifications (BE

1888:36). These improvements, while helping to alleviate the problem, were not enough to remedy the situation. Compared to the expenditures of other cities for street cleaning, Buffalo paid very little. During the 1880s, Buffalo's citizens paid an average of 5 cents per year for street cleaning costs. This fee translates to \$34.00 per mile of paved road. By comparison, in New York City, private citizens paid as much as 71 cents per year, a total of \$1,870.00 per mile (Melosi 1981:44).

Contagious disease continued to spread in Buffalo, despite the efforts made to slow its progress. Another outbreak of cholera claimed 179 lives by the summer of 1888, surpassing the previous year's total of 99. By the fall, the number of cholera cases had dwindled, but was soon replaced by an outbreak of diphtheria (BE 1888:35-6;45).

The field of bacteriology developed during the later part of the 19th century. Along with an emphasis on disease-spreading bacteria rather than poisonous gases, came a transfer of focus from the environment to the individual. This shift in the understanding of disease and its proliferation meant an increased emphasis on medical techniques and personal hygiene (Tarr, et al 1949:181).

## MEDICINE

The mid-19th century, despite the recent success of homeopathic treatment, was a time of general mistrust of the medical profession in the United States. Divisions between the various sects within the profession led to a decrease in the status of medical practitioners (Howson 1992:144). Occurring simultaneously with this skepticism was the increase in the popularity of patent medications. By the 1840s a vast assortment of cure-all medicinal products, many of the "man or beast" variety, were available nationwide. The development of brand name medicines, especially those of the proprietary variety, "transferred the allegiance of the consumer from the pharmacist to the manufacturer for these preparations" (Lockie 1968:15-9). For example, Merchant's Gargling Oil, manufactured in Lockport, New York, just 20 miles northeast of Buffalo, was available nationally as well as in local markets. The Merchant's brand is not represented in the Martin Phillips Site artifact assemblage. While the product was available in Buffalo, sales of this and other patent medications were greater outside of the area of manufacture (ibid:15).

Proprietary medicines allowed the consumer to circumvent the physician. These preparations enabled the sick to diagnose their own symptoms and to choose the

remedy. There were two general types of patent medicines available: "specifics", which were recommended for the treatment of a particular disease, and "cures", which could be taken for a wide range of ailments (Ketchum 1975:82). These products were all available as over-the-counter preparations. This method of acquisition represented an important action on the part of the consumer: self-help.

Nineteenth-century Americans chose to purchase patent medicines rather than consult a physician for several reasons. Patent medications were reputed to be more palatable than their physician-formulated counterparts (Howson 1992:145). Many contained large quantities of alcohol, as well as arsenic, morphine, and opium (Ketchum 1975:37). Not surprisingly, the use of such products was often habit-forming (Harris 1977:7). Furthermore, patent medicine vendors often convinced consumers that their products were a simpler solution than the harsh battery of tests, therapies, and treatments they would receive from a doctor for the identical ailment (Young 1961:37). Some consumers avoided medical attention because they could not afford it. Others held a general mistrust of the profession (Larsen 1994:74). Physicians may also have been avoided for religious or cultural reasons. Irish immigrants were known

to have been afraid to go to hospitals, for fear of dying without a priest present (Johnson 1966:25).

The outbreak of the Civil War led to an increase of medical sanitation standards in an effort to prevent the spread of epidemic disease. These precautions were extended to treatment of the civilian population as well (Stone 1979:288). The war also led to the stepping up of the production of medicines. The number of drug stores began to expand following the close of the war. In 1850, Buffalo had twenty drug stores. By 1870, the number had risen to thirty stores (Lockie 1968:15,18-9).

The Buffalo City Dispensary opened its doors at 157 Main Street in 1841. By 1844, the office had moved to 180 Main Street. Its purpose was to provide medical care for the ailing poor (Lockie 1968:15). Two additional dispensaries were incorporated during the next few decades. Local physicians were not pleased with their presence. Many doctors donated their services to the dispensaries. They felt that by doing so they were already providing ample care for the poor, and that additional aid was unnecessary (Buffalo Medical and Surgical Journal [BMSJ] 1871:74).

Poor people have been, and now are, able to select their own physician, and receive both his services and necessary medicines gratuitously. We cannot see what further advantages they can desire, unless they are

able to receive pay for taking the medicines when thus furnished (BMSJ 1871:74).

Doctors may have been fearful that their services were being abused. "Dispensary abuse" was a common occurrence during the mid-19th century. Dispensaries typically served as "medical soup kitchens", in that their main function was to dispense medication to all who were in need. Middle-class people, who could afford to seek the services of professional physicians, often misrepresented themselves as poor at the dispensaries in order to save money. Medical practitioners became frustrated by this occurrence, and were wary of the establishment of too many dispensaries (Tarr, et al 1949:182).

#### PRIVIES IN BUFFALO

In Buffalo, regulations were enacted to keep privies clean and to prevent them from contaminating the ground water. The Buffalo City Ordinances for 1843 prohibited the removal of a privy's contents between 4 am and 11 pm. Written permission was to be granted by the street commissioner before a sewer, privy, cistern or well could be constructed (CCB 1843:19,32). The 1852 City Ordinances prohibited the removal of waste from privies between June 1st and September 15th. Furthermore, waste

could only be removed from privies between the hours of 11 pm and 4 am during the remainder of the year (CCB 1853:13). In 1870, the Common Council drafted an ordinance prohibiting the removal of a privy's contents without the consent of the City Scavenger (CCB 1870:136). By 1885, a license was required in order to engage in privy cleaning. The law also required that night soil "be removed and conveyed away by means of some odorless apparatus...said apparatus to be approved of by, and subject to such rules and regulations as the Board of Health may impose" (CCB 1885:16).

In 1854, the Common Council of Buffalo voted to allow the city's scavengers to sell night soil to local landowners (CCB 1854:40). Unfortunately, the supply of human waste exceeded the seasonal demands of farmers (Smith and Young 1993:8). Lacking a market for their product, scavengers would often dump their nightly collection into local waterways (Geismar 1993:60). In Buffalo, the Niagara River served as a waste receptacle for some of the city's night soil men, much to the dismay of the city's downstream neighbors (Engineering News [EN] 1894:356).

By 1893, it was not permissible to construct a privy in places where sewers made water closets accessible. Where this service was not available, privies were to be constructed of hard brick, water tight, and not to exceed 75

cubic feet in capacity. In addition, offensive odors were to be prevented from escaping the vaults (Almendinger 1893:95). The Health Department of Buffalo, in its 1893 plumbing laws, prohibited the construction of a privy within 10 ft of a street or highway (with the exception of an alley), or within 5 ft of the property boundary on which it was being built. The vaults were to be constructed in a manner which rendered them easy to access and clean. Furthermore, no privy was to be constructed within 50 ft of a well. Such privies were required to be water tight, so that the soil around them would not become saturated with the waste. These laws were considered of the utmost importance, and carried a \$25.00 fine for each violation (Almendinger 1893:103-4).

The water closet and earth closet were both alternatives to the privy vault. Both of these mechanisms consisted of a metal pail enclosed within a wooden cabinet and seat. The water closet used water to flush waste out, while the earth closet covered the waste with soil. These early toilets were in use during the 1860s. Because not all households had access to sewer lines, however, privy use continued. Privies were still the most popular form of waste disposal in the 1870s (Sutherland 1989:38).

Explanations for the persistence of the privy vault system include not only economic considerations, but also

the perceptions 19th-century Americans held regarding indoor plumbing. Many people did not feel comfortable having an item so closely linked with filth and disease inside their homes (Stone 1979:283). Families whose homes were equipped with the latest amenities were often fearful of the consequences: "People with indoor sewage pipes and toilets worried about 'sewer gas', which backed up from clogged pipes to poison household air" (Sutherland 1989:78). Medical journals of the time warned against the deleterious effects of these "gases", admonishing families who used water closets to check the mechanisms frequently for defects, warning that, "Though elegant and convenient, they can be through means of sewer gas the agents of disease" (BMSJ 1874-5:75).

#### THE INSTALLATION OF A PIPED WATER SYSTEM

The country's first major public water supply system was introduced in Philadelphia in the 1790s. This system was implemented in response to a city-wide yellow fever epidemic. By 1876, most of the country's big cities had a municipal water supply of some kind to serve some of the city's neighborhoods (Schlereth 1991:111).

The implementation of a water supply system did not necessarily mean a corresponding system of waste disposal,

however. By the 1850s there were still no municipal sewage removal systems in any American cities. Larger cities began to implement sewer systems during the 1880s. These mostly served to collect storm water, however. Local ordinances typically prohibited the disposal of waste in these sewers. It is probable that these laws were occasionally broken. Many had their waste removed by night soil men or farmers, or chose to dump in their back lots and streets (Schlereth 1991:112).

The implementation of running water systems, while improving some sanitary conditions, exacerbated others. Cities became reliant upon water pumped in from distant places because of the contamination level of their own supply, as well as the exhaustion of their own potable provisions (Tarr, et al 1980:61). The emergence of running water also gave way to the adoption of the water closet, which had been patented in England earlier in the century (Tarr, et al 1980:62).

By the 1870s, water was still being carried into and out of the home on a daily basis by American women and children. Many homes were still without running water in 1915 (Schlereth 1991:111):

Perhaps the single biggest chore for these women was getting water. Without indoor plumbing or sewage, every drop of water used in a house- for drinking, cooking,

bathing, and cleaning- had to be carried indoors and dirty water carried out. Urban families living on the third or fourth floor of a tenement made many treks each day to public faucets (Sutherland 1989:65).

Within the home, few American families had rooms set aside for bathing. For those who did, the bathroom contained a tub which was hooked up to a cold water line, to which hot water had to be carried from the kitchen. The majority of the population, however, still bathed using a pail as late as 1880 (Sutherland 1989:37). Many lodginghouses had only one bathroom, if any, because they were originally designed to serve as single family residences (Schlereth 1991:105).

The first water supply system in the Village of Buffalo was introduced in 1827. That year, the Jubilee Water Works was incorporated, and began to pump water from a natural spring. The company laid down 16 miles of hollow log pipes which supplied homes, businesses and corner water pumps (Buffalo Evening News [BEN] 1951). Prior to this, villagers relied upon peddlers like "Water John" Keucherer, who delivered water scooped from the Niagara River to their doorsteps (Ray 1940). The cost of the street corner pumps was covered with a general tax. For individual services, however, families were charged an annual fee of \$5 (BEN 1951).

By 1875, over 5,000 Buffalo homes were supplied with water. Of these, 3,310 had water closets (Tarr, et al 1984:231). Connection to the water system was not free. In 1868, the Buffalo City Water Works' annual rates were \$15.00 for a two-story 25 to 30 ft wide dwelling. In private houses, water connection for bathtubs was \$5.00 per tub for hot and cold water, and \$4.00 per tub for cold water only. Public houses paid \$8.00 per tub. Prices for water closets in private residences ranged from \$5.00 to \$7.00 for the first unit, and \$2.50 to \$5.00 for each additional unit. Grocery, liquor, and drug stores were charged \$10.00 to \$35.00 for service. Bars, saloons, billiard saloons and restaurants were charged \$12.50 to \$65.00. Special rates (unspecified) were available for boarding houses, taverns and hotels (Buffalo City Water Works [BCWW] 1868).

Citizens who could not afford to pay for these services were forced to live in less than ideal environments. About three-quarters of Buffalo's urban households still used privies in 1880 (Tarr, et al 1984:232). It has been noted that the order in which particular sections of a city receive water services is related to the socio-political status of its inhabitants (Honerkamp and Council 1984:26).

A water company runs its pipes only in those streets which will pay; the poor cannot pay, and no stream flows to gladden their sight, allay their

thirst, or bathe their bodies. Every drop that flows has its price, and as it falls is watched with as jealous an eye as if it were expected that it would congeal into a diamond (Newman 1856:23).

In c. 1870, Mr. B. Holly of Lockport, New York introduced the Holly system of water pressurization. The process involved the use of engines and rotary pumps to force water into mains, bypassing the use of reservoirs, and providing enough pressure to use in firefighting purposes by attaching hoses directly to hydrants. The system was first introduced in the northern section of Buffalo, "in which section of the city most of our more elegant residences are located". The system was an expensive one to implement, but was described as "a mere bagatelle when the needs and importance of the portions of the city to be supplied are considered" (BC 1871).

In Buffalo's First Ward, there was neither a central water system nor were there private wells by the 1870s. First Ward residents drew their water from a well located at the corner of Terrace and Main Streets (BEN 1972:B-5). In 1873 an act empowering the Board of Water Commissioners of the City of Buffalo to "establish or designate free public hydrants in said city" was passed (Unknown 1873).

The quality of water pumped into the city was of a questionable nature. Local newspapers published numerous

editorials in which concerned citizens voiced their concerns about the safety of their water supply.

The complaint is not that the "pure water of Lake Erie" is unwholesome, but that the filthy, poisonous contents of the enormous cesspool called Main and Hamburg Street Canal, which receives the entire sewerage of all that part of the city lying east of Main Street- including the nauseous drainage of nearly every oil refinery in Buffalo- is stirred up, and pumped up out of its filthy bed, at an enormous expense; that every tax-payer in the city has been compelled to pay a share of the expense of carrying this terrible compound straight into the water tunnel in the Niagara river, and of pumping it up into the reservoir and serving it without filtering to the inhabitants of this city as a beverage and for culinary purposes. Many times within the last six months the water thus furnished has not only been nearly the color of liquid manure, but so nauseous with the odor of kerosene oil as to be almost intolerable. It needs not the employment of a chemist to detect the deleterious substances which compose such a villainous compound (Buffalo Commercial Advertiser [BCA] c.1871).

Residents were concerned with the connection between the impurities in the water and their physical well-being.

One of the chief needs of our city is water- pure and abundant. The health of the inhabitants depends largely upon the wholesomeness of the water they use, and the very safety of the city itself may, in case of fire, be endangered by a scarcity supply. During the last two or three years these questions have been forcibly presented to the consideration of our people. The nauseating mixture that has circulated through the city's arteries, and been paid for as water, has been as unhealthy as it was disgusting, while the means for supplying even this detestable compound have been far short of what is absolutely required (Buffalo Express [BE] 1873).

The canal system was often viewed as a culprit in Buffalo's water supply problem. Local physicians monitored the passage of sewerage through the canals and attempted to correlate the offensive odors that emanated from them with an increase in disease (BMSJ 1871:71-2). The Hamburg Canal was singled out for its repulsiveness, but was thought to be innocent of spreading disease.

...Its unequalled offensiveness is sufficiently apparent. When it was for a few days served up...our citizens abandoned the use of the water almost entirely for culinary purposes; indeed, for all purposes-animals would not, and human beings did not make use of it. Offensive and bad as it is, it has not been so potent for evil as to cause any manifest disease (BMSJ 1873:109).

Citizens living in close proximity to the canals were not found to suffer from disease at a greater rate than those who lived in the outskirts of the city. Wells and privy vaults were considered to be the primary agents of contagion. The use of wells in an urban setting, because of the risk of contamination, was frowned upon by the medical profession of Buffalo. It was feared that privies polluted not only the air, but also the well water. Local physicians warned that these vaults were an imminent danger to urban areas (BMSJ 1873:110).

It can be plainly shown that they are highly dangerous to the public health. These privies are, many of them, placed in yards of the houses to which they belong, some in the houses themselves; in these yards

are in many instances wells from which the drinking water of the family is obtained, and in such close proximity are the wells that it requires no stretch of the imagination to see how the contents of the privy vault might filter into the well (BMSJ 1874-5: 75).

Health and sanitation reform are intrinsically linked with innovations in water and waste facilities technology (Bell 1987:57; Howson 1992:139). While the new doctrine of public health and sanitary reform may have reflected a "dominant ideal" for the 19th-century American sanitation movement, it is unlikely that the majority of citizens adopted these ideals or practices (Ford 1994:57). City ordinances supply the researcher with the desired conditions, but do not indicate whether or not these guidelines were closely followed and representative of reality (Bell 1987:59). Economics, for instance, played a role in determining the access to and probability of adopting new methods of sewage disposal. Other perhaps stronger factors may have influenced behavior as well, and must be considered alongside the prevailing dogma of the day. The archaeological record can be used to flesh out the inconsistencies between the "desired" and the "experienced" (ibid:59).

## CHAPTER IV

### THE MARTIN PHILLIPS SITE

The area in which the Martin Phillips Site is located was designated as part of the outer lots of the City of Buffalo when it was first surveyed by the Holland Land Company in 1797 (Brown and Watson 1981:15). These outer parcels were divided and sold during the early 1800s. In 1829 the portion which makes up the Martin Phillips Site, Lots 76 and 77, were sold to John B. Hicks (Barbour, Peña et al. 1997:27) (Figure 3).

In 1840, Hicks' land was divided into subplots and distributed to Charles Hicks, John P. Hicks, George and Maria C. Smith, and Lamira and Warren Lampman. This investigation is concerned with the lot which belonged to Charles Hicks, which was located at 68 Ohio Street (Figure 4). In 1846, Charles Hicks leased the property to Henry Hamilton. The following year the lot changed ownership three times, to Philander Sawin, Benjamin Fitch, and William Fitch. In 1866, the lot was owned by Augustus Fitch. Beginning in 1870, the property was leased to Henry Newman. Following the death of Augustus Fitch, the property was inherited by Evelina Fitch. Because Evelina was a minor, her

FIGURE 3  
1884 MAP OF THE OUTER LOTS OF THE CITY OF BUFFALO

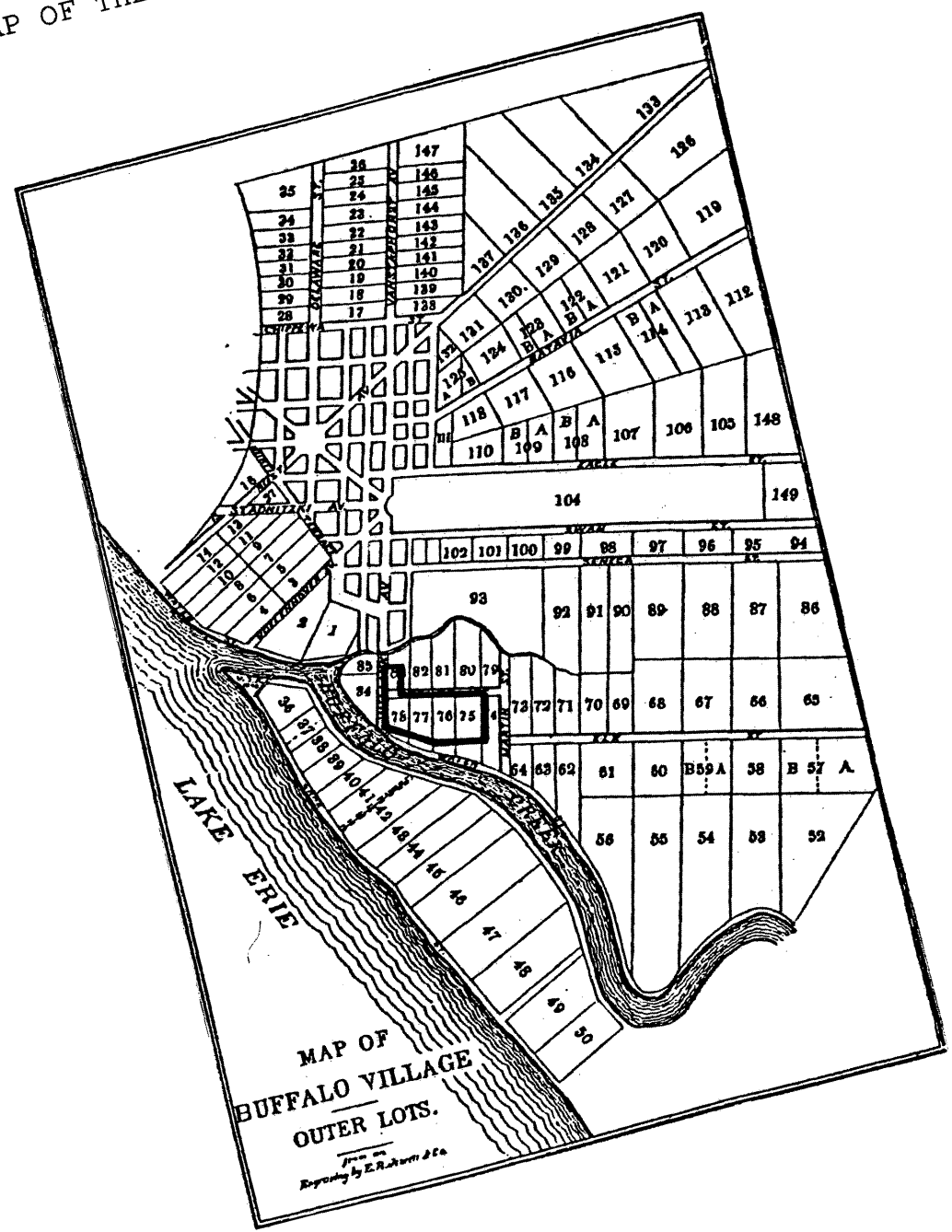
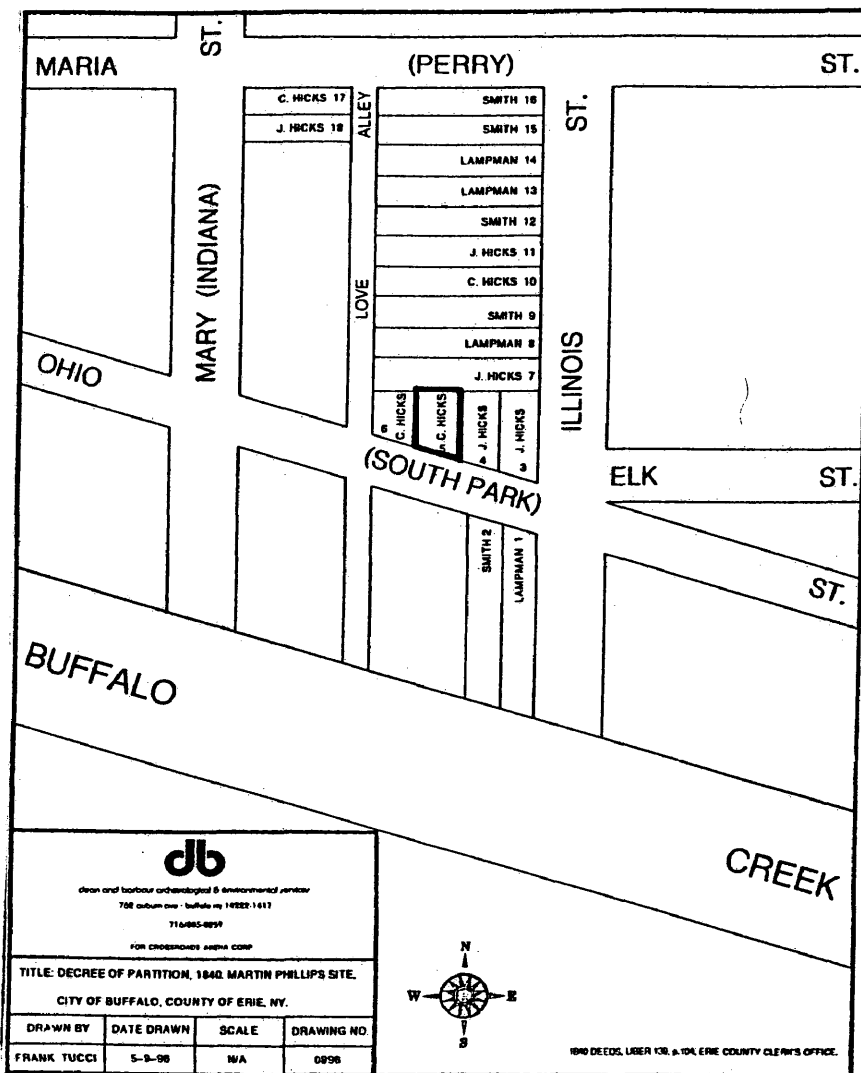


FIGURE 4  
 PARTITION MAP OF 1840, INDICATING THE LOCATION OF  
 68 OHIO STREET  
 Illustration by Frank Tucci



guardian sold the property to Christian Witmer in 1884. Henry Newman continued to lease the property during this time. Newman is last listed at 68 Ohio Street in the 1885 city directory (Buffalo City Directory [BCD] 1885). By 1887, the property had been leased to Jeremiah McMahon (BCD 1887) (Table 1).

This investigation is concerned with the time period evidenced by the archaeological data from the two privies to be examined, ca. 1865-1888. This corresponds primarily with the occupation of the lot by Henry Newman. Newman, who leased the property beginning in 1870, was an Irish-born saloon and boardinghouse proprietor. The 1870 US census lists Henry Newman, his wife Gertrude, their two children, Florence and Henry, and a female domestic servant. Newman's personal estate value was \$500 (US Census 1870). No boarders were listed in the 1870 survey. The 1875 Erie County census has a listing for Newman in a brick building with a property value of \$6000. At this time, Newman inhabited the house with his wife, their two children, a female servant, and 9 male boarders. Four of the lodgers were US born, five were Irish, and one was Scottish. The Scottish resident and three of the Irish lodgers were naturalized citizens. Five of the lodgers were sailors, two were laborers, one a boot maker, and one a mechanic (Erie County Census 1875).

TABLE 1

CHRONOLOGY OF OWNERSHIP AND USE OF 68 OHIO STREET  
 Source: Buffalo City Directory, 1870-1889; Barbour Peña, et al 1997

1829	John B. Hicks purchases Lots 76 and 77 from the Holland Land Company	
1840	John B. Hicks divides property into subplots, distributing 68 Ohio Street to Charles Hicks	
1846	Charles Hicks leases property to Henry Hamilton	
1847	Property sold to Philander Sawin	
1847	Property sold to Benjamin Fitch	
1847	Property sold to William Fitch	
1866	Augustus Fitch	
1870	Augustus Fitch leases property to Henry Newman	
1871	Henry Newman	Boarding-house
1875	Henry Newman	Saloon
1880	Henry Newman	Boarding-house/Saloon
1880	Augustus Fitch bequethes property to Evelina Fitch (a minor)	
1881	Henry Newman	Boarding-house/Saloon
1882	Henry Newman	Boarding-house/Saloon
1883	Henry Newman	Boarding-house/Saloon
1884	Evelina Fitch's guardian sells property to Christian Witmer	
1884	Henry Newman	Boarding-house/Saloon
1885	Henry Newman	Boarding-house/Saloon
1887	Jeremiah McMahon	Saloon
1889	Jeremiah McMahon	Boarding-house/Saloon

By the time of the 1880 US census, the now widowed Newman shared the property at 68 Ohio Street with his two children (Florence, whom the census lists as a housekeeper, and Henry, a clerk), a female servant, and 36 male lodgers. Of the lodgers, 13 were US born, 8 were Irish, 6 were Canadian, and others immigrated from Germany, Sweden, Holland, Scotland, England and Denmark. Of those born in Canada and the US, 6 reported Irish parentage. All of the lodgers were sailors (US Census 1880). Only one of the lodgers, Edward Francis, a Massachusetts native, was listed in both the 1875 and 1880 census records. Following Newman's lease of the property, the lot was leased to Jeremiah McMahon c.1887, who also operated a saloon and boardinghouse on the premises (BCD 1887).

#### THE 68 OHIO STREET PRIVIES

The property at 68 Ohio Street consisted of a lot which measured 80 ft deep by 16ft 8in wide. The structure upon it was a brick-walled row house, which extended north from the street. The house shared its eastern and western walls, which marked the property lines, with the adjacent houses.

The backlot of the row house at 68 Ohio Street contained a double privy at its western boundary. These vaults, their contents, and their construction are the focus

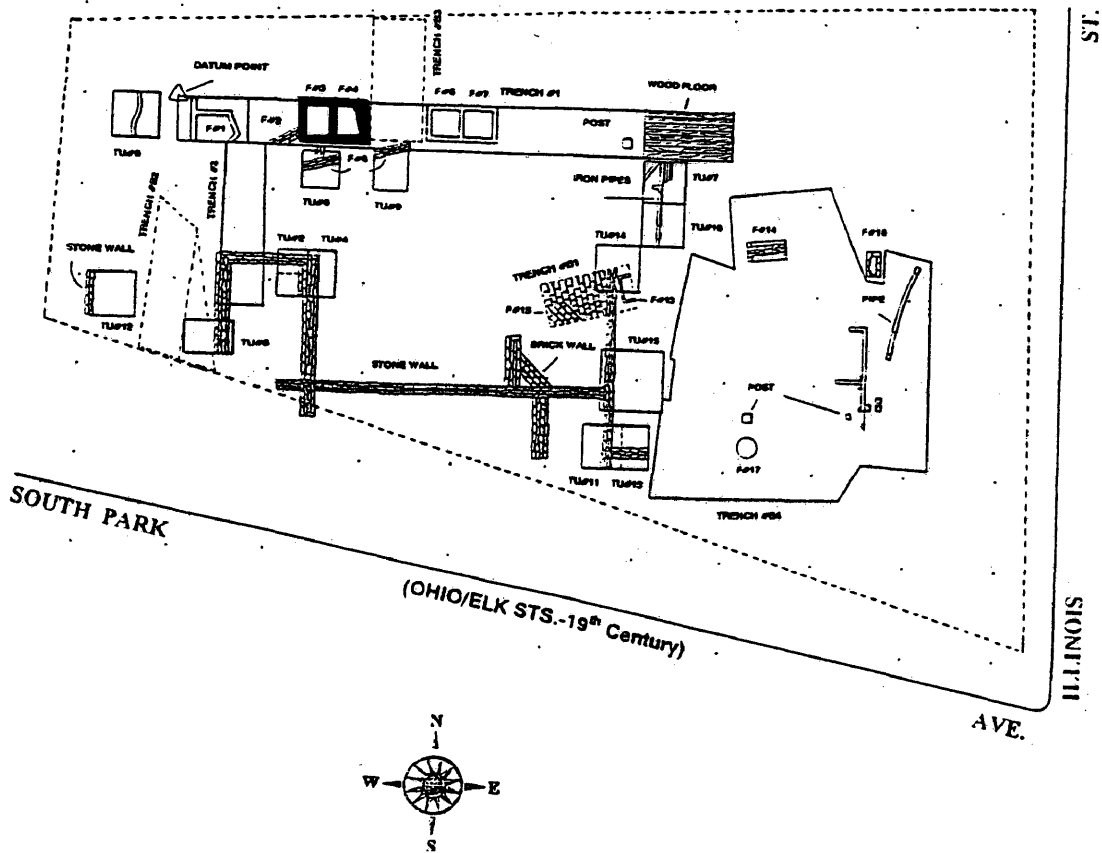
of this examination. The privies were designated Features 3 and 4 during the field investigation. Feature 3 was the western vault, and shared its eastern wall with the eastern vault, Feature 4. The features were excavated in quadrants, and by stratigraphic layers (Figure 5).

Feature 3 was a wood-lined privy vault, square in shape, which measured 3 ft 8 in x 3 ft 6 in. The planks of the wooden side walls ran horizontal for the northern, southern and western walls of the feature. The planks of the eastern wall, which the feature shared with the adjacent vault, ran vertically. The walls of the feature were thin and unstable. A yellowish plaster coating was observed on the interior of the north and east walls of the feature.

Layer 1 of Feature 3 consisted of a lime cap that had been placed over the feature at the time of its abandonment. This chalky substance was found in all of the quadrants of the feature, however, in the northwest quadrant it was covered by a layer of black (10YR2/1) soil. Layer 1 measured approximately 2ft in depth toward the center of the feature, and approximately 1ft at the outer edges. Layer 2 was a very dark gray (10YR3/1) soil with rusty industrial material, particularly slag. The layer measured approximately 1ft 6in in depth. Layer 3, which measured 1ft 4in in depth, was also a very dark gray (10YR3/1) soil which contained rust

FIGURE 5

MARTIN PHILLIPS SITE MAP, INDICATING THE LOCATION OF  
FEATURE 3 AND FEATURE 4  
Illustration by Frank Tucci



particles throughout. The layer was distinguished by an increase in artifact concentration. Layer 4 of Feature 3 was a dark greenish gray (5GY4/1) gley. Excavation of this layer was halted after approximately 1 1/2ft in depth due to a strong odor that caused concern for worker safety.

Like Feature 3, Feature 4 was a wood-lined privy vault, square in shape, which measured 3ft 8in x 3ft 6in. The vault was located adjacent to Feature 3, with which it shared its western wall. The planks of the northern, southern and eastern walls of the feature ran horizontally, while the planks of the western wall ran vertically.

Layer 1 of Feature 4 consisted of a black (10YR2/1) soil with slag throughout. This layer measured 6 inches in depth. Layer 2 consisted of a very dark gray (10YR3/1) soil mottled with clay and slag. This layer measured approximately 9 inches in depth. Layer 3 of the feature was a layer of wooden planking that measured 3in in depth. A small amount of dark soil (10YR3/1) and lime was noted above the wood, and was included within Layer 3. The planks may have served to cap the privy. Layer 4 consisted of a dark olive gray (5Y3/2) clay, and measured approximately 1ft in depth. Layer 5 of the feature contained a mixture of dark olive gray (5Y3/2) clay and wood. This layer measured roughly 6 inches in depth. Layer 6 was a dark olive gray

(5Y3/2) clay. The majority of the artifacts excavated from Feature 4 were concentrated along the walls. This may be indicative of a cleaning episode (Wright Mauer 1995).

*Terminus post quem* dates were established for Features 3 and 4. Because no temporal differences were evidenced by the artifact assemblages from individual layers, one date will be given for each feature. A *terminus post quem* of 1879 was established for Feature 3, based upon the presence of a Hutchinson Spring Stopper (Jones and Sullivan 1989:162). A *terminus post quem* of 1865 was established for Feature 4. This was based upon the presence of a John Howell bottle. This local bottling company began operating under this name in 1865 (Buffalo Morning Express [BME] 1888). The *terminus post quem* dates for Features 3 and 4 indicate that the features can be associated primarily with Henry Newman's occupation of the 68 Ohio Street lot. Newman and his family and boarders lived at this residence from 1870 to c. 1886. The property was then leased to Jeremiah McMahan, who continued to run a saloon and boardinghouse on the property. It is not known whether some of Newman's boarders continued to reside at 68 Ohio Street under McMahan's proprietorship.

The stratigraphy and pattern of artifact dispersal within Features 3 and 4 indicate differential treatment of

the two privies. The concentration of artifacts within Feature 3, as well as its correlation with industrial by-products rather than night soil indicates that the deposit may represent a single housekeeping episode, rather than the accumulation of material over time. Housekeeping episode deposits often took place during a change of households (Stottman 1996:3). If this was the case with Feature 3, the deposit may represent the final deposition of items from the Newman household at the time that Jeremiah McMahon took up residence at 68 Ohio Street. The privy may have been cleaned periodically prior to this. Privy vaults were often cleaned out and reused over a period of many years (DeCunzo 1987:272).

The concentration of artifacts around the walls of the adjacent vault, Feature 4, indicates that the feature may have been cleaned at one time. The capping off of a portion of the feature with wooden planks suggests that the feature may also have been sealed at some point, possibly at the time of a change in households. The filling of Feature 4 with soil and industrial waste rather than household trash may indicate a change in waste-disposal technology, rather than a switch in household or other housekeeping activity. The household may have switched to a water or earth closet system, making a privy unnecessary.

## ARTIFACTS

The artifact types considered in this examination are glass bottles and medical paraphernalia. Other artifact classes represented in the Newman household assemblage included ceramics, clay tobacco pipes, table and flat glass, animal bone, metal hardware, cutlery, textiles and buttons. These artifacts will not be addressed by this study. Ceramics were initially examined as part of this study in order to determine whether they could be interpreted in terms of health and sanitation. The tableware and teaware assemblages did not appear to reflect consumer choices made out of a concern for health and sanitation (cf. Stottman 1996), and are therefore not included here. Future analysis of the other artifacts classes, however, would help to develop a fuller picture of life at 68 Ohio Street.

This study is concerned with responses to health, sanitation and hygiene matters at the household level. A household is defined here as a co-residing domestic unit which shares a domestic space for "basic life processes" (Gibb 1996:17). This definition does not limit the household to individuals with kinship ties. Domestic space, in this study, includes not only the physical dwelling, but the yard areas as well, particularly the privies.

## BOTTLES

The categories of container glass addressed in this examination are medicine, soda/mineral water, perfume, and wine/liquor bottles. The analysis of table, lamp, and flat glass is beyond the scope of inquiry, as they have not been shown to be related to health and sanitation concerns. Furthermore, only complete or mostly complete legible bottles will be used in this study. Future analysis of the assemblage incorporating the bottle fragments would help to further elucidate the understanding of the features.

### Soda and Mineral Water Bottles

#### Feature 3

Soda and mineral water bottles comprised the majority of the glass bottle assemblage for Feature 3. A total of 40 of these bottles, or 55 percent of the Feature 3 glass bottle assemblage, were recovered. This section will describe these items, as well as their reflection of product availability, consumer behavior, and ideas about health.

Two soda bottles were recovered from Layer 1 of Feature 3. One bore the embossments "G KRIEGER" and "BUFFALO NY". Krieger was a local grocer whose business was located at 374 Broadway in Buffalo (BCD 1880; BCD 1881). A Hutchinson Spring Stopper was found inside of the bottle. This type of

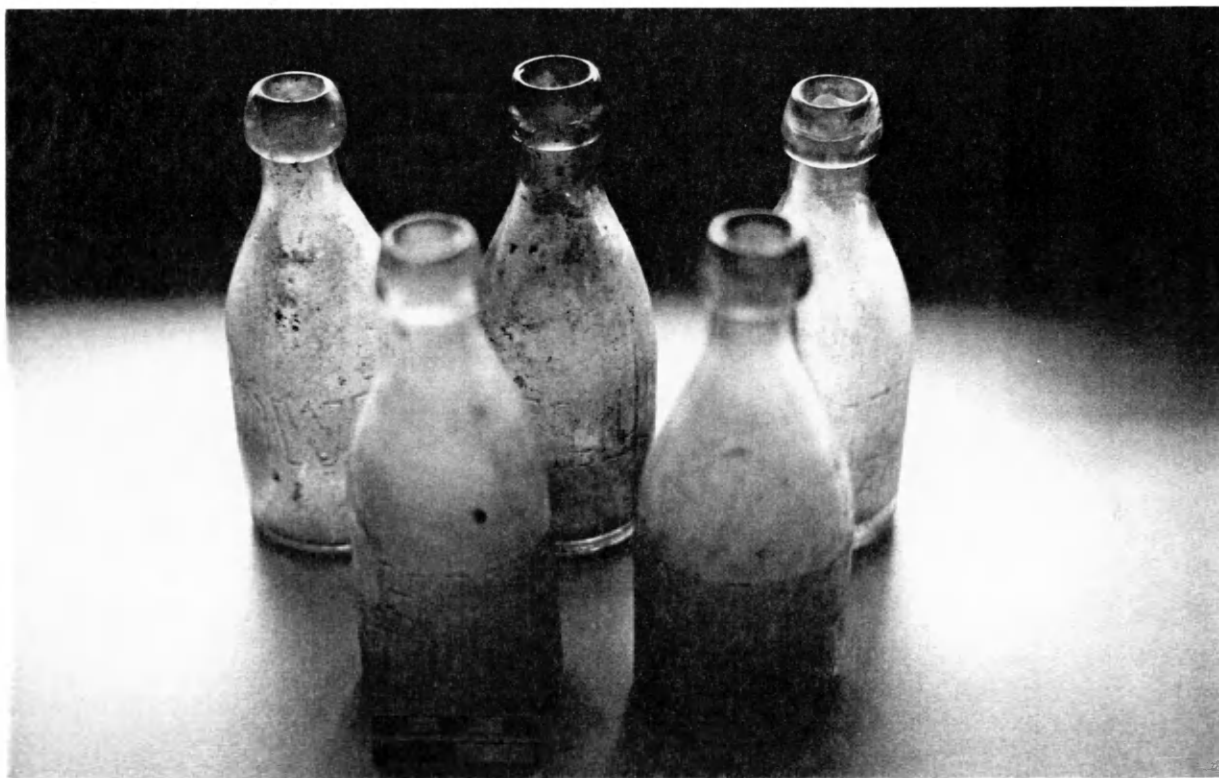
closure was patented in the United States in 1879 (Jones and Sullivan 1989:162). The second bottle was embossed with the name "WINANS". Elisha Winans manufactured "Boston Birch Beer" on Niagara Street in Buffalo. His business was listed in the Buffalo City Directories from 1881 to 1893 (BCD 1881-1893).

Five soda bottles were recovered from Layer 2 of Feature 3. One of the bottles was embossed "P G STEPHAN" and "BUFFALO NY". Philip G. Stephan was a mineral water manufacturer whose business was located at 24 Broadway in Buffalo (Barbour, Peña, et al 1997:57). Another bottle was embossed "F X SPITZNAGEL" and "BUFFALO NY". The base of this bottle read, "JOHN MATTHEWS PAT OCT 11 1864 NEW YORK". Spitznagel's business was located at 437 Ellicott Street in Buffalo. The business was listed the city directories from 1881 to 1892 (BCD 1881-1892). Three bottles bore the embossments "JOHN HOWELL" and "BUFFALO NY" (Plate 1). A Hutchinson Spring Stopper was found in one of the bottles. John Howell bottles will be discussed later in this chapter.

Nineteen soda bottles were recovered from Layer 3 of Feature 3. Fifteen of these were embossed with "JOHN HOWELL" and "BUFFALO NY". One bottle was embossed with the name "FRANK MCGOVERN" and "SYRACUSE NY". McGovern ran his business from 1871 to 1878 at 90 Geddes Street in Syracuse

## PLATE 1

JOHN HOWELL BOTTLES, FEATURE 3  
Photograph by J. Denmon



(Barbour, Peña, et al 1997:57). Another bottle bore the embossment "FRED KERN & CO". This bottle can be associated with the Frederick Kern Saloon, which was located at 397 Ellicott Street in Buffalo. Kern's business was listed in the 1879 City Directory (BCD 1879). One bottle was embossed "DR CRONK & GIBBONS IMPROVED MINERAL WATER". Another was embossed "E L WINANS" and "BUFFALO NY". This bottle can be associated with Elisha Winans, described above.

Fourteen soda and mineral water bottles were recovered from Layer 4 of Feature 3. One was embossed with the words "E SMITH", "ELMIRA" and "NY". These can be traced to a company that was located on Water Street in Elmira, New York. The company was found in an 1857 City Directory (Barbour, Peña, et al 1997:58). Another bottle was embossed with "LANCASTER GLASS WORKS". This company began operations in 1849 in Lancaster, New York (Dunn 1971:7). The Town of Lancaster is located 10 miles east of Buffalo. The New York Central Railroad was routed through the town in the early 1850s. Buffalo provided Lancaster with not only a local market for glass products, but also a national market via canal, rail, and Great Lakes shipment (ibid:1). During the 1870s, the Lancaster Glass Works produced a wide variety of bottles for local and regional beverage and patent medicines manufacturers (ibid:15).

Twelve of the bottles recovered from Layer 4 of Feature 3 can be associated with various incarnations of a single bottling firm. Two of the bottles were embossed "BURR & WATERS", seven were embossed with "HOWELL & SMITH", and three were embossed with "JOHN HOWELL". The firm of Burr & Waters, manufacturers of porter, vinegar, and cider began operations by 1838. The company was located at 21 and 35 East Seneca Street in Buffalo (BCD 1838). By 1853, the company had begun to bottle mineral water as well. John Howell, an English immigrant, began work as a clerk for the company in 1841. In 1854, Howell and Arman B. Smith became proprietors of the business. The firm of Howell and Smith operated until 1865, when Howell became its sole proprietor (BME 1888). In 1880, the business name was changed to Howell & Sons (BCD 1880).

The Burr & Waters, Howell & Smith, and John Howell bottles recovered from Feature 3 represent three of the four known stages of the company. The three bottles recovered from Layer 2 were embossed "JOHN HOWELL", representing the period from 1865 to 1880. One of these bottles was associated with a Hutchinson stopper, indicating that it was manufactured between 1879 and 1880. Fifteen bottles embossed "JOHN HOWELL" were recovered from Layer 3, representing the period from 1865 to 1880. Layer 4 of Feature 3 yielded

bottles which represent three periods of the company: Burr & Waters (1853-1854), Howell & Smith (1854-1865), and John Howell (1865-1880). The fact that all of these bottles were found in a single layer supports the hypothesis that there is no temporal division between the layers in which the feature was excavated.

#### Feature 4

Feature 4 yielded four soda bottles. A single bottle bearing the embossment "JOHN HOWELL" was recovered from Layer 1 of the feature. This bottle was produced between 1865 and 1880. The three remaining bottles were recovered from Layer 6 of the feature. The bottles all bore the embossment "HOWELL & SMITH", giving them a date range from 1854 to 1865.

#### Discussion

Soda and mineral water bottles account for 53% of the glass bottle assemblage for Features 3 and 4. This high representation may be attributable to several factors. First, the last quarter of the 19th century marked the beginning of national distribution for soda bottling corporations (Riley 1946:8). Stottman (1996) argued that the increase in the number of soda, mineral and spring water

bottles in privy assemblages may be used to delineate late-19th century perceptions of sanitation. During this period, public awareness of ground water contamination increased. People who did not have access to the municipal water supply often chose to purchase bottled water, rather than use well or cistern water (Stottman 1996:6). That the citizens of 19th-century Buffalo were less than satisfied with the quality of their water supply was illustrated in Chapter III. The soda and mineral water bottles recovered from Features 3 and 4 may have been purchased by members of the household in an effort to avoid the impure water supplied by the city and thereby control their physical well-being.

Another factor which may have contributed to the high percentage of soda and mineral water bottles was the popularity of mineral water as a medical agent. In this way, the soda and mineral water bottles may also be interpreted as medicine bottles. Prior to the publication of the 1898 *British Pharmacopoeia*, the English considered soda water to be a solely medicinal product, and required that sodium bicarbonate be an ingredient. Early 19th-century American pharmacopoeias also categorized soda water as a "Medicinal Water" (Riley 1958:5). Until the establishment of the Pure Food and Drug Act of 1907, thousands of people regularly drank mineral water in an effort to improve their health

(Armstrong and Armstrong 1991:89). Among the ailments the beverage was reputed to cure were heartburn, indigestion, and urinary calculi. The drinking of soda water was believed to prevent stomach and bowel-related diseases, as well as headaches. The regulation of the use of soda water was a concern for some medical practitioners. Some consumers overindulged in the use of the beverage (Riley 1958:5).

“Moreover it is true that certain gases and salts held in solution in some beverages, such as mineral waters, increase the excretory action, and may be highly beneficial in appropriate cases; but it should be a matter of caution that where such therapeutic results are thought to be necessary, competent medical advice should be the guide as to the kind and quantity of the agents used. This comment is justified by the fact that of late many substances capable of influencing the body functions have been advertised and sold in the form of one beverage or another directly to the laity, who, being incompetent to judge as to whether or not such substances are actually needed in their individual cases, may in this way do themselves much harm (Egbert 1926:331-2).

The terminology applied to soda and mineral waters also gives a glimpse of the perceptions connected to these beverages. The use of the term “tonic” to refer to the drinks indicates an association of them with medicinal qualities. That the correlation of effervescent drinks with medicine continued in the United States into the late 19th century is evidenced by the early marketing of flavored carbonated beverages. In 1886, the initial selling point of

a new product called Coca-Cola was its efficacy as a headache remedy (Schlereth 1991:230).

The temperance movement has also been cited as a factor which contributed to the increase in soda and mineral water consumption during the late-19th century. Thomas (1998) linked increased use of soda and mineral water in 19th-century Buffalo with an attempt, on the part of the purchaser, to be identified with the temperate lifestyle, and hence, the respectability of the middle class. Soda and mineral water were often suggested as substitutes for alcoholic beverages. They were commonly referred to as "temperance drinks" and "soft drinks", in comparison to "hard" liquors (Riley 1958:12).

Those involved in the temperance movement often recommended the soda fountain as an alternative to the saloon (Schlereth 1991:229). Here a patron would be surrounded by like-minded companions who reinforced the temperate lifestyle. The saloons, too, offered soda and mineral water to customers, however. Saloons were frequently the main outlet for a soda bottler's product, often accounting for as much as 2/3 of bottled water sales (Riley 1958:133-4).

Advocates of the temperance movement also used health as a reason to abstain from alcohol use. The intemperate

were listed among the groups most greatly afflicted with cholera (Larsen 1993:11.8). Physicians argued that substituting mineral water for alcohol was more hygienic (Egbert 1926:332).

All of the possibilities presented as motivating factors in the purchase of soda and mineral water are indicative of a concern for health. The purchase of the bottled water in avoidance of pumped water or alcohol would represent a preventative measure taken to avoid disease, while the purchase of water as a remedy for an ailment represents a curative measure. Regardless of the reasons for their purchase, locally bottled soda and mineral waters were easily accessible in the Buffalo market. Only two of the soda bottles recovered from Features 3 and 4 came from outside of the Buffalo area. One of the bottles was manufactured by Frank McGovern of Syracuse, New York, and the other by E. Smith of Elmira, New York. Both towns are within 150 miles of Buffalo, and would have had ready access to the busy port city via railroads and canals.

#### Wine and Liquor Bottles

##### Feature 3

A total of 4 wine and liquor bottles were recovered from Feature 3, representing 5% of the glass bottle

assemblage for the feature. A single liquor bottle was recovered from Layer 1 of Feature 3. It was embossed with the name and address of the Walsh Brothers Liquor Dealers, located at 351 Elk Street in Buffalo. This business was located at this Elk Street address from 1881 to 1893 (Barbour, Peña, et al 1997:57). Layer 3 of the feature yielded one unembossed flask, and two wine bottles.

#### Feature 4

A single wine bottle was recovered from Feature 4. The specimen, which consisted of a base and partial body, was recovered from Layer 5 of the feature.

#### Discussion

It would be imprudent to draw conclusions about a difference in use between Features 3 and 4 based upon the small sample size represented by the wine and liquor bottle assemblage. The scarcity of liquor bottles in comparison to soda and mineral water bottles may be explained by the presence of the saloon which Henry Newman ran from his home at 68 Ohio Street. Newman's saloon may have had liquor delivered in barrels or kegs, which would have been returned and refilled by a distributor. Any bottles which were delivered to the saloon may also have been returned for

cash, as this was often the case for milk, soda and alcohol bottles during this period (Bond 1989:137).

### Medicine Bottles

#### Feature 3

Thirty-one medicine bottles were recovered from Feature 3. This class of bottle represents 40 percent of the Feature 3 bottle assemblage. Several of the bottles are embossed with the name of a particular druggist or pharmacy (Table 2). This type of information is useful in the examination of the use, form, and availability of medical care.

Six medicine bottles were recovered from Layer 1 of Feature 3. One of the bottles was embossed "U S MARINE HOSPITAL SERVICE 100cc". Plans for a Marine Hospital in Buffalo were first made in 1827. That year, citizens petitioned the Common Council to build "A Marine Hospital for the reception of all sick and disable Seamen, Sailors, or persons in navigating the Lakes or Canals of this State" (Select Committee Appointed to the Common Council, 1836). At this time, a Board of Trustees was established for the hospital, and a lot was purchased. By 1836, no facility had been erected, prompting the Common Council to form a Select Committee to investigate the issue.

TABLE 2  
EMBOSSSED MEDICINE BOTTLES, FEATURE 3

Embossment	Layer	Frequency
MCD	1	1
U.S. MARINE HOSPITAL SERVICE	1	1
RODENBACH APOTHECARY//166 BATAVIA ST.//BUFFALO, NY	1	1
PETERSONS//BUFFALO, NY// (B6// PAT JUNE 88-on base)	2	1
BOSCHEE'S GERMAN SYRUP//L.M. GREEN, PROPRIETOR	2	1
CATARRH REMEDY//DR. PIERCE PROPR.// DR. SAGES//BUFFALO	2	1
WT & CO.	2	1
CHESEBROUGH MFG. CO//VASELINE	2	1
PD & CO.//15	2	1
RRR RADWAY & CO//NEW YORK//ACT OF CONGRESS	4	1
R&C WRIGHT//PHILA	4	1
OWAYS//OINTMENT//HE CURE OF//NDOLENT TUMOURS//ATE ULCERS//SCALDS RINGWORMS SOREHEADS AND ALL CUTANEOUS DISEASE//GOUT AND RHEUMATISM//SOLD IN POTS//1S//219-416- 11-22 33 ED//BY THE PROPRIETOR//244 STRAND//LONDON//AND ALL MEDICINE VENDERS THROUGHOUT THE KINGDOM	4	1
TURLINGTON'S BALSAM OF LIFE*	4	1

\*based upon shape, not embossment

Further documentation of the Marine Hospital is sparse and incoherent. A three-story brick building labeled "U.S. Marine Hospital" was found on a 1915 atlas map of Buffalo. The structure was located at 2183 Main Street (Century Atlas Company 1915:14). This structure was not indicated on an 1891 map of the area (G. M. Hopkins and Company 1891). The Main Street location is the present-day site of Sisters Hospital of Buffalo. Prior to establishing operations at this Main Street location, the hospital occupied a lot on St. Louis Place, and later at 353 Main Street. Sisters may have operated a branch of the Marine Hospital from these earlier locations. The 1882 city directory listed a Marine surgeon as a member of the Sisters Hospital staff. At this time, the hospital was located at 353 Main Street. The 1887 directory listed a U.S. Marine Hospital and Dispensary which was run in conjunction with Sisters Hospital at 353 Main Street.

One bottle was embossed with the letters "MCD". Another bottle was embossed "WT & CO". These bottles could not be associated with any product or manufacturer.

Three of the bottles were unidentifiable as to content or manufacturer, because they bore no embossments (Plate 2). Pharmacists and physicians often purchased unembossed

## PLATE 2

UNEMBOSSSED MEDICINE BOTTLES, FEATURE 3  
Photograph by J. Denmon



bottles to which they applied their own labels (Barbour, Peña et al 1997:56) (Figure 6).

Layer 2 of Feature 3 yielded nine medicinal bottles, four of which can be associated with specific products or manufacturers. One of the bottles was embossed "DR A BOSCHEE'S GERMAN SYRUP/L M GREEN/PROPRIETOR" (Plate 3). Another bottle read, "CATARRH REMEDY/ DR SAGE'S/ DR PIERCE PROPR/BUFFALO" (Figure 7). Catarrh referred to the inflammation of a mucous membrane (Baldwin 1973:22). Dr. Ray Vaughn Pierce began his proprietary medicine business in Buffalo in 1867. Dr. Pierce was a shrewd businessman whose products were sold nationwide (Lockie 1968:116-7). He ran both the World's Dispensary Invalids' Hotel located at 663 Main Street, as well as the World's Dispensary Laboratory at 660 and 670 Main Street (Pierce 1894). The Laboratory manufactured Pierce's wide variety of medications, which included Dr. Pierce's Golden Medical Discovery, Dr. Pierce's Favorite Prescription, Dr. Sage's Catarrh Remedy, and Dr. Pierce's Pleasant Pellets. The Cattarrh Remedy, which came in powder form, sold for 65 cents per 1/2 ounce bottle. The bottle was embossed on all but one side. An instructional label was affixed to the empty panel (PMC). The remedy was to be used 4 to 6 times per day, until symptoms lessened. Once a portion of the powder was dissolved in water, the

FIGURE 6

1890 CATALOG ADVERTISEMENT, MEDICINE BOTTLES  
Source: Truax 1890

200



DISPENSING SUPPLIES AND DRUG SUNDRIES.

BOTTLES, Prescription, flint, French square, Fig. 211, or ovals, Fig. 212.

The dozen price will be charged for less than gross lots.

	Per gross in full cases.	Per gross in less than full cases.	Per dozen in less than gross lots.
1/2 oz., 5 gross in case.....	\$1 38	\$1 60	\$ 15
1 oz., 5 " " .....	1 38	1 60	15
2 oz., 3 " " .....	1 62	1 85	18
3 oz., 2 " " .....	2 00	2 25	20
4 oz., 2 " " .....	2 25	2 55	25
6 oz., 1 " " .....	2 75		30
8 oz., 1 " " .....	3 25		35
16 oz., 1/2 " " .....	5 50		60
Ass'd. 1 " " .....	1 to 8 ounces, per case.....		2 25
Prices for bottles washed, corked and wrapped. 1/2 oz. per doz			
1 oz. ....			18
2 " .....			20
3 " .....			24
4 " .....			30
6 " .....			35
8 " .....			40
16 " .....			50
			75

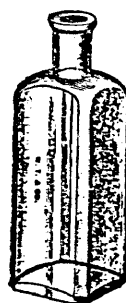
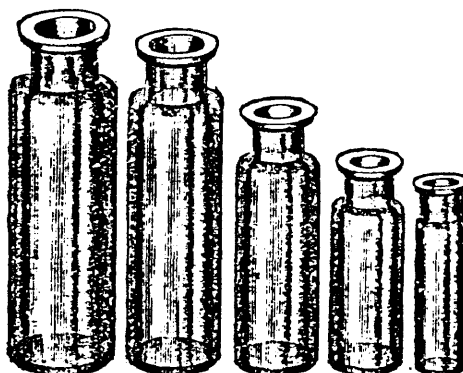


Fig. 211.

For the convenience of physicians we have these vials well washed, corked with the best corks and wrapped with light manilla paper. The advantage of using these will be readily seen, for not only are the bottles always ready for use, with corks fitted, but a wrapper is supplied which can be used to re-wrap the vial after being filled and labeled. We are happy to order gummed labels, printed with physician's name and address. See Label page.



Fig. 212.



8.3 drachm. 8.3 drachm. 8.1 drachm. 8.1/2 drachm. 8.1/4 drachm.  
HOMOEOPATHIC VIALS.

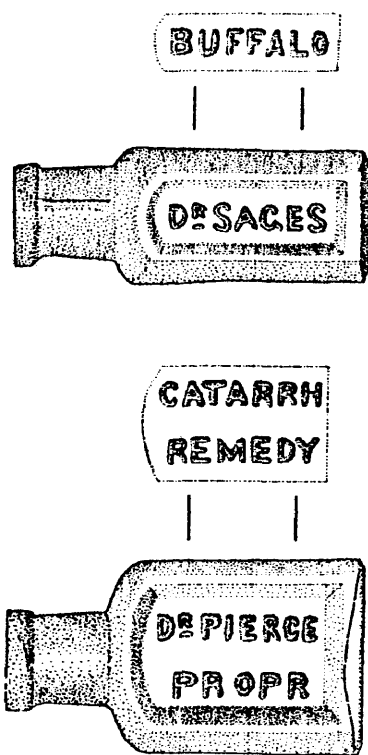
## PLATE 3

DR. A. BOSCHÉE'S GERMAN SYRUP BOTTLE, FEATURE 3  
Photograph by J. Denmon



FIGURE 7

CATARRH REMEDY BOTTLE, FEATURE 3  
Illustration by Chris Hughes



fluid was heated and poured into a post-nasal syringe. This type of instrument had a curved tip that was placed behind the soft palate. The user then tilted his or her head forward over a wash basin and pressed the syringe plunger, emptying the liquid into the nasal passage. Two syringe-fulls of the solution were used for each dosage (Pierce 1895:493-4) (Figure 8).

Another bottle recovered from Layer 2 of Feature 3 read "RODENBACH APOTHECARY/166 BATAVIA ST/BUFFALO, NY". The company was located at the Batavia Street address from 1868 to 1896 (Barbour, Peña et al 1997:56). One colorless bottle was embossed "PETERSON BROS./BUFFALO NY". The base of this bottle read "B6/PAT JUNE 88". The Peterson Brothers were located at 179 Exchange Street in Buffalo from 1888 to 1896 (BCD 1888-1896).

A glass jar which read "CHESEBROUGH MFG CO/VASELINE" was recovered from Layer 2 of Feature 3. Vaseline was advertised as "A valuable dressing for cuts, abrasions and burns" (PMC).

Four medicine bottles were recovered from Layer 3 of Feature 3. None of these could be associated with manufacturers or products.

Layer 4 of the feature yielded 12 medicine bottles. One of these read "R. R. R. RADWAY & CO. NEW YORK/ENTD ACORD

## FIGURE 8

CATARRH REMEDY DEMONSTRATION SKETCH  
Source: Pierce 1895

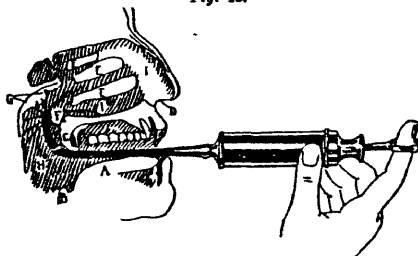
## PHARYNGITIS AND POST-NASAL CATARRH. 498

the victims of incurable disease of the air-passages resulting from morbid nasal conditions, who might be saved by proper and timely treatment.

## PHARYNGITIS AND POST-NASAL CATARRH.

Simple chronic pharyngitis seldom exists alone and uncomplicated; most cases being the result of previous existing disease of the nasal or post-nasal passages. Many cases are associated with hypertrophy, or enlargement, of the tonsils. Usually the disease is located in the upper part of the pharynx, or throat, behind and above the uvula and soft palate, and is thus hidden from view when looking into the throat through the mouth. When not associated with nasal catarrh the common

Fig. 16.



Use of the Post-nasal Syringe in the treatment of Post-nasal Catarrh.

A. Tongue. B. Epiglottis. C. Soft palate. D. Anterior opening of the nostril. E, E'. Turbinated bodies. F. Junction of the nasal passage and throat. G. Diseased and roughened mucous membrane. H. Throat or Pharynx. I, I'. Interior of nasal passage.

symptoms are dropping of tenacious mucus in the throat, causing a constant desire to hawk and spit; sense of dryness in this region; cough and expectoration on rising in the morning, which is due to the irritability of the throat, and may invade the lower air-passages. The throat may be studded with red and thickened patches of its mucous membrane. Respiration may be embarrassed, the voice affected and the general health gradually decline. The membrane above and behind the palate is angry, reddened, thickened and roughened, as represented in G, Fig. 16.

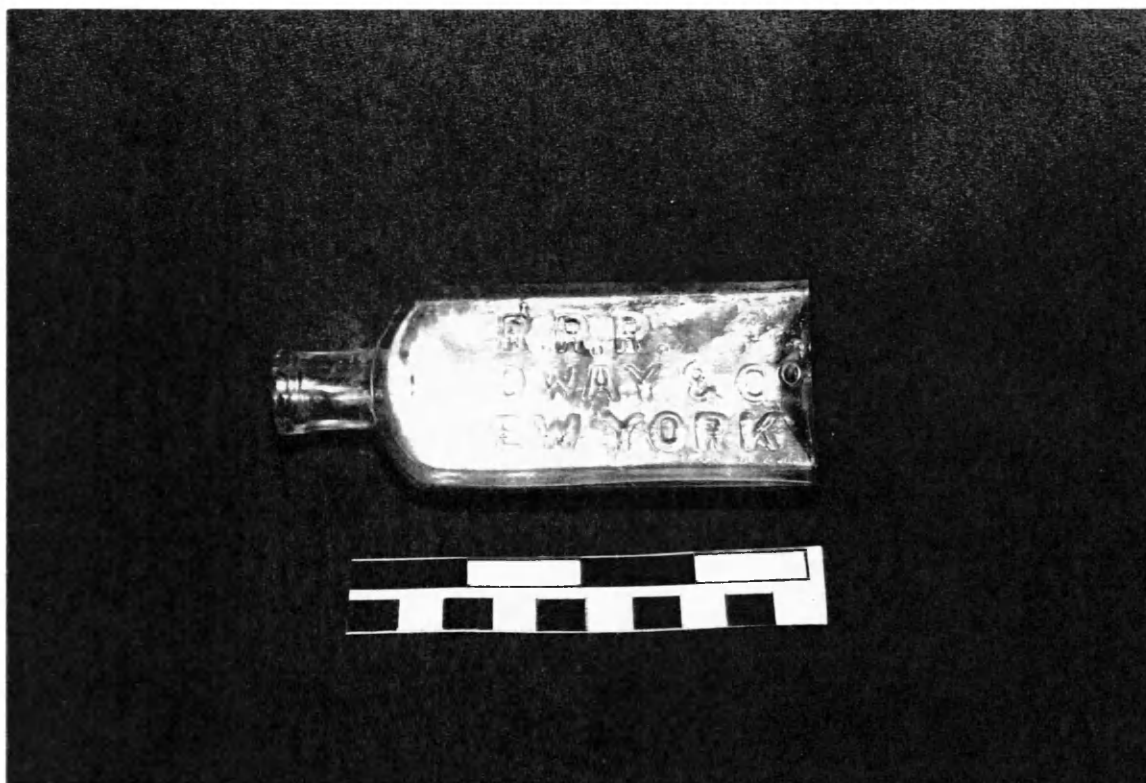
**Treatment.** To rationally treat a disease, attack the cause. Therefore, in an uncomplicated case of post-nasal disease of the pharynx the medicine should be applied at this point. For this purpose we rec-

TO/ACT OF CONGRESS" (Plate 4). This bottle contained a product known as Radway's Ready Relief. This liquid medication could be used externally as a liniment for physical ailments including minor sprains and muscle strains, toothaches, insect bites, and neuralgia, or nerve pains of the face. It could also be taken internally for use as a carminative (PMC). Carminative medications served to expel gas from the stomach and intestines (Baldwin 1973:22). Radway's Ready Relief contained oleoresin capsicum (cayenne pepper), ammonia, camphor, potassium carbonate and castile soap. The product was also 27 percent alcohol, or 54 proof. The medication was advertised as "Warmth in a bottle", and was endorsed for use by children as well as adults (Cramp 1921:738). In 1915, Radway & Company was fined \$50 after being found fraudulent in its claims regarding the curative effects of Ready Relief. An analysis of the Bureau of Chemistry found that the product was misbranded (ibid:738).

A partial ceramic ointment pot was recovered from Layer 4 of Feature 3. The vessel had black transfer-print lettering which read, "...OWAY'S/ OINTMENT/...HE CURE OF/...NDOLENT/TUMOURS/...ATE ULCERS/SCALDS RINGWORMS SOREHEADS AND ALL CUTANEOUS DISEASE/GOUT AND RHEUMATISM/SOLD IN POTS/1S/219-416-11-22 33 ED/BY THE PROPRIETOR/244 STRAND/LONDON/AND ALL MEDICINE VENDERS THROUGHOUT THE

PLATE 4

RADWAY'S READY RELIEF MEDICINE BOTTLE, FEATURE 3  
Photograph by J. Denmon



KINGDOM" (Plate 5). A complete version of an identical pot was found elsewhere at the Martin Phillips Site. The vessel revealed that the product was known as "Holloway's Ointment", and that in addition to the ailments listed above, the product was also recommended for the cure of scrofula.

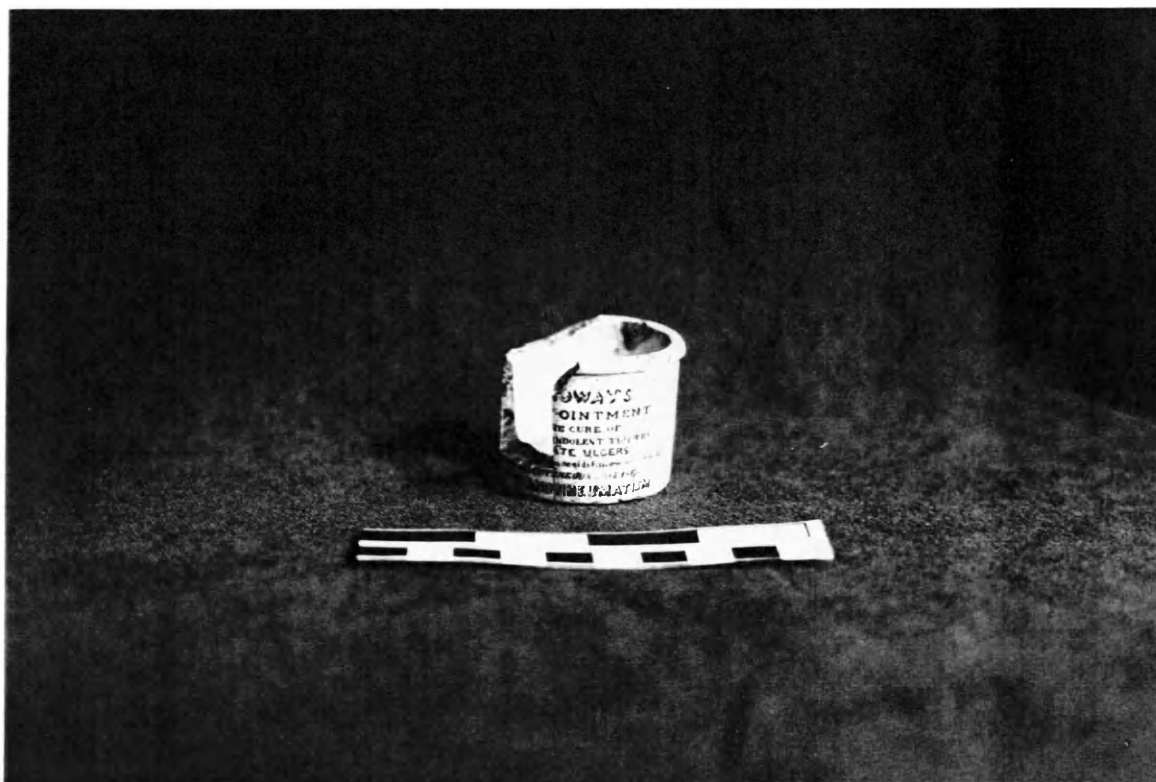
Another bottle read "R & C WRIGHT PHILA". This bottle could not be identified as to contents. One bottle had no embossed labeling, but was identified based upon its shape. Robert Turlington's Balsam of Life, with its distinctive pear-shaped casing, was imported to the United States from England from 1744 until the close of the 19th century (Ketchum 1975:78). The preparation was purported to cure a range of ailments from a sprained thumb to dropsy (Young 1961:11). The distinctive shape of bottles such as Turlington's increased product recognition, and enabled illiterate consumers to easily distinguish the medication from others (ibid:12). The eight remaining bottles were unidentifiable in terms of product and manufacturer.

#### Feature 4

Four medicine bottles were recovered from Feature 4. All of the bottles were without labels and/or embossment.

## PLATE 5

HOLLOWAY'S OINTMENT POT, FEATURE 3  
Photograph by J. Denmon



One bottle was recovered from Layer 1 of the feature, one from Layer 4, and two from Layer 5.

#### Discussion

The residents of 68 Ohio Street purchased medicines produced in both local and regional markets. With its lakefront position, canal system, and railroad traffic, Buffalo was a busy port that would have had access to a huge national product market. Consumers had an abundance of access in the locally produced market as well. Between 1880 and 1910, there were over 200 proprietary medicine manufacturers in Buffalo (PMC). This wealth of availability would have helped to keep prices low.

Residents of 68 Ohio Street may have utilized both proprietary and professional sources of medication. The sailors had a Marine Hospital for whose services they paid dues. That at least one sailor took advantage of the hospital on one occasion is evidenced by the presence of the US Marine Hospital bottle recovered from Feature 3. While several patent preparations were identified in the Features 3 and 4 assemblage, the majority of the medicine bottles (76%, n=26) could not be associated with a particular product. These bottles may represent patent medicines whose labels have been removed. Conversely, they may represent

medicines obtained from a doctor or pharmacist. These professionals often purchased bulk supplies of bottles and affixed their own labels to them.

The patent medicine bottles in the assemblage may be interpreted as evidence of self-care on the part of members of the household. The tradition of self-care or self-doctoring in the United States had a broad appeal during the 19th century which has been attributed to an increased emphasis on individualism. This fostered the belief that people were able to control what happened to their bodies, and that ill health could be attributed to moral shortcomings (Cayleff 1987:45). Religious groups of the time advocated the philosophy of self-help as a means of improving one's self, thereby reinforcing the notion of self-reliance and control of one's destiny (ibid:45).

The practice of self-care enabled the 19th-century consumer to bypass the physician, his harsh treatments, and his fees. The consumer could assess the symptoms of an illness and select the appropriate remedy. In this way the consumer took control of his or her own health and well-being.

Members of the Newman household chose self-care at least part of the time. As previously stated, the presence of a Marine Hospital bottle indicates that professional

medical attention was sought at least once. The members of the household may have decided which medical option to use on a case-by-case basis. Perhaps the severity of the ailment determined the venue to be utilized. Professional medical attention was often sought in emergency situations or when other treatments were unsuccessful (Larsen 1993:11.18).

The motivations behind the choices made by members of the household are not fully understood. The fact that consumers often sought professional treatment only after other options had been exhausted has been attributed to economic factors (Larsen 1993:11.18), the more palatable nature and high alcohol content of patent preparations (Howson 1992:145; Ketchum 1975:37; Harris 1977:7), and to the severe nature of a physician's treatments (Young 1961:37). Each of these arguments has merit, but no one factor can fully explain the behavior. It is possible that all of these factors influenced the decision to choose one form of treatment over another. An additional factor which bears examination, however, is the personal and social meaning attached to medical treatment.

The practice of self-care can be seen as empowering the consumer. Not only does the user demonstrate that they have the authority to diagnose and heal his or her self, but they also demonstrate that their unhealthy status was not

alarminglly severe. If indeed a connection was perceived between health and uprightness, one has verified that their virtue was intact. One's moral fortitude could be used to explain why some recovered from the same illness that killed another person. Following this line of interpretation, it is possible to perceive a trip to the doctor's office as an indication of one's moral as well as physical deterioration. An ailment which required professional attention may have carried an element of shame.

The practice of medicine has been seen as reflecting the way "people envision themselves within their social environment" (Larsen 1993:11.1). Medicine is seen as delineating the distinction between the world of the healthy and that of the ill (ibid:11.1). People want to be numbered among the healthy of their population. To be considered unhealthy when health is within one's own control is to be unsound, shiftless, and unclean. Members of the lower class were perceived as inherently immoral and dirty regardless of their state of physical health. When their health was in jeopardy, these stereotypes were substantiated.

Members of the Newman household may have been keenly aware of the way that health and illness were perceived within their society. It is possible that their selection of medical treatments reflects an effort to heal themselves

when it was possible, and to seek professional care when it was not.

## HEALTH-RELATED PRODUCTS & PARAPHERNALIA

### Feature 3

Three syringes are represented in the Feature 3 assemblage. Two syringes, one glass and one hard rubber, were recovered from Layer 1 (Plate 6). Another glass syringe was recovered from Layer 2. The hard rubber syringe resembled those advertised in an 1890 physicians' supply catalog as "Male Syringes" (Figure 9) The glass syringes also resembled those advertised as "Male" (Figure 10).

One bottle recovered from Layer 4 of Feature 3 was categorized as a perfume bottle based upon its shape and size.

### Feature 4

A partial toothpaste lid was recovered from Layer 4 of Feature 4. The transfer-print lettering on the lid read, "...D/...TH PASTE/...HE TEETH/...FYING THE BREATH/...BY/...IN/...TO/...L/...PHILADELPHIA".

PLATE 6

SYRINGES, FEATURE 3  
Photograph by J. Denmon



FIGURE 9

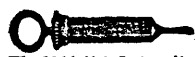
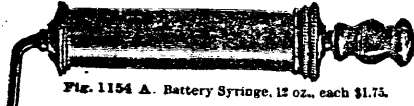
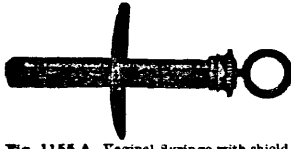
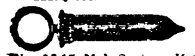


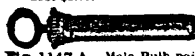

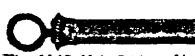
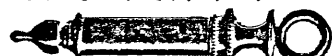

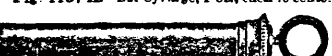
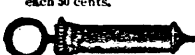
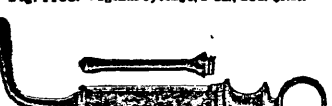
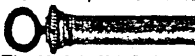


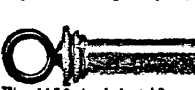
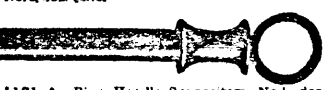
1890 CATALOG ADVERTISEMENT, RUBBER SYRINGES  
 Source: Truax 1890

737



SYRINGES.

GOODRICH RUBBER CO.'S HARD RUBBER SYRINGES

 Fig. 1144. Male Syringe, 1/2 oz., doz. \$2.00.	 Fig. 1154 A. Battery Syringe, 12 oz., each \$1.75.   Fig. 1155 A. Vaginal Syringe with shield, 1 oz., doz. \$4.75.
 Fig. 1145. Male Syringe, 1/2 oz., doz. \$2.00.	
 Fig. 1146. Male Syringe, 1/4 oz., doz. \$2.50.	
 Fig. 1147. Male Syringe, 1/4 oz., doz. \$3.00.	
 Fig. 1147 A. Male Bulb-point Syringe, 1/4 oz., doz. \$4.25.	 Fig. 1156 A. Vaginal Syringe, 1/4 oz., doz. \$1.00.
 Fig. 1148. Male Syringe, 1/2 oz., doz. \$4.50.	 Fig. 1157 A. Ear Syringe, 1 oz., each 70 cents.
 Fig. 1148 A. Dental Syringe, 3-16 oz., each 30 cents.	 Fig. 1158. Vaginal Syringe, 2 oz., doz. \$6.25.
 Fig. 1150. Rectal Syringe, 1/4 oz., doz. \$5.25.	 Fig. 1159. Glycerine Syringe, 1/4 oz., doz. \$8.00.
 Fig. 1150 A. Male Syringe, 1/2 oz., doz. \$6.00.	
 Fig. 1151 A. Vaginal Syringe, 1 oz., doz. \$4.50.	 Fig. 1160 A. Plain Suppositories, No. 5, doz. \$3.00, No. 4, doz. \$3.75.
 Fig. 1152 A. Infants' Syringe, 1/2 oz., doz. \$4.75.	 Fig. 1161 A. Ring Handle Suppositories, No. 1, doz. \$4.50, No. 2, doz. \$5.00.

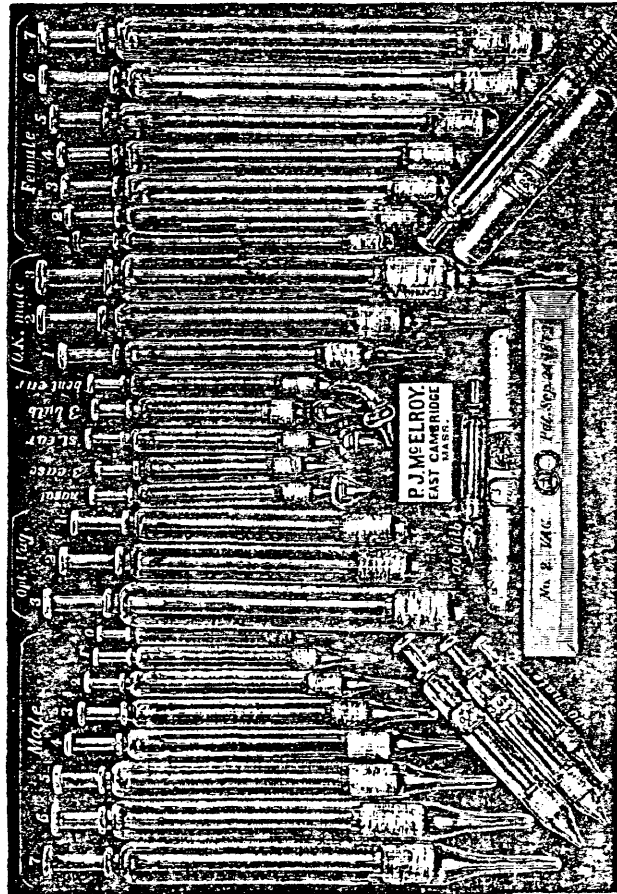
FOR SALE BY CHAS. TRUAX, GREENE & CO. SEE PAGES 721 AND 722.

FIGURE 10

1890 CATALOG ADVERTISEMENT, GLASS SYRINGES  
Source: Truax 1890



### McELROY'S SYRINGES.



These syringes are made according to the directions of the most skillful physicians and recommended by the medical profession as the best in the world.

ORDERS FILLED BY CHAS. TRUAX, GREENE & CO. See Page 78L.

## Discussion

Items such as perfume may be considered to be indicative of a concern for health and sanitation. The application of fragrance could serve as a replacement for daily bathing, and was probably used by a female member of the household (Bond 1989:138). The use of such an item may have given those who came into contact with the user the impression that she was concerned with cleanliness.

Artifacts such as syringes, like the patent medicine bottles, suggest the practice of self-care. As illustrated in the description of the catarrh treatment, some proprietary medications required the use of syringes in conjunction with the product. The 19th-century consumer was more intimately involved in his or her own medical treatment than is their typical 20th-century pill-popping counterpart. Having to mix solutions and inject these concoctions is an activity not generally required of today's consumer. In this way, 19th-century self-care was more closely related to the activities performed by physicians and pharmacists. This ties in with the argument that self-care was associated with individualism and the control of one's destiny. Consumers may have felt that physicians did not offer services which were much more efficacious than they could provide for themselves.

That members of the household did indeed practice self-care has been evidenced. The motivating factors behind this behavior appear to be numerous and interconnected. What is clear, however, is that this behavior represents an active concern for and response to sickness and disease.

## CHAPTER V

### 19th-CENTURY CONSUMER BEHAVIOR

The mid-nineteenth century witnessed a new phenomenon in world history: a surplus. Industrialization provided an overabundance of goods, and American society's role as producer began to transform into that of consumer. This transition has been described as a transformation from the "good life" to the "goods life" (Schlereth 1991:141-2).

Susan Henry (1991), borrowing from Schiffman and Kanuk (1987), defines consumer behavior as "the behavior that consumers display in searching for, acquiring, using, evaluating, and disposing of products, services, and ideas which they expect will satisfy their needs" (Henry 1991:3). This definition accounts for the entire life cycle of the commodity, from acquisition, to use, and the eventual discard. Henry recognizes consumerism as a social, as well as economic behavior which served as "a means to an end, a way of reaching goals" (Henry 1991:3). The goals and means represented by the fragments of glass and ceramics recovered from archaeological contexts are what archaeologists attempt to delineate.

The way in which items were perceived by the consumer undoubtedly effected sales. Late 19th-century advertisements emphasized the sanitary aspects of products. Advancements in food production and preservation made perishable foods available to people throughout the nation year-round. Coupled with the increased production came the association of canned and bottled foods with sanitation. Manufacturers boasted that their products had never been touched by human hands (Schlereth 1991:163).

At a time when the majority of grocery stores sold food in bulk, pre-packaged foods may have offered consumers a greater sense of security. Public awareness of the connection between hygiene and the curtailment of disease had increased throughout the century. As concern for hygienic products grew, manufacturers responded with innovations in packaging.

Advertisements for the Hutchinson Spring Stopper and the loop seal closure touted the cleanliness these closures would ensure the bottler (National Bottle Gazette 1866 in Hull-Walski and Walski 1993:17.7-.9). These closures were replaced by the crown cap, which was deemed the most sanitary of all since it could not be resealed by the consumer once opened (Munsey 1970:105). The bottles themselves also changed. Thomas (1998) found that soda and

mineral water bottles from the Martin Phillips Site (of which the Newman houselot was a component) were manufactured in lighter colors over time. The bottles went from cobalt and dark green during the 1830s and 1840s to aqua during the 1860s (Thomas 1998:13). The increased transparency of bottles during the late 19th century has been attributed to a demand for bottles which would allow the consumer to visually inspect the contents for purity (Fike 1987 and Kendrick 1964 in Stottman 1996:6).

Reflecting again on Henry's view of consumerism as "a means to an end, a way of reaching goals" a question is raised: what goals were met through the purchase of goods perceived as hygienic? Evidence from the Newman privies indicates that the answer is two-fold. First, through the purchase of sanitary goods, one is assured that the items are free of disease-causing agents. Second, particularly in the case of proprietary medicines and soda and mineral water, the products would also prevent or remedy any existing affliction suffered by the consumer.

It is beyond the means of this study to attempt to establish a hierarchy of the motivations influencing consumer behavior. It is likely that these factors operate in varying amounts for different commodities. What is emphasized here is that a concern for sanitation must be

considered among the aggregation of other factors influencing consumer behavior in order to more fully understand domestic assemblages of the 19th century.

## CHAPTER VI

### DISCUSSION AND CONCLUSION

The study of the privy assemblage associated with the structure at 68 Ohio Street of the Martin Phillips Site affords an opportunity to examine working-class solutions to problems facing all sectors of 19th-century American society. Within Buffalo's First Ward, a neighborhood with a reputation for filth and squalor, the poorest members of the city's population made efforts to abate disease. The form these efforts took offer clues into the perceptions they held regarding health and sanitation.

The specific hypothesis addressed by this investigation was that the members of the household were concerned with hygiene and the evasion of disease, and that their beliefs concerning disease influenced their behavior as consumers.

The lower socioeconomic status of the residents of 68 Ohio, and of their neighborhood in general was evidenced by their lack of access to water and wastewater facilities. Residents of the First Ward did not have access to a piped water system for several decades after the first pipes were laid in the city. These citizens were forced to draw their

water supply from a neighborhood pump several blocks from their houses, while wealthier citizens had water pumped directly into their homes. Despite these inequities, it is clear that the members of the Newman household made an effort to monitor their health and the sanitation of their surroundings.

An analysis of the privy architecture demonstrated that the residents of 68 Ohio Street had a concern for domestic hygiene. The privy was lined with wooden planks and two of the walls showed evidence of a plaster lining. This may represent an attempt to seal the feature and prevent seepage into the surrounding soil and ground water. The privy stratigraphy also showed evidence of maintenance activity. During the excavation of the privy, it was noted that the artifacts recovered seemed to be concentrated around the walls of the feature. This may indicate some form of privy cleaning, possibly the use of a bucket, shovel, or some sort of nozzle or vacuum pump. These methods of cleaning might concentrate on waste located in the center of the privy, leaving some waste remaining against the walls and in corners. Excavation also revealed that lime was sprinkled over the vaults. This indicates a concern that the privy be inoffensive to the senses.

The large number of soda and mineral water bottles recovered from the privy indicates a preference for sanitized products. In the absence of a clean water supply, many late-19th-century consumers turned to bottled beverages as a preventative measure against disease as well as a curative medicinal agent (Stottman 1996:6; Armstrong and Armstrong 1991:89; Riley 1958:5). During this time, the residents of the Martin Phillips Site did not have direct access to a piped water system. It may have been in an effort to prevent the ailments often associated with a polluted water supply or in an attempt to cure the maladies already being suffered that these consumers purchased bottled soda and water.

The high number of soda and mineral water may also indicate the influence of the temperance movement. Temperance advocates recommended the drinking of soda and mineral water in place of liquor. The temperate lifestyle was associated not only with moral uprightness but also with a more hygienic state of well-being. It is possible that some members of the Newman household identified with this philosophy and drank soda and mineral water as part of the regimen of temperate living.

Members of the Newman household appear to have employed more than one strategy for treatment of medical conditions.

The presence of proprietary medicine bottles as well as at least one bottle from a medical practitioner indicates the use of both self-care and professional services. It is unclear whether the practice of self-care is indicative of an inability to pay for a physician's services, a distrust of the medical field, or a philosophy of self-reliance. It is possible that the severity of the affliction determined the treatment sought.

The social meanings attached to medical care during the 19th century may also have affected the household's behavior in relation to the handling of illness. The availability of patent preparations gave the consumer greater control over their own medical treatment. During a time when social mores dictated that illness and moral weakness were interconnected, the ability to successfully treat one's own illness may have demonstrated self-control and ethical strength.

As all 19th-century households did, the members of the Newman household chose which societal values and norms to incorporate into their lives, and to what extent they would incorporate them. While it seems impossible to determine which beliefs played the greatest role in their choices, it is evident that the members of the Newman household were not simply passive recipients of societal doctrines concerning

health and sanitation, but were actively involved in examining these beliefs and making them relevant to their own situation.

## BIBLIOGRAPHY

- Almendinger, J. C. (compiler). Handbook of the Builder's Exchange of Buffalo, New York. Buffalo: Hill & Cobb, 1893.
- Armstrong, David and Elizabeth Metzger Armstrong. The Great American Medicine Show: Being an Illustrated History of Hucksters, Healers, Health Evangelists, and Heroes from Plymouth Rock to the Present. New York: Prentice Hall, 1991
- Barbour, Warren T. D., Elizabeth S. Peña, and Cynthia Jackson. Stage III Cultural Resource Investigations at the Martin Phillips Site/Marine Midland Arena Site, City of Buffalo, Erie County, New York. Manuscript on file at the New York State Office of Parks, Recreation and Historic Preservation, Albany, New York, 1997.
- Baldwin, Joseph K. A Collector's Guide to Patent and Proprietary Medicine Bottles of the 19th Century. Nashville: Thomas Nelson, Inc, 1973.
- Barlow, Ronald S. The Vanishing American Outhouse. El Cajon: Windmill Publishing Company, 1992.
- Beaudry, Mary C. "Archaeology and the Historical Household". Man in the Northeast 28:27-38, 1984.
- Beaudry, Mary C. and Stephen A. Mrozowski, eds. Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume III: The Boarding House System as a Way of Life. Cultural Resources Management Studies No. 21. Boston: National Park Service, 1989.

- Bell, Edward. "A Preliminary Report on Health, Hygiene, and Sanitation at the Boott Mills Boardinghouses: An Historical and Archaeological Perspective". In Beaudry, Mary C. and Stephen A. Mrozowski (eds.), Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume I: Life at the Boarding Houses. U.S. Department of the Interior, National Park Service, North Atlantic Regional Office, Cultural Resources Management Study 18. Boston Board of Health and Registration of Vital Statistics, City of Boston, 1987.
- Bellavite, Paulo and Andrea Signorini. Homeopathy: A Frontier in Medical Science. Berkeley, CA: North Atlantic Books, 1995.
- Board of Police. Annual Report of the Board of Police of the City of Buffalo, 1886. Buffalo: The Courier Co, 1887.
- Bond, Kathleen H. "The Medicine, Alcohol, and Soda Vessels from the Boott Mills". In Beaudry, Mary C. And Stephen A. Mrozowski (eds.), Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume III: The Boarding House System as a Way of Life. Cultural Resources Management Studies No. 21. Boston: National Park Service, 1989.
- Brown, Richard C. And Bob Watson. Buffalo: Lake City in Niagara Land. Windsor Publications, Inc, 1981.
- Bryant, Douglas D. "A Stylistic Approach to the Study of Privies". American Archaeology 7(1):66-76, 1988.
- Buffalo Board of Health (BBOH). Sanitary Reports of the City of Buffalo. Buffalo: Clapp, Matthews & Co, 1855.
- Buffalo City Directory (BCD). Buffalo City Directory, various publishers. On file at the Buffalo and Erie County Library, Local History Collection, 1838-96.
- Buffalo City Water Works (BCWW). Table of Rates, 1868.

Buffalo Commercial Advertiser (BCA). "Our Water Supply".  
Buffalo Commercial Advertiser, c.1871.

Buffalo Evening News (BEN). "City's First Water Works in Delaware Ave. Spring Fed". Buffalo Evening News, March 3, 1951.

"The Ward: Touched in Many Ways by the Shannon".  
Buffalo Evening News, Saturday, May 13, 1972.

Buffalo Express (BE). "Water". Buffalo Express, Saturday, November 15, 1873.

Buffalo Express Pictorial Yearbook, Local History of 1886. Buffalo: Matthews Northrup & Co., 1887

The Pictorial Year-Book and Calendar for 1888 with Buffalo Events in 1887. Buffalo: Matthews Northrup & Co., 1888.

Buffalo Morning Express (BME). Obituary of John Howell.  
Buffalo Morning Express, August 17, 1888.

Buffalo Medical and Surgical Journal (BMSJ). "Buffalo Dispensaries". Editorial, Buffalo Medical and Surgical Journal, Volume 10:73-4. Buffalo: Baker, Jones & Co., 1871.

"The Water Supply of Buffalo". Editorial, Buffalo Medical and Surgical Journal, Volume 13:109-113. Buffalo: Baker, Jones & Co., 1873.

"Causes of Disease in Large Cities". Editorial, Buffalo Medical and Surgical Journal, Volume 14:74-75. Buffalo: Baker, Jones & Co., 1874-75.

Buffalo News (BN). "The Irish". Buffalo News, October 12, 1980.

Cayleff, Susan E. Wash and Be Healed: The Water Cure Movement and Women's Health. Philadelphia: Temple University Press, 1987.

Century Atlas Company. The New Century Atlas of Greater Buffalo, Volume I. Philadelphia: Century Atlas Co, 1915.

City of Buffalo (COB). Charter and Ordinances Relating to the Board of Health and Registration of Vital Statistics of the City of Buffalo. Buffalo: The Courier Company, 1885.

Clark, Richard. "Thoughts on the Urban Privy". Paper presented at the Annual Meeting of the Council for Northeast Historical Archaeology, Albany, NY, 1996.

Common Council of Buffalo (CCB). By-Laws and Ordinances of the City of Buffalo. Buffalo: Press of George Zahm, 1843.

By-Laws and Ordinances of the City of Buffalo. Buffalo: A.M.Clapp & Co, 1853.

Proceedings of the Common Council of the City of Buffalo. Buffalo: Democracy Association Print, 1854.

Proceedings of the Common Council of the City of Buffalo. Buffalo: Haas & Kelley, Printers, 1870.

Ordinances of the City of Buffalo and of the Board of Health. Buffalo: The Courier Company, 1885.

Continelli, Louise. "Last of the Grain Scoopers". The Buffalo News, January 28. Section E, 1996.

Cramp, Arthur J. Nostrums and Quackery, Volume II. Chicago: American Medical Association Press, 1921.

Crane, Brian D. "Filth, Garbage and Rubbish: Refuse Disposal, Sanitary Reform, and 19th-century Yard Deposits in Washington, D. C.". Paper presented at the Society for Historical Archaeology Annual Conference, Corpus Christi, Texas, 1997.

Cullinan, Helen F. "Buffalo's Grain Industry and Its Irish Community, 1899-1930". Manuscript Collection. Buffalo and Erie County Historical Society, 1974.

- DeCunzo, LuAnn. "Adapting to Factory and City: Illustrations from Industrialization and Urbanization of Paterson, New Jersey". In Spencer-Wood, Suzanne M. (ed.) Consumer Choice in Historical Archaeology, pp. 261-96, 1987.
- Dolan, William H., compiler. Our Police and Our City: The Official History of the Buffalo Police Department. Buffalo: Bensler & Wesley, 1893.
- Doyle, Kevin. Personal Communication, 1994.
- Duffy, John. A History of Public Health in New York: 1866-1966. New York: Russell Sage Foundation, 1974.
- Duis, Perry R. The Saloon: Public Drinking in Chicago and Boston, 1880-1920. Urbana: University of Illinois Press, 1983.
- Dunn, Jean W. Glass: Lancaster and Lockport, New York. Adventures in Western New York History XVII. Buffalo: Buffalo and Erie County Historical Society, 1971.
- Eberle, Scott and Joseph A. Grande. Second Looks: A Pictorial History of Buffalo and Erie County. Norfolk and Virginia Beach: The Donning Company, 1987.
- Egbert, Seneca. A Manual of Hygiene and Sanitation. Philadelphia: Lea and Febiger, 1926.
- Engineering News (EN). "The Merz System of Garbage Utilization in Four American Cities". Engineering News, Nov. 1, 1894, pp. 354-65, 1894.
- Erie County Census. Census of Erie County, New York. On file at the Buffalo and Erie County Main Library, 1875.
- Ford, Benjamin. "The Health and Sanitation of Postbellum Harper's Ferry". Historical Archaeology 28(4):49-61, 1994.
- Geismar, Joan H. "Were is the Night Soil?" Historical Archaeology 27(2):57-70, 1993.

- Gerber, David A. The Making of an American Pluralism: Buffalo, New York, 1825-60. Urbana: University of Illinois Press, 1989.
- Gibb, James G. The Archaeology of Wealth: Consumer Behavior in English America. New York: Plenum Press, 1996.
- Glasco, Laurence. "The Life Cycles and Household Structure of American Ethnic Groups: Irish, Germans, and Native-born Whites in Buffalo, New York, 1855." In Hareven, Tamara (ed.) Family and Kin in Urban Communities, 1700-1930. New York: Franklin Watts, 1977.
- "Migration and Adjustment in the Nineteenth-Century City: Occupation, Property, and Household Structure of Native-born Whites, Buffalo, New York, 1855". In Hareven, Tamara and Maris A. Vinovskit (eds.) Family and Population in Nineteenth Century America. Princeton: Princeton University Press, 1978.
- Goldman, Mark. High Hopes: The Rise and Decline of Buffalo, New York. Albany: State University of New York Press, 1983.
- Hanson, Lee. "Outhouses in Rome, New York". Northeast Historical Archaeology. 3(1):30-43, 1974.
- Harris, Michael R. Drugs and Their Dispensers. Washington, D. C.: Smithsonian Institution Press, 1977.
- Harris, Richard. "The End Justified the Means: Boarding and Rooming in a City of Homes, 1890-1951. Journal of Social History, Winter, 331-358, 1992.
- Hastings, Paul. Medicine: An International History. New York: Praeger Publishers, 1974.
- Henry, Susan L. "Consumers, Commodities, and Choices: A General Model of Consumer Behavior". Historical Archaeology 25(2):3-14, 1991.
- Honerkamp, Nicholas, and R. Bruce Council. "Individual Versus Corporate Adaptations in Urban Contexts". Tennessee Anthropologist 9(1):22-31, 1984.

Hopkins, G. M. & Company. Atlas of the City of Buffalo. Philadelphia: G. M. Hopkins & Company, 1891.

Howson, Jean. "The Archaeology of 19th Century Health and Hygiene at the Sullivan Street Site in New York City". Northeast Historical Archaeology 21-22:137-160, 1992.

Hull-Walski and Walski. Brewing and Bottling in Harpers Ferry, West Virginia. In Shackel, Paul A. (Ed.), Interdisciplinary Investigations of Domestic Life in Government Block B: Perspectives on Harpers Ferry's Armory and Commercial District. Occasional Report No. 6. Washington, D.C.: U.S. Department of the Interior, 1993.

Johnson, James E. The Irish in America. Minneapolis: Lerner Publications Company, 1966.

Jones, Olive R. and Catherine Sullivan. The Parks Canada Glass Glossary for the Description of Containers, Tablewares, Closures, and Flat Glass. Ottawa: Canadian Parks Service, 1989.

Ketchum, Jr., William C. A Treasury of American Bottles. New York: The Ridge Press, Inc, 1975.

Larsen, Eric L. "That Trying Climate": Health and Sanitation in Nineteenth-Century Harpers Ferry. In Shackel, Paul A. (Ed.), Interdisciplinary Investigations of Domestic Life in Government Block B: Perspectives on Harpers Ferry's Armory and Commercial District. Occasional Report No. 6. Washington, D.C.: U.S. Department of the Interior, 1993.

"A Boardinghouse Madonna-Beyond the Aesthetics of a Portrait Created Through Medicine Bottles". Historical Archaeology 28(4):68-79, 1994.

Levy, Sidney H. The Grain Scoopers of Buffalo: And Essay in Local Labor History. Masters thesis. State University of New York at Buffalo, 1940.

- Lockie, Laurence D. Pharmacy on the Niagara Frontier: The Past and Present. East Aurora, NY: Henry Stewart Incorporated, 1968.
- McCarthy, Richard D. "A St. Patrick's Day Backward Look at Lively Times in the Old First Ward". Buffalo Evening News, March 3, 1962.
- Melosi, Martin V. Garbage in Cities: Refuse, Reform, and the Environment, 1880-1980. College Station: Texas A&M University Press, 1981.
- Metress, Eileen. "The American Wake of Ireland: Symbolic Death Ritual". Omega 21(2):147-153, 1990.
- Modell, John and Hareven, Tamara K. "Urbanization and the Malleable Household: An Examination of Boarding and Lodging in American Families". Journal of Marriage and the Family 35(3):467-479, 1973.
- Newman, James N. Report on the Sanitary Police of Cities. American Medical Society Transactions. Philadelphia: K. and P.G. Collins, Printers, 1856.
- Oxford English Dictionary (OED). The Compact Edition of the Oxford English Dictionary, Vol. I. New York: Oxford University Press, 1971.
- Peel, Mark. "On the Margins: Lodgers and Boarders in Boston, 1860-1900". The Journal of American History 72(4):813-834, 1986.
- Pierce, Ray Vaughn. The People's Common Sense Medical Adviser in Plain English: Or Medicine Simplified. Buffalo: World's Dispensary Printing Office and Bindery, 1895.
- Ray, Delbert. "City's Wooden Water Works Recalled". Buffalo News, June 22, 1940.
- Reynolds, Reginald. Cleanliness and Godliness. Reprint of 1946 edition. New York: Harcourt Brace Jovanovich, 1974.

Riley, J. Organization in the Soft Drink Industry: A History of the American Bottlers of Carbonated Beverages. Washington, D.C.: American Bottlers of Carbonated Beverages, 1946.

A History of the American Soft Drink Industry: Bottled Carbonated Beverages. Washington, D.C.: American Bottlers of Carbonated Beverages, 1958.

Roberts, Daniel G. and David Barrett. "Nightsoil Disposal Practices of the 19th Century and the Origin of Artifacts in Plowzone Proveniences." Historical Archaeology 18(1):108-115, 1984.

Robins, Joseph. The Miasma: Epidemic and Panic in Nineteenth Century Ireland. Dublin: Criterion Press Limited, 1995.

Rosen, George. A History of Public Health. Expanded edition. Original published in 1958. Baltimore: Johns Hopkins University Press, 1993.

Schlereth, Thomas J. Victorian America: Transformations in Everyday Life. New York: Harper Collins Publishers, Inc, 1991.

Schiffman, Leon G. And Leslie Lazar Kanuk. Consumer Behavior. Englewood Cliffs, New Jersey: Prentice-Hall, 1987.

Seifert, Donna J. Within Sight of the White House: The Archaeology of Working Women. Historical Archaeology 25(4):82-108, 1991.

Select Committee Appointed to the Common Council. Report of the Select Committee Appointed to the Common Council of the City of Buffalo, to Investigate the Subject of the Marine Hospital Lot. Buffalo: Day, Stagg & Cadwallader, 1836.

Seller, Maxine S. Ethnic Communities and Education in Buffalo, New York: Politics, Power, and Group Identity 1838-1979. Buffalo Community Studies Graduate Group Occasional Paper #1. Buffalo: State University of New York at Buffalo, 1979.

- Smith, Raymond and Young, Nicholas. "Sewers Past and Present". History Today 43:8-10, 1993.
- Stern, Mark J. Society and Family Strategy: Erie County, New York, 1850-1920. Albany: State University of New York Press, 1987.
- Stone, May N. "The Plumbing Paradox". Winterthur Portfolio 14(3):283-309, 1979.
- Stottman, M. Jay. "A Perception of Sanitation in the Archaeological Record" Paper Presented at the Society for Historical Archaeology Annual Conference, Cincinnati, Ohio, 1996.
- Strombeck, Janet and Richard. The Classic Outhouse Book. Delafield: Sun Designs, 1980.
- Sutherland, Daniel E. The Expansion of Everyday Life., 1860-1876. New York: Harper & Row, 1989.
- Tarr, Joel A., with James McCurley III, Francis C. McMichael, and Terry Yosie. "Water and Wastes: A Retrospective Assessment of Wastewater Technology in the United States, 1800-1932." Technology and Culture 25(2):226-263, 1984.
- Tarr, Joel A., James McCurley, and Terry F. Yosie. The Development and Impact of Urban Wastewater Technology: Changing Concepts of Water Quality Control, 1850-1930. In Melosi, Martin V. (ed.), Pollution and Reform in American Cities, 1870-1930. Austin: University of Texas Press, 1980.
- Thomas, Gerard J. The Circulation of Bottled Water as the Materialization and Maintenance of Social Relationships in Nineteenth-Century Buffalo. Masters project. State University of New York at Buffalo, 1998.
- Truax, Chas. & Co. Price List of Physicians' Supplies, Fifth Edition. Chicago: Chas. N. Trivers, 1890.

United States Census. United States Census Office, 9th  
Census, City of Buffalo, Ward 1, 1870.

United States Census Office, 10th Census, City of  
Buffalo, Ward 1, 1880.

Unknown. "A Water Law". Manuscript on file at the Buffalo  
and Erie County Historical Society, Buffalo, New York,  
1872.

Vogel, Michael N., Edward J. Patton, and Paul F. Redding.  
America's Crossroads: Buffalo's Canal Street/Dante  
Place, The Making of a City. Buffalo: The Heritage  
Press, 1993.

Wolfe, Albert Benedict. The Lodging House Problem in  
Boston. Cambridge: Harvard University Press, 1913.

Wright, Lawrence. Clean and Decent. Reprint of 1960  
edition. London: Routledge & Kegan Paul, 1980.

Wright Mauer, Tracy. Field Notes, Martin Phillips  
Site/Marine Midland Arena Site, City of Buffalo, Erie  
County, New York. Manuscript on file, Dean & Barbour  
Associates, Inc., Buffalo, New York, 1995.

Young, James Harvey. The Toadstool Millionaires: A Social  
History of Patent Medicines in America Before Federal  
Regulation. Princeton: Princeton University Press,  
1961.

VITA

Jacqueline Colleen Denmon

Born in Little Rock, Arkansas, July 16, 1971. Graduated from Oak Ridge High School, El Dorado Hills, California, June 1989, B.A. San José State University, 1994. M.A. candidate, The College of William and Mary, 1998, with a concentration in historical archaeology.