Library and Archives Canada Cataloguing in Publication

Ch₂olera: Hamilton's Forgotten Epidemics / D. Ann Herring and Heather T. Battles, editors.

Includes bibliographical references and index. ISBN 978-0-9782417-4-2

Print catalogue data is available from Library and Archives Canada, at www.collectionscanada.gc.ca

- Cover Image: Historical City of Hamilton. Published by Rice & Duncan in 1859, drawn by G. . Rice. http://map.hamilton.ca/old hamilton.jpg
- Cover Design: Robert Huang Group Photo: Temara Brown

Hamilton's Forgotten Epidemics

D. Ann Herring and Heather T. Battles, editors

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Ch₂olera: Hamilton's Forgotten Epidemics

D. Ann Herring and Heather T. Battles

Cholera is an ancient disease that has been feared for centuries. It often appears suddenly, seems to spread rapidly and inexplicably and, in the absence of effective treatment, kills quite violently. It has had many nicknames, including "King Cholera" and "the blue death" (due to the bluish pallor of its victims). Although it is still very much present in the world today, cholera remains the quintessential disease of 19th-century cities, the disease that drove improvements in water sources, sewer construction, and public health in Europe and North America. This book is about Hamilton's cholera epidemics in 1832 and 1854, outbreaks that place the city within the sphere of recurring global pandemics and make it a fascinating example of how communities cope with a new disease of unknown cause.

Much has been learned about cholera since 1883 when *Vibrio cholerae*, the microorganism that causes the disease, was identified through the use of new microscope technology. It is a human-specific disease that affects the small intestine. The *vibrio* are transmitted from person to person through water, food, and objects, such as clothing and bedding, that have been contaminated by fecal matter excreted by infected people. *V. cholerae* secretes a potent toxin that is taken up by the cells that line the intestine, resulting in profuse diarrhea and vomiting that can lead to rapid dehydration and death within a day (Madigan, Martinko, Dunlop, and Clark 2009). It is a disease associated social disparity and poverty today, as it was in the 19th century when working and living conditions associated with the industrial revolution allowed cholera to flourish.

Written by fourth-year Honours Anthropology students studying infectious disease at McMaster University, this book tells the story of how cholera came to Hamilton and how the people of Hamilton understood and coped with two major epidemics in 1832 and 1854. The story is revealed through the analysis of a rich body of cultural artifacts, including newspaper accounts, medical journals, Board of Health reports, diaries, parish burial records, and cemeteries. Our subject matter ranges from the details of mortality due to cholera in Hamilton and the surrounding area to cholera's impact on public memory.

Our book begins by addressing the defining role played by British imperialism in India in propelling the shift in cholera from a local, endemic disease to a global pandemic in the 19th century (Chapter 2). Diedre Beintema traces the connections between an international network of commercial and trade links that allowed cholera to move from the Bengal region to engulf the Indian subcontinent in 1817 and then to spread to most of the capitals of Europe by 1831. By 1832, it had arrived in Hamilton. A lack of knowledge about how cholera was transmitted hindered attempts to prevent and cure it wherever it occurred. As Ayla Mykytey points out (Chapter 3), there were competing views in the 19th century about how cholera worked. The contagionist view maintained that cholera was spread from person to person; the miasmatic view argued that cholera was the product of poisonous airs produced by foetid, decaying plant and animal material. During the 1832 epidemic, the weight of medical opinion supported the miasma paradigm; by the 1854 epidemic, the contagion model was gaining ground. Here we see how growing knowledge about cholera transformed medical thinking and paved the way for germ theory.

Further complicating matters, several distinct types of cholera were identified throughout most of the 1800s, whereas today cholera is considered to be a single disease produced by different strains of varying virulence. Tom Siek (Chapter 4) discusses the major types of cholera and the signs and symptoms upon which doctors relied to determine which variant was affecting their patients. Katlyn Ferrusi (Chapter 5) takes a close look at one type of cholera, *Cholera Infantum*, a gastrointestinal disease that took its greatest toll among children under the age of two during the hot summer months. Based on her analysis of parish records of childhood burials in Hamilton from the Anglican Diocese of Niagara Archives, she suggests that *Cholera Infantum* is best understood as a non-specific, umbrella term used to explain elevated child deaths during epidemics.

All of these factors contribute to the fog surrounding the actual number of cholera deaths that occurred in Hamilton and elsewhere. Working with a series of published accounts, Brianna Johns (Chapter 6) observes, however, that the mortality rate from cholera decreased significantly from the first to the second epidemic in Hamilton, with perhaps 18 percent of its population perishing in 1832 compared to four percent in the second. She attributes this improvement in survivorship to political and medical actions in the inter-epidemic period that ameliorated conditions and made the city less hospitable to cholera, coupled with a shift to safer (though still ineffective) medical treatments less likely to kill cholera sufferers. Sam Lawrence-Nametka explores the development of cholera treatment methods from 1800 to 1850 as they changed from dangerous, painful methods used by orthodox medical practitioners, such as cauterization, to gentler, less frightening, orally administered remedies advocated by unorthodox, homeopathic practitioners (Chapter 7). This rise in the popularity and authority of homeopathic medicine, she argues, was an outcome of public perception that homeopathy offered more effective, and certainly less dangerous, treatments than traditionally offered by medical doctors.

People were deathly afraid of cholera, and this fear spread more quickly than the disease itself. Jacqueline Le (Chapter 8) considers the psychosocial dimensions of the 1832 and 1854 epidemics and how they shattered social relations in Hamilton. The panic surrounding cholera, evident through accounts and language used to describe the epidemics in local newspapers, not only led people to flee, but to blame immigrants for its introduction as well as to stigmatize those who suffered from it. Cholera was, in fact, brought to Hamilton by immigrants who had survived the transatlantic journey from Western Europe in overcrowded, abysmally filthy ships that ensured that contagious diseases spread quickly among the passengers. As Andrew Turner (Chapter 9) observes, however, Irish immigrants were singled out for blame in Hamilton, as were the poor. Both groups occupied marginal social positions and both were found in abundance in Corktown, along with cholera. Jodi Smillie's analysis of parish registers for Christ's Church Cathedral and Church of the Ascension (Chapter 10) suggests, however, that immigrants to Hamilton from Germany, Scotland, and England together made up about 60 percent of the deaths due to cholera, at least among this sample of Protestant denominations. Cholera deaths also clustered among people in the 20 to 50 age ranges, indicative of the destructive toll cholera took among the productive and reproductive segment of Hamilton's population.

Although Hamilton was a major port through which cholera entered southern Ontario, it did not stop there. It spread to surrounding towns and villages, though there is little in the way of surviving evidence for where it went. Mackenzie Armstrong (Chapter 11) examined letters, church and cemetery records, and other documents curated by historical societies to find out the extent of cholera in Ancaster, Dundas, Flamborough, Stoney Creek, Glanbrook, and the Six Nations Reserve/Brant County. Dundas appears to have been more severely affected by cholera than the other areas, probably owing to its proximity to Hamilton and its contaminated water sources. The lack of evidence for cholera's presence elsewhere also may be related to its loss to collective memory and overshadowing by other events deemed more significant, such as the War of 1812 in Stoney Creek.

Religion and politics occupied pivotal places in the lives of the people of Hamilton in the mid-19th century. The institutions of Church and State, as Karolina Grzeszczuk suggests (Chapter 12), offered different explanations for the origins of cholera as well as advice on treatment and prevention, and each had distinctive ways of delivering their messages. Both played important interpretive and practical roles during Hamilton's cholera years as residents grappled with sickness and death. State interventions, argues Alexandra Saly (Chapter 13), are visible at various levels and some of the most effective steps taken to control cholera were put into place by Hamilton's Board of Health. The political and disease landscape of Hamilton was dramatically altered through the introduction of new by-laws aimed at cleaning up the urban environment, new rules for reporting disease, and through defining the role and scope of the city's Medical Health Officer. These changes, however, came at the cost of a public backlash against perceived threats to personal privacy and property. Sanitation was, and still is, essential for preventing V. cholerae from spreading from one human intestine to another. Nathan Garrett (Chapter 14) reminds us how filthy Hamilton was and how inadequate its sanitary infrastructure to protect citizens from cholera and any other waterborne disease, for that matter. Politicians of the time were consumed by railway fever and preferred to invest in developing a transportation hub rather than in constructing an adequate sewer and safer water system; the economy trumped public health. After the 1854 epidemic, sufficient political will finally was mustered to begin addressing Hamilton's sanitary water problems, resulting in the design and completion of the Pumphouse in 1860 (now the Hamilton Museum of Steam and Technology).

The presence of cholera not only transformed the infrastructure of Hamilton from 1832 to 1860, but also exerted a profound effect on the lives of ordinary people. Paul Dixon (Chapter 15) considers how the epidemics prompted changes in daily life. Many people fled, especially during the 1832 epidemic, and much of the life in the city came to a standstill as fear of cholera, and talk about it, dominated everything. Once the Board of Health was empowered to enforce sanitary by-laws, officials had the authority to enter homes, order them cleaned, and impose fines, prompting subtle but significant shifts in daily routines. By the 1854 epidemic, when cholera was no longer a new disease and the Board of Health had been in operation for over 20 years, other issues, such as upcoming elections, came to dominate the newspapers. Rachel Duban (Chapter 16) draws our attention, nonetheless, to inescapable, disturbing features of both epidemics: deaths, funerals, and cemeteries. Traditional burial practices had to be modified because of the sheer volume of fatalities, widespread sickness and death, and fear of the contaminating effects of the dead on the living. New cemeteries and mass graves, such as the "cholera field" at Burlington Heights, were created to handle all the corpses and remove them as far as possible from the living.

How much of Hamilton's momentous cholera history is visible today? Not much, as several of the chapters of this book show. Zach Hammel (Chapter 17) considers how the series of Gore Park Fountains exemplifies the systematic forgetting of cholera by Hamilton officials. The first fountain was erected in 1860 as a monument to the creation of the Pumphouse and the city's new ability to provide clean water for its residents. Replaced and refurbished several times over the last 150 years, the Gore Park Fountain's connection to cholera has been increasingly lost, leaving it as a monument to modernity rather than to the struggles of Hamilton's citizens with a new and deadly disease.

In writing this book, we hope to re-engage the people of Hamilton with their extraordinary history with cholera and to remind them of the role it played in shaping the cityscape around them today.

Acknowledgements

Without the assistance of many generous people we would not have been able to undertake this project, let alone complete it in three months. In particular, we extend our deepest thanks to Dr. Wayne Warry, Chair of the Department of Anthropology, who provided the seed money needed to print the book. Without

his financial support and belief in our book project, it never would have come to fruition. We are especially grateful to the United Ukrainian Hamilton-Wentworth-Halton Credit Union and B. D. and I. Saly, who generously sponsored the book. Family and friends also helped us raise the funds necessary to print the book: Ashley Nagel and Alexandra Saly designed and printed t-shirts; the authors ran a successful raffle and fattening bake sale; Andrea Goertzen secured a Vineland Estates wine prize that we raffled off. Many librarians and archivists helped the authors identify and retrieve the newspapers, public health reports, images, maps, and funeral records that form the basis for each chapter. Their kindness and generosity made it possible for students who were initially inexperienced at working in an archival setting to become passionate, professional researchers and accomplished authors. We thank in particular Rick Stapleton at the Hamilton Archives and Anne McKeage at the History of Medicine Library at McMaster University, and the staff at the Hamilton Public Library. Brian Kowalewicz graciously granted permission to use certain images. Robert Huang designed our great book cover and donated his time and talent to achieve a cover that made everyone happy. Temara Brown took the group photograph of the authors shown on the back cover. Media Production Services at McMaster made sure everything was printed properly and according to schedule. This book would not have been possible without each and every one of you. Thank you!

"From Time Immemorial": British Imperialism and Cholera in India

Diedre Beintema

Cholera is said to be as "old as the human race in India, and the centres of departure of the great Indian epidemics of this disease are to-day as they have been from time immemorial – the mouths of the Ganges, and Brahmaputra rivers" (McConnell 1885:6).

The history of the first cholera pandemic which affected the city of Hamilton in 1832 began in India in 1817. This disease was to play a defining role throughout the 19th century not only in India but around the world. During this period and until 1858, India was under British political control via the East India Company; after 1858 it was under direct control of the British Government. British administrators in India commonly referred to its culture, politics and history as existing "from time immemorial". This phrase exemplifies the attitude of the British towards their colony and its inhabitants. I analyze how this attitude affected public health in India during the 19th century. I also explore the factors that enabled cholera to transform from endemic to epidemic disease to become a global disease and how the crisis was understood in the 19th century.

Using the theoretical framework of critical medical anthropology, I analyze the role played by British colonial rule in India in the spread of cholera in the early 19th century. This framework "emphasizes the importance of political and economic forces, including the exercise of power, in shaping health, disease,

illness experience, and health care" (Singer and Baer 1995:5). Critical medical anthropology enables researchers to take microlevel evidence and place it within a wider macrocontext in order to achieve a more comprehensive understanding of epidemics, such as the global cholera epidemic of the 19th century (Joralmon 2006). Following the critical medical anthropology framework, I analyze the British perception of the inhabitants of India, the role played by the British in the transformation of cholera from a local endemic disease to a global pandemic, and how cholera challenged traditional attitudes towards disease prevention while at the same time it helped to reinforce the colonial oppression of the inhabitants of India under the British rule.

British Perceptions of Indian "Immorality"

During the 18th and 19th centuries, British colonizers believed that Indian culture, society and history were static and unchanging (Watts 1997). This narrow interpretation of the colony of India and its people was promoted by many prominent British philosophers and historians. Lord Alexander Fraser Tytler remarked:

The want of truth is a failing very generally allowed to be prevalent among the natives... It is said to proceed from their religion, - from their education, - and from their situation, as inhabitants of a country ruled from time immemorial by despots. These have all their effects; and the Hindoo character is their joint offspring (Tytler 1816:103).

Tytler clearly exemplified the imperialist opinion that the people of India were, by nature, less moral than the people of Europe. Additionally, according to Tytler, the fact that this immorality had existed "from time immemorial" indicated that the people of India were completely unable to improve their behavior to become as civilized as a European individual.

In his History of British India, James Mill expressed a similar attitude when he wrote, "the natives of India, and other parts of Asia, are very generally taught the use of written language; and have been so from time immemorial, yet continue the ignorant and vicious people of whose depravity we have so many proofs" (Mill 1817:360). Mill was also a proponent of the idea that the people of India lacked the moral capacity to behave in a manner that would be considered 9

civilized by European standards. Mill's *History of British India* became required reading for all East India Company and British Government employees in India (Watts 1997). Mill's stereotype of the ignorant and unchanging nature of native Indians was thus embraced by the British in India and shaped the policies implemented by colonial administrators. Further on in this chapter I discuss the various ways in which the philosophical and historical concept of a society unchanging "from time immemorial" was made manifest under British colonial administrative policy in 18th- and 19th-century India.

Cholera Goes Global

Cholera's transition from local disease to a global pandemic was facilitated by the network of European commerce and trade linkages that existed throughout the world. On August 28, 1817, the first cases of the cholera epidemic were recorded at Jessore, 60 miles from Calcutta (The Lancet 1831). Throughout the autumn of 1817 the disease presented itself in surrounding towns in the province of Bengal and reached interior India following the course of the Ganges River and its tributaries; within only a few months the entire Indian subcontinent was affected by cholera (The Lancet 1831). In just a few years following the initial outbreak in 1817, the disease spread globally. Cholera travelled by camel caravan across Syria and into Russia in 1822; in other cases it was carried by ship (Longmate 1966). In the latter cases "it was disturbing to find that neither distance nor isolation seemed to provide protection" (Longmate 1966:3). After a second wave of cholera, which began in 1826, the disease spread throughout Asia and reached Southern Russia. European countries attempted to prevent the disease from breaching their borders by establishing military zones or quarantine (Longmate 1966). Despite these efforts, the second wave of cholera reached Moscow by August 1830, Berlin by September and "by the summer of 1831 nearly every European capital was suffering or had recently suffered from cholera" (Longmate 1966:6). The rapid global spread of cholera demonstrates how it spread using every mode of transportation, regardless of any attempts to slow its journey.

Reports of the early cholera outbreaks and the spread of the disease tended to focus on its alarmingly rapid and inevitable progress. Accounts of cholera implied that the disease travelled according to its own free will: "At length it [cholera] appeared in the grand army... From thence it spread to Nagpore, and continued its course over the Deccan in a violent degree" (Blane 1820:111).

Instead of characterizing cholera as a disease carried by humans, it was depicted as an autonomous agent. Other reports referred to cholera as a foreign enemy, saying, "there are certain districts in the Madras Presidency in which a reproduction of an invading cholera will go on for three, or even four years after the primary invasion" (Cornish 1871:2). The description of cholera as autonomous agent or as a foreign invader reveals the bewilderment of medical experts attempting to comprehend the disease.

Cholera's successful transition from endemic to epidemic to pandemic was a result of the disease's ability to spread quickly via unpredictable means. In the 19th century there was very little understanding of how cholera spread from person to person, particularly because it was a newly emerging disease creating an atmosphere of global panic. The language used to describe the spread of cholera also reveals that the British were unwilling to be held responsible for the spread of disease in India. Instead, cholera was portrayed as a foreign autonomous agent which spread regardless of human intervention (for a discussion of the panic inspired by the unpredictable nature of cholera, see Chapter 8)

The rapid global spread of cholera is in part due to the increasingly interconnected trade routes and global linkages that characterized the 19th century. New railway lines in Russia contributed to the speed of the cholera outbreak of 1892, since "the present epidemic of cholera has spread through Russia with unprecedented rapidity, which may be most plausibly explained as the result of the laying down of many new railways and of the increase in the number of people who travel by rail" (Clemow 1893:3). While the benefits of global economic linkages, trade and transportation were a positive, these innovations also contributed to a sense of vulnerability associated with a shrinking world (Huber 2006:455). Quicker methods of transportation meant Europeans had easier access to luxuries produced in the colonies, such as India. However, it also meant that Europeans were less far removed from the problems of these areas. The global spread of cholera indicates that, as a result of imperialism, local problems were also becoming interconnected through the global economy.

The British and Public Health in India

Cholera was likely a strictly localized disease prior to the major outbreak in 1817. In response to the global outbreak, European scholars noted:

Bontius, upwards of two centuries ago, in treating of "Cholera Morbus," describes very correctly the prevailing disorder... There is also frequent mention of what was undoubtedly this disease, by the medical officers of the East India Company's Service, in the latter portion of the last century; and, in 1775, it seems to have assumed the character of an epidemic in India, and to have extended itself to the Island of Mauritius (Bell 1832:64).

Therefore, the disease had existed in India prior to the imposition of British rule but, in 1817, specific factors allowed cholera to develop from a local disease to a global pandemic.

Nineteenth-century understandings of how Indian culture and society allowed cholera to flourish and spread reveal the cultural bias of European medical experts. The eminent British medical journal The Lancet recounted the initial outbreak:

In the month of August, 1817, the present disease is said to have commenced in Jessore, the capital of the Sunderbunds, and distant from Calcutta about sixty English miles. Jessore is a crowded, filthy place, surrounded by impenetrable and marshy jungles, and consequently exposed to all the horrors of a malarious and ill-ventilated atmosphere (The Lancet 1831:242).

Given the impoverished conditions under which cholera first came into view, European observers assumed that filth and poverty were the main factors stimulating the epidemic. However, these conditions do not always need to be visible in order for cholera to spread successfully through an area.

Instead of recognizing that the new epidemic form of cholera might be linked to the British presence in India, European observers passed the bulk of the blame onto what they considered to be the unchangeable and immoral nature of the local population. It was suggested that although the poor living conditions at Jessore allowed cholera to flourish, the disease actually broke out in several locations in the area six weeks prior to the initial dates reported in sources such as The Lancet (Bell 1832). It was presumed that the initial outbreaks of epidemic cholera were underreported in 1817 because "the usual apathy of the natives of India had prevented its existence from being noticed, until the fact was brought

prominently forward by the presence of Europeans" (Bell 1832:78). These claims suggest that British medical experts felt the cholera epidemic would have occurred regardless of the British imperial presence in India. The British felt they were not responsible for the epidemic but were merely the ones who called attention to the severity of the pre-existing disease.



Figure 2.1: A group of emaciated young Indian men and woman (Wellcome Library, London 1876).

Outbreaks of cholera often occurred in India in conjunction with conditions that enhanced the spread of disease. The British aggravated presence pre-existing conditions of poverty and famine. In order to increase the amount of cultivated land in the colony, colonizers British forced farmers onto sub-standard land that often failed to provide adequate food (Watts

1997). Reports of the conditions in India claimed that "the year 1815 and still more that of 1817 had been marked by extremely heavy rains followed by disastrous floods and harvest failures" (Watts 1997:178). Death rates due to cholera could double or triple during periods of famine (Arnold 1997). Although cholera victims came from all social class, the disease demonstrated an "apparent predilection for the poor and undernourished... few Europeans succumbed to the disease compared to the number of Indian victims" (Arnold 1997:166). Poor environmental conditions combined with inappropriate administrative policies had devastating effects on the health of local populations already living in impoverished conditions, making them particularly susceptible to cholera.

Other factors contributed to the development of cholera from a local disease in India to a global pandemic. The cholera outbreak of 1817 may have originated from a more virulent biotype of the disease which "enabled it to move with great speed and destructiveness... to almost every part of the subcontinent 13

within three years" (Arnold 1997:162). In short, the global cholera pandemic of the 19th century was a result of a combination of many factors which together facilitated the spread of the deadly disease.

Soldiers and Pilgrims

Following the initial outbreak of cholera in the area of Jessore, the disease spread rapidly throughout India. British soldiers and Hindu pilgrims were frequently blamed for the spread of the disease. Cholera was a leading cause of both military and civilian deaths in India with a particularly high incidence among white European soldiers (Arnold 1993:70). Blame for cholera outbreaks in military camps was placed on the lowest of the ordinary soldiers and their native Indian camp followers who were referred to as "creatures" by the British officers (Watts 1997; Arnold 1993). Instead of using the vulnerability of soldiers to cholera as an indicator that living conditions in military camps were in need of improvement, the British chose to use the presumed immorality of local populations as an explanation for cholera.



Figure 2.2: The death of Hindoos on the banks of the river Ganges (Wellcome Library, London 1860).

Religious

pilgrimages in India also caused cholera outbreaks occasions on many 19th throughout the century. Hindu pilgrims travelling to and from pilgrimage sites during festival times suffered unsanitary conditions and often carried the disease with them from one place to another (Arnold 1993). In a religious culture where great symbolic

importance was placed on water through mass bathing or cleansing, religious pilgrims were especially vulnerable to cholera at key religious sites such as the Ganges River (Arnold 1993). In 1866, the International Sanitary Conference concluded, "the custom of the Hindoos of abandoning to the current of the sacred

river their half-burnt corpses may explain the privilege of endemicity which the Delta of the Ganges possesses" (Gilbert 2004:144). Once the link between cholera outbreaks and religious ceremony was recognized, British officials faced a political dilemma. Attempts to restrict the movement of religious pilgrims through a pilgrim tax, quarantines or cancellation of religious festivals resulted in political and religious backlash (Arnold 1993). British administrators decided it was more politically and financially prudent to allow pilgrims, and cholera, to move unhindered throughout India rather than interfere in religious celebrations and risk political backlash (Arnold 1993:190,191). The "immemorial" nature of Indian culture served to justify this policy since the British believed that Indian natives would rather perpetuate the cholera epidemic than alter their religious traditions.

Indian Perceptions of Cholera

Cholera was often understood by members of Indian society as divine punishment for moral or religious trespasses. Since cholera outbreaks frequently coincided with the movement of British soldiers and their camp followers, the outbreaks were often explained as a result of the actions of the British soldiers, such as slaughtering cattle for consumption, polluting sacred locations or disobeying other Hindu taboos (Arnold 1993). Religious responses to cholera outbreaks often consisted of worship or attempts to pacify deities who might have control over the disease through spirit mediums, which served to vocalize "the supposed grievances of the goddess of the disease and giving, in return, an immediate focus to local anxieties and alarm" (Arnold 1993:172). The performance of such rituals to stop the spread of disease indicates that regardless of which social group broke taboo, either British or Indian, the outbreak was a collective social problem.

The narratives of cholera patients written by native Indian doctors differ from the accounts provided by British doctors in India, indicating a difference in the perception of the disease. Native Indian doctors, although often trained in Western medicine, usually followed different modes of treatment than British doctors by combining traditional remedies with their European medicinal knowledge (Mukharji 2009:181). Additionally, accounts of the treatment of cholera patients by Indian doctors often made reference to the experience of human suffering by the patient as well as their families (Mukharji 2009:183). British narratives often only referred to the physical manifestations of the disease 15

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and added few personal details (Mukharji 2009:183). While Indian doctors recounted the disease experience in vivid, emotional detail, British doctors apparently preferred to ignore the psychological aspects of the disease. The effect was two very different approaches to the disease and in methods of treating it. Indian doctors sympathized with their patients and patients' families while British doctors tended to remain emotionally detached. When listing ways to avoid cholera, Indian doctors urged people to be happy and avoid becoming worried or depressed (Mukjarji 2009:194). For native Indians, the experience of cholera was more than a physical affliction; it was also a religious and psychological experience. However, the British view that Indian culture remained unchanged "from time immemorial" prevented British doctors from seeing that their Indian patients took such a complex view of the disease experience, thereby maintaining an emotional divide between British doctors and Indian cholera victims.

To Time Immemorial?

The experience of cholera in India did very little to change the British perception of Indian society as unchanged "from time immemorial". Throughout the 19th century, mortality rates due to cholera reached 25 million in India, increasing with every successive outbreak, while rates in Britain reached only 130,000 people, decreasing over the century (Watts 1997). The dramatic difference in public health in the two countries was a result of colonial policies that prevented improvement of living conditions in India which, at the same time, guaranteed economic prosperity in Britain. The majority of European governments, particularly the British, were strongly opposed to preventative measures, such as quarantine, in order to slow the spread of cholera through trade routes, calling such measures useless and detrimental to global trade (Huber 2006). While quarantines had failed to prevent the initial global spread of cholera, European governments did not attempt to develop a more successful form of quarantine out of economic self interest and because mortality rates in Europe were decreasing. Many 19th-century medical professionals believed that local environmental conditions were primarily responsible for cholera outbreaks, thus quarantine was seen to be a useless endeavour (Huber 2006). In keeping with the logic of the "from time immemorial" thinking of the time, since cholera-inducing environmental factors had always existed in India, they would continue to exist in the future. This allowed the British to justify their lack of effort to eradicate or reduce the factors that contributed to cholera outbreaks in India.

The British response to the connection between cholera outbreaks and religious festivals in India reveals the same underlying attitude. Many British officials in India believed that very strict controls over pilgrimages were absolutely necessary in order to stop cholera outbreaks, claiming: "nothing less than a 'total prohibition' on pilgrimage... would put a stop to the annual massacre" (Arnold 1993:190). Ironically, while guarantine was seen as completely useless in Europe, quarantine-like measures were thought to be the best way to control cholera spread in India. However, guarantine policies and strict limits on pilgrimages were not implemented in India, not because such policies were useless, but because of the religious and political backlash they generated (Arnold 1993). Improvements to sanitation were seen by Europeans as having no chance of success in India (Arnold 1993). Instead of benefiting from the growing knowledge about the disease and the sanitary science being engineered that were saving European lives, native Indians were left to suffer in their presumed ignorance. The British perception of Indian society as unchanging resulted in incredible numbers of cholera victims throughout the 19th century.

From India, to the World

British imperialism in India played a dramatic role in the development of cholera from endemic disease to global pandemic during the 19th century. In India, the belief that Indian society, culture and religion had existed as the British had found them, from time immemorial, influenced how the colony was administered. Indians were seen as apathetic and indifferent to cholera, signaling to the British that nothing needed to be done in order to improve public health. Meanwhile, political and economic forces, such as the increasing interconnectedness of global trade through shipping and railway lines, served to bring foreign diseases, like cholera, alongside foreign goods, closer to Europe and from there, to small developing towns like Hamilton in Upper Canada. The British presence in India, therefore, shaped European perceptions of Indian society, facilitated cholera's transition from endemic to epidemic during the 19th century and shaped the future of public health in India, and beyond.

Miasma Theory and Medical Paradigms: Shift Happens?

Ayla Mykytey

Finding nothing in his whole education and experience to assist him, and without the background and knowledge to use the 'experimental method,' the doctor turned inevitably to speculation, and the subject that gave free reign to his imagination was that of the cause of this mysterious malady (Chambers 1938:20).

Medical practice in the early 19th century was shaped by an explanatory paradigm that accounted for the causes of disease and the way they were transmitted. Miasma theory framed medical practice in North America for the duration of the cholera epidemics examined in this book. This theory can be traced to Hippocrates (460BC - 370BC) who stated that maladies are caused by a material thing that exists in the air (Chambers 1938). This initial foundation gave rise to the idea in the United States and elsewhere that cholera was caused by a poison in the air that rose from "the bowels of the earth" as a result of decaying plant and animal materials, or from the bodies of the sick (Chambers 1938:35). When cholera spread to the Americas in1832, therefore, miasma theory explained it as a disease transmitted through the air, not from person to person (Chambers 1938). This deterred competing theories that argued for person to person transmission, such as contagion theories. On the other hand, belief in an almost-omnipotent poison that exists in the air and cannot be escaped but still has to be dealt with motivated people to engage in good personal hygiene and to persevere through times of epidemic (Chambers 1938).

This chapter examines miasma theory in a broad context, considering how it affected treatment for cholera, how it connected and interacted with opposing theories, and how miasma theory prevailed in the United States, England and in Hamilton in particular in the early to mid-19th century. As Stott (1995) has stated, increased immigration and ease of travel during this period meant that many doctors arrived from England, travelled between large ports in the United States and Canada, thereby creating a network of medical professionals who communicated the ideas and remedies of the day. This provides a vast body of information about the way cholera was conceptualized during the 1852 and 1854 epidemics in North America. This chapter compares the ways in which cholera was understood in Hamilton during these two epidemics to assess whether theoretical and conceptual changes took place between these two outbreaks. I also examine the context in which explanatory models develop and change.

Miasma Theory Wins Out

According to Morris (1976), there were multiple alternatives to miasma theory in London, England prior to the cholera epidemics. The first was contagion theory, and this theory was most widely accepted in England during the early 1830s. Contagion theory was a straightforward common-sense perspective on disease that relied on the idea that cholera was communicated person to person by direct contact (Morris 1976:170). Morris also notes that outside of the medical realm, it was widely held that epidemics were sent by the Almighty. However, the contagion and miasma theories were hotly debated during both epidemics in England and in North America, at a time when scientific standards provided researchers and doctors with an unclear framework for choosing between the two theories (Morris 1976). There was no agreement between professionals concerning the nature of cholera, and no central authority to guide research under one paradigm. A scientific community barely existed within the groups of doctors trying to treat cholera, but miasma theory seemed to win out in many of the geographic locations examined here, including Hamilton (Harris 1905; Morris 1976; Stott 1995).

Perhaps the most obvious reason that theories of contagion were not widely accepted in North America is because Dr. John Snow's theory of contagion that emerged from his studies of the Broad Street Pump in London, 19 England did not occur until 1854, the year of the second cholera epidemic in Hamilton. From the outset of the first epidemics of cholera in the early 1830s in London, Dr. Snow framed his research and inquiries into cholera under the contagion theory, and argued fervently that cholera is transmitted from person to person, and never travels farther or faster than its human carriers. By examining the way *Asiatic Cholera* moved through the city of London after 1848, Dr. Snow determined that cholera is communicated person to person, but not necessarily by direct contact with someone who is infected. He contended that although the miasma theory had its benefits and was reliably applied in the past, the miasma theory limits the way communicable diseases are understood with regards to cholera and other diseases that present a quick onset of physical symptoms (Snow, Richardson, and Hampton 1936).

Dr. Snow presented a variety of case studies and medical evidence to support his assertion that cholera is indeed communicated from person to person by way of contamination from "cholera evacuations" (i.e. from cholera's main symptoms of diarrhea and vomiting). Many of these involve cases where poor sanitation and a lack of knowledge of transmission greatly facilitated the transmission of the disease (Snow, Richardson, and Hampton 1936). However, Dr. Snow went further to state that person to person transmission via contact with cholera evacuations was not sufficient to explain the way cholera moved into the greater population; this is where Dr. Snow's most famous argument emerges. He stated that if cholera is transmitted in small groups via direct contact with cholera evacuations, cholera moves out into the greater population because cholera evacuations are mixed with the water used for eating, drinking and cooking (Snow, Richardson, and Hampton 1936:22-23).

However, it was not until 1854 when Dr. Snow published his observations on the Broad Street Pump that his connection of cholera to water was solidified. Dr. Snow described the cholera outbreak that took place in Broad Street as the worst that occurred in London, with 500 fatal cases reported after the outbreak started the night of August 31; more than 75 percent of the residents fled the area in the days following (Snow, Richardson and Hampton 1936). The severity and location of this outbreak led Dr. Snow to believe that the only way this could have occurred was if the water at the frequently and regularly used Broad Street Pump had been contaminated. By examining death records from the outbreak, Dr. Snow concluded that their proximity to the Broad Street Pump was what had most likely

been the cause of cholera in many of the victims (Snow, Richardson, and Hampton 1936). Dr. Snow also pointed out that it is likely that most people using the contaminated water had no knowledge that it was contaminated and that they were unknowingly contracting the disease. However, when Dr. Snow made his information public, it was not well received, and other theories of transmission persisted (Snow, Richardson, and Hampton 1936).

Although Dr. Snow was making connections between cholera, sanitation and public water sources in London, England, few studies such as Dr. Snow's were being undertaken in North America. In many locations in North America, social pressures dictated the way in which diseases were understood and treated by doctors. The prevalence of miasma theory amongst the majority of medical practitioners reflected the inability of many doctors to take an authoritative stance and provide treatments to communities already skeptical of existing treatments (Morris 1967; Rosenberg 1987). During a time when commerce was increasing, miasma theory aligned best with treatment measures expected by the public (Morris 1976). Doctors required a system of thought that could be effective immediately in order to treat patients and thereby retain their status as authoritative figures; the argument between paradigms guided research and therefore results of research and effected what happened day-to-day on the ground (Morris 1976). Anomalies in the way cholera spread and reacted to environmental conditions also seemed to fit best with the miasma theory (Morris 1976). Cholera spread across populations and in all geographic areas; it reacted to changes in seasons, pausing in winter (Hingeston 1854; Morris 1976; Rosenberg 1987).

The social pressures to subscribe to miasma theory affected the way doctors carried out their medical practices. As the debate raged on in the United States, and cholera appeared again and again after the initial epidemic in 1832, discussions of miasma theory began to spread beyond the medical profession, making its way into all social classes; eventually, the idea began to dominate public as well as professional thought (Morris 1976). This meant that doctors, who had to cater to patients' needs in order to keep their jobs, adhered publicly to miasma theory, even if in private they had reservations about it. By the 1849 epidemic in New York, miasma theory had permeated most of the medical and public spheres of life and governments were being forced to adhere to its tenets (Morris 1976).

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Public fear also affected the way doctors treated and described cholera. Miasma theory meant that the "moral effects" cholera could potentially have on certain groups were somewhat deterred (Morris 1976; Rosenberg 1987). As Rosenberg (1987) and many others note, hygiene and cleanliness were key elements of miasma theory as it pertained to cholera prevention. Public health announcements, news publications and reports all emphasized that the most reliable treatments and prevention measures required keeping a clean house and public environment, eating properly, maintaining good personal hygiene, and getting regular amounts of fresh, clean air (Harris 1905; Lindsay 1854; Patterson 1957). Having confidence in these preventative measures would "banish idle fears" (Lindsay 1854:674) that could lead to increased virulence and failure to keep cholera in check.

Miasma theory also allowed cholera epidemics to be viewed through a flexible lens, and therefore a variety of factors were proposed as the causes and remedies to the cholera epidemics in the early and mid 1800s (Rosenberg 1987). The varying virulence of each cholera epidemic was well explained by miasma theory. The contagion theory could potentially instill fear not only in patients but in doctors; if cholera were perceived to be unavoidable because it was already in the air, people would adapt to those conditions and strive to work within them. If cholera could be transmitted person-to-person, social relationships would simply be avoided, and adaptive measures such as movements to improve sanitation, increase research, and develop better direct treatments for patients would have been avoided (Morris 1976; Rosenberg 1987). Miasma theory also explained the massive failure of quarantine procedures across North America; if cholera resided in the air, it would be impossible to contain it, and its rapid spread could be more easily explained and understood (Morris 1976; Patterson 1957; Rosenberg 1987).

Did Hamilton Experience a Paradigm Shift?

During the 1832 to 1854 period explored here, a paradigm shift away from miasma toward contagion theory took place more generally in medical thinking in North America and England. This shift eventually led to germ theory and the understanding that bacterial organisms are the cause of diseases such as cholera. The 1854 cholera epidemic in Hamilton led in 1857 to the construction of a pump house on the shore of Lake Ontario (McGuinness 2010). By the end of the 1849

epidemics in the United States (most notably in New York), miasma theory was beginning to change, and more doctors believed that there was something specific in the atmosphere that caused diseases, a view that presaged the beginnings of germ theory (Rosenburg 1987). The 1849 cholera epidemic in the United States was the catalyst that prompted a reconsideration of the effectiveness of the miasma theory and made room for germ theory (officially accepted in the U.S. in 1873) to root itself firmly within medical practice there (Chambers 1938; H.W. 1938). During this period, studies that undermined miasma theory were being undertaken in England by others as well as Dr. Snow, notably by J. A. Hingeston whose study on weather patterns was published in the British Medical Journal in 1854. Hingeston (1854) stated that it took more than the proper atmospheric conditions to facilitate a cholera outbreak, and that more studies needed to be completed in other parts of the world to understand the conditions necessary for a cholera outbreak to occur.

It is difficult to determine whether medical authorities in Hamilton did indeed experience a paradigm shift between the cholera epidemics of 1832 and 1854. Two co-existing paradigms were constantly at odds with each other during each of the epidemics, miasma theory prevailing mostly due to convenience rather than because of research and medical innovation. As stated in the Board of Health records for Hamilton, the miasmatic view still held sway between the epidemics of 1832 and 1854, and basic sanitary measures were still being implemented as the primary means to control the spread of cholera (Harris 1905). In 1852 Hamilton's sewer system was started, but large portions of the city did not have sewers until the late 19th century (Harris 1905). Although miasma theory and the idea that cholera was something that existed in the atmosphere led to many improvements in sanitation measures throughout the City of Hamilton, and this made way for germ theory, the idea that cholera still resided in the air framed the way cholera was understood during both the first and second cholera epidemics in Hamilton (Harris 1905). However, it is clear that by the end of the cholera outbreaks of 1854, the miasmatic theory of transmission was quickly falling out of favour in many parts of the world, including Hamilton, leaving room for new understandings of cholera that shaped the way medicine was practiced during the second half of the 19th century.

'A Rose by Any Other Name': The Types of Cholera in the 19th Century

Thomas Siek

What's in a name? That which we call a rose By any other name would smell as sweet (Romeo and Juliet, II, ii, 1-2).

Nosology is defined as a branch of medicine that deals with the classification of diseases. This form of study has been used for centuries by medical professionals to classify diseases and in turn create a universal order of reference. Today nosology is based on the anatomical effects and the processes involved with the disease; but as late as the 19th century diseases were typed according to their symptoms. This was eventually seen as a flawed system because the human body can react to a disease in only a limited number of ways such as fever, inflammation, a buildup of mucus and purging. For instance, many illnesses will trigger a fever as the body attempts to destroy the infection by raising its internal temperature several degrees.

Classification also resulted in a disease being splintered into a plethora of types based on the smallest of observable differences. This was certainly true in the case of cholera in the 19th century. As cholera progressed throughout Europe and North America, medical professionals were faced with the task of creating a typology for the disease. As the system was based solely on observable symptoms, cholera was divided into a number of different types. These types

differed little from each other except for minute details and they were also identifiable by a surplus of synonyms.

This chapter aims to identify the various types of cholera identified in the 19th century. I compare them on the basis of descriptions of symptoms found in medical journals and treatises and on the distinctions made by medical professionals at the time. The types of cholera discussed in this chapter include *Asiatic Cholera, Cholera Morbus, Cholera Asphyxia, Cholera Infantum* and *Cholera Sicca*. These terms were used throughout the 19th century and during the 1832 and 1854 Hamilton epidemics.

Cholera Today

Vibrio cholerae is a water-borne bacterium that, when ingested by humans, causes the disease known as cholera; however it should be noted that not all vibrio are pathogenic to humans. The bacterium is associated with poor conditions. sanitary improper hygiene and is transmitted through the ingestion of water contaminated with the fecal matter of an infected (Madigan individual et al.



Fig. 4.1: The water-borne bacterium *Vibrio cholerea* (Madigan et al. 2009:1035).

2009:953). When ingested, *V. cholerae* travels to the small intestine and secretes an enterotoxin which activates the production of a chemical called cyclic adenosine monophosphate (cAMP). This chemical mediates regulatory systems in cells, including ion balance. The elevated levels of cAMP cause the secretion of chloride and bicarbonate ions into the intestine. This increase in ion concentration then leads to the secretion of large amounts of water which cannot be reabsorbed leading to massive fluid and electrolyte loss (Madigan et al. 2009:831).

Cholera is best characterized by severe diarrhea and dehydration. The most recognizable symptom is the "rice water stools", so named for their composition of nearly liquid feces and white mucus (Madigan et al. 2009:1035). Left untreated, cholera has a mortality rate of 25 to 50 percent. However treatment is simple and inexpensive, consisting of intravenous or oral liquid and 25

electrolyte replacement therapy; this greatly lowers the mortality rate to one percent (Madigan et al. 2009:1036).

Туре	Other names
Cholera Morbus	British Cholera, Cholera Biliosa, Cholera Nostras,
	European Cholera, Simple Cholera, Sporadic Cholera
Asiatic Cholera	Cholera Epidemica, Cholera Indica, Cholera Maligna,
	Cholera Orientalis, Cholera Pestifera, Cholera Serosa,
	Convulsive Cholera, Indian Cholera, Malignant Cholera,
	Nervous Cholera, Oriental Cholera, Pestilential Cholera,
	Serous Cholera, Spasmodic Cholera
Cholera Asphyxia	Algid Cholera, Blue Cholera
Cholera Infantum	N/A
Cholera Sicca	Cholera Flatulenta, Wind Cholera
Table 4.1: The types of cholera identified in the 19 th century (Antiquus Morbus).	

Cholera at Home

Cholera Morbus was the most basic form of cholera known prior to and throughout the 19th century. It went by other names as well (see Table 4.2). As these names suggest, this form of cholera was thought to be a benign, familiar disease, with relatively simple symptoms (Godfrey 1968:5). As such, *Cholera Morbus* was applied to isolated incidents of the disease and was thought to be indigenous to all countries (Marsden 1868:531).

Exotic and Dangerous Asia

As cholera travelled across Europe and North America throughout the 19th century, epidemics started arising. This was a new type of cholera that medical professionals had never seen before, outside of Asia. This new cholera was unlike *Cholera Morbus* in that it was much more virulent and malignant. Although the symptoms were the same as *Morbus*, it was considered to be the sole cause of epidemic cholera (Brigham 1832:341). It was thus termed *Asiatic Cholera*, although other terms were applied to it as well (see Table 4.2). These terms
reflected the degrees of separation which medical professionals took to distance the epidemic quality of the disease from the familiar individual cases that had been observed until then. *Asiatic Cholera* was deemed as different and malignant, more so than ever before seen in Europe and North America. The only place where it was observed to be this virulent was in Asia; therefore the disease must have been a product of that exotic place.

Differentiating Between the Familiar and the Exotic

With these two main types of cholera plaguing the populace, doctors had to be able to distinguish the difference between Asiatic and *Morbus*. The former was accepted as having its origin in India, where it was endemic, and constantly coming to the West through the immigration of infected people and the importation of contaminated goods (Marsden 1868:530). Apart from this origin, the two types of cholera were only distinguishable in one way: Cholera Morbus never caused an epidemic, appearing as isolated cases, whereas Asiatic Cholera spread from person to person and from place to place (Marsden 1868:531). It was this epidemic characteristic that, due to its novelty at the time, qualified Asiatic Cholera as a new disease, distinctive from the Cholera Morbus seen before (Chapman 1833:293).



Something Old, Something New, Something Blue

The nosology of cholera did not end with the two forms, *Asiatic* and *Morbus*. A third term was also garnering attention in the pages of 19th century medical journals, *Cholera Asphyxia* also known as *Algid Cholera* or more simply, *Blue Cholera*. This label derived from the most distinguishable of the disease's symptoms, namely blue lips and nails. Descriptions of *Cholera Asphyxia* given by 27

doctors included the usual diarrheal discharge of rice water stools, as well as other symptoms such as very low body temperature, weak pulse and thick, dark blood (Bell 1832:7-10). It is likely that the observation of thick blood, a cardiovascular affect, pushed medical professionals to label the disease as *Asphyxia* (Hamlin 2009:24), a condition highlighted by a lack of oxygen and the body turning a shade of blue.

All the Fun of Cholera in a Child-Size Package!

Discussions of disease often center on patients from the adult world; at times it is easy to forget that children are just as susceptible to illness. In the 19th century. children were often visited with Cholera Infantum. This form of cholera was unique as it was understood to be contracted in the summer months and only by young children and infants (Jackson 1855:135). Those who still clung to the humoural system of thought, the belief that the body was composed of four core elements or humours and disease resulted when these humours were unbalanced, concluded that Infantum's cause was rooted in the mother's sexual passion which was infused into her breast milk. According to an 18th-century medicinal dictionary, this "assumes an Orgasm by the Passion, produces an Effervescence with the Bile in the delicate Stomach of the Infant, corrodes the Intestines, and generally gives occasion to a fatal Inflammation" (Hamlin 2009:27). To many the illness would first appear as common diarrhea, complete with vomiting and purging, but *Infantum* was characterized by the extremity of the pain experienced by the young patient. Moreover, the site of infection was also believed to be different; the stomach and the duodenum were believed to produce diarrhea while the small intestine and the lower ends of the digestive tract were the home for cholera (Jackson 1855:134).

An Identity Crisis

Of the types of cholera mentioned above, the Hamilton epidemics in both 1832 and 1854 were most often referred to as *Asiatic Cholera* due to the ubiquitous distribution of cases; the terminology reverted to *Cholera Morbus* once officials deemed the epidemic to be over (Irvine 1854:5).

This change in nomenclature makes the tracking of cholera's history difficult at times. Over two centuries, many different meanings and descriptions

have appeared in a number of different languages. Scholars of the disease grouped symptoms and explained infections differently and there was an on-going discussion among medical practitioners as to which symptoms were primary and which were incidental; doctors argued about whether the focus of attention should be on diarrhea or vomiting. With no clear consensus, cholera came to be viewed as a continuum of disease centered on diarrhea (Hamlin 2009:21-23). These debates led to the inclusion of other symptoms into the category of cholera, some of which might not have been cholera at all. *Cholera Sicca*, for example, was characterized by its total absence of vomiting and diarrhea. Instead, its key symptom was an intense coldness of the limbs followed by a quick collapse and death (Hamlin 2009:23).

Medical professionals agreed, however, that *Asiatic* and *Asphyxia* were the most dangerous forms of the disease. At times they were referred to as third grade cholera. The first and second grades were not given precise names but the first grade of cholera was likely *Morbus* and the second grade *Infantum*, as it was believed to only affect children (Stimson 1835:16).

One of the purposes of distinguishing so many varieties of cholera was to rob the disease of the terror it instilled. The people of Dundas, for instance, praised the cholera classifications as ingenious (Dundas Warder 1849). When something causes a great amount of fear and panic, as cholera did during both of Hamilton's epidemics, naming and categorizing it into different types acts as a way to dispel the fear and anxieties that are produced. Cholera had been seen as a hulking disease, a faceless entity that killed without discrimination. The nosological practices of the 19th century gave cholera a face and made the unfamiliar understandable. These classifications not only dispelled some of the fear that cholera produced but were also useful in medical and scientific terms as they allowed the disease to be identified by the relative severity of the various forms. This was clearly seen in 19th-century medical journals and treatises, as *Asiatic Cholera* and *Cholera Morbus* dominated the literature, while others such as *Cholera Infantum* and *Cholera Sicca* were only noted occasionally.

When presented with a case, physicians chose to focus on minute variations or abnormalities. If a symptom had not been seen before, the illness was deemed to be a new type, splintering cholera further into more subgroups. Cholera eventually became a catch-all term for any ailment that showcased diarrhea or vomiting as a main symptom. As such, many diseases, such as gastritis or other intestinal illnesses, would have been assumed to be cholera and 29

treated as such. This resulted in not only a continuum of choleric diseases but it also paid tribute to the human need to classify and segregate, a habit that is not limited to simply diseases.

The 19th-century cholera classifications were based on perceived differences in signs and symptoms. Classifications of human differences were also being made at the time on the basis of minute observable distinctions in characteristics, such as skin colour, head shape, and nose shape. The people of the world were slotted into racial categories, such as "Caucasian" and "Negroid". These racial classifications became the basis of social hierarchies that lasted well into the mid-21st century; they contributed to many social and cultural upheavals that include and are not limited to the Second World War and the Civil Rights Movement in the United States. Humans have always been compelled to categorize and label their surroundings; doing so endows the classifier with power over the classified. When logic is applied to the natural world, hierarchies can be formed. This is evident in the 19th-century classification of cholera and other organisms, including humans.

Doesn't Anyone Care about the Children?

Katlyn J. Ferrusi

When it comes to a serious illness, the child who has been taught to obey has four times the chance of recovery that the spoiled and undisciplined child has (Author Unknown n.d.).

In 19th-century Hamilton, cholera did not appear to discriminate on the basis of age or sex, although unfortunately the vast majority of data available about cholera epidemics pertains to adults. What about all the children who died from cholera? In this chapter I describe what life was like for children in 19th-century Hamilton, how they were regarded and how they contributed to the household. Through this examination I hope to make it clear that children were just as likely to be exposed to cholera as adults. I focus on the 1853 and 1854 cholera epidemics in Hamilton and scrutinize a sub-category of cholera created specifically for children: Cholera Infantum. I examine what Cholera Infantum was and discuss whether or not it was in fact a separate form of cholera which specifically affected children or if the category was created out of panic and concern. Through an analysis of death and birth records retrieved from the McMaster University Archives I uncover the age group that experienced the highest mortality. I also compare the number of births and deaths during these epidemics to determine whether they affected population growth in Hamilton. Functionalist theory emphasizes that a given society acts like a biological organism in that its necessary progression occurs through the interaction of many different parts (Edwards, Neutzling, and Porth 2009). Through the use of this

theory I explain how children were an integral part of the household economy and how their presence in the workforce, despite legislation and law, made children a necessary spoke in the wheel of 19th-century industry and society.

The Hidden Workforce

In 19th-century Canada children were folded into the adult world and actively participated in industry. They "inhabited a world where no hard and fast distinctions were made between children's activities and those of adults" (McIntosh 1999:127). Children were plagued by premature death, sporadic education, and little protection from the adult world in which they were expected



demonstrate their trade (Public Archives of Canada C 4239 in Bullen 1986:175).

to take on adult responsibilities despite a relatively young age (McIntosh 1999). Bullen (1986) identifies Hamilton as one of the centers of industry where children were employed in factories; however, child labour was not restricted to factories as children worked various street jobs to supplement their family's income. While children as young as eight were expected to contribute to household chores, it was common for children to contribute to the economic stability of the home by "gather[ing] coal and wood for fuel from rail and factory vards" (Bullen 1986:166). Oftentimes the income of children employed as boot blacks or newsboys buoyed families just above the poverty line.

It was not until the Ontario School Act of 1871 (Hurl 1988:92) and eventually the first meeting of the Trades and Labor Congress in 1883 (McIntosh 1999:127) that any type of real reform regarding compulsory education and limitations to child labour in factories occurred. Prior to this legislators "had been reluctant to intervene and regulate the child's place within the nurturing family" (McIntosh 1999:127). However, when the state did intervene it was in instances of abuse or neglect; children were inevitably treated like adults and were placed in "Poor Houses" or "Houses of Industry" where they lived alongside adults and were not afforded the special treatment that they needed (McIntosh 1999). 33

Education was available although Hurl (1988) emphasizes the fact that regardless of the existence of legislation that required children to attend school it was never "intended to eliminate the practice of child labor" (Hurl 1988:92). This allowed rules to be bent or ignored, which led to the misrepresentation of the number of children within the workforce because they performed jobs that were often not fixed to a schedule, rendering them virtually invisible.

Although child labour would have been common knowledge and practiced by most low-income families and increasingly among working class families in the 19th century, it tends to be swept under the rug and this fact is not well-known today. Child labour was a reality in Hamilton before, during, and after the cholera epidemics of 1853 and 1854. The fact that children were not segregated from adults meant that they were exposed to the same diseases as adults; children also drank the same water as adults.

A Disease of Their Own

As briefly discussed in Chapter 4. Cholera Infantum is an old disease category no longer in use today. The referred term to а childhood dangerous disease that was most prevalent during the hottest summer months. characterized by cramping, vomiting, diarrhea. and



Figure 5.2: Young boys employed by Greening Wire Company of Hamilton Ontario joining in a company photograph (Labour Studies Department, McMaster University, Hamilton, Ontario in Hurl 1988:107).

gastrointestinal discomfort. Other common symptoms consisted of persistent fever and rapid decline, clammy hands and feet, localized warmth on the head and abdomen, and insatiable thirst ending with the child in a state of constant sleep and, finally, convulsions from which they inevitably succumbed (Antiquus Morbus 2011).

Cholera Infantum, also known as the "summer complaint" (Lippe 1884:185) or the "summer fever" (Jordan 1987:101), was a disease associated with the digestive tract and brain. This particular disease occurred only in children and, as the pseudonyms suggests, caused the most fatalities during the hot summer months. Furthermore, *Cholera Infantum* was considered to affect children being weaned during their second summer of life, coincident with the initial eruption of milk teeth. There are of course problems with this aspect of the medical definition provided by 19th-century physicians and scholars as not all children were weaned at the age of two and the eruption of milk teeth is a highly variable aspect of childhood development.

Lippe (1884) makes it clear that the appearance of milk teeth in infants is an indicator of the child's want and need to be weaned. Mothers and physicians alike were of the opinion that as soon as the teeth appeared farinaceous food should be introduced to the infant's diet. Jordan (1987) describes farinaceous food as bread soaked in water or milk to which a sedative could be added to quiet



Figure 5.3: Gilbert's Cure for *Cholera Infantum* (Cannon 2012).

infants during teething. Nineteenth-century milk was unpasteurized and often contained infectious diseases such as tuberculosis while water typically came from wells or streams that were often contaminated by sewage. It can therefore be concluded that these weaning practices may have caused cholera to be unintentionally introduced to infants, causing even higher mortality rates.

The ability of early physicians to recognize the symptoms of *Cholera Infantum* in the absence of modern medical cures and medicines led to the development of homeopathic remedies to "cure" or at least alleviate the symptoms of the disease. The use of Chamomilla (Chamomile) on children was fairly common in the 1800s and was most often used in cases where children were persistently restless. Belladonna is a potent stimulant and while it may have given children energy the many side effects such as extreme thirst, flushed cheeks, hot skin, restless sleep, and convulsions most likely cause the child's condition to become

worse. Sulphur was a common remedy used to alleviate the more uncomfortable symptoms but only briefly; side effects consisted of hot skin, aversion to water, and restless sleep and may also have made matters worse rather than better. 35

Aconite was used to treat the onset of sudden and severe fevers and gastrointestinal afflictions although it caused the individual to become restless and weak. Bryonia was used to relieve aches and to harden the stool, however, patients often become irritable with excessive thirst (ABC homeopathy 2009). It is clear that the use of homeopathic remedies to treat an illness such as *Cholera Infantum* was a double-edged sword that was justified based upon the positive effects. One cannot ignore the coincidental side effects of these various remedies and it seems plausible that many young children may have declined faster with the application of these remedies.

Diarrhea was the most fatal affliction that an infant could have and the dehydration which came along with it was a byproduct of infection that could prove fatal. Poor nutrition or lack thereof played a role in diarrheal disease, but other factors, such as the prevalence of infectious diseases, living conditions, and the social circumstances surrounding the child played a significant role in whether a child survived (Jordan 1987). As such the first few months of a child's life were crucial and unfortunately many did not survive.

I examined burial records kept for a number of Hamilton churches during this period and it is clear that the most common illnesses recorded as causes of child deaths are diarrhea, decline, teething, and *Cholera (Infantum)* (Christ's Church Cathedral, Church of the Ascension, St. James Church, St. John's Anglican Church, and Anglican Diocese of Niagara Archives, McMaster

University, Hamilton, Ontario - henceforth referred to as the Anglican Diocese of Niagara Archives). All of these illnesses were considered to be infections of the bowel and caused dehydration and constant defecation until the infant finally succumbed. The introduction of homeopathic remedies discussed earlier,



while revolutionary, may have caused serious symptoms such as dehydration, fever, and convulsions to become heightened while only slightly alleviating specific symptoms. The negative side effects of these remedies may have been misconstrued as symptoms of the disease and when child deaths increased

dramatically during the epidemics panic and concern may have contributed to the formation of an entirely new category of *Cholera Infantum*. Some of the symptoms of *Cholera Infantum* are similar to those of cholera; thus, it is entirely possible that children were dying from the same form of cholera as adults, the disease having passed from mother to child as they were weaned using farinaceous food containing the same contaminated water that adults were drinking. Children were already perishing at this time from common childhood illnesses, however, as child mortality rose an explanation for this growing problem was needed. I feel that the term *Cholera Infantum* was created to help explain the increase in child deaths but it is best viewed as an umbrella term for common illnesses and cholera among very young children, under the age of two.

From Birth to Death Much Too Soon

Up to this point I have endeavoured to provide the reader with the historical context in which the medical condition, *Cholera Infantum*, emerged. However, the heart of this chapter relies on burial data I compiled from church records from the Anglican Diocese of Niagara Archives. In the 1850s death records were not kept on a municipal or provincial scale and as such it is necessary to rely upon the diligence of church officials to record the baptisms, burials, and, occasionally, causes of death. For this study of cholera in Hamilton, I examined all of the baptisms and burials recorded for Christ's Church Cathedral, Church of the Ascension, St. James Church, and St. John's Anglican Church from January 1853 to December 1854. I chose to use these records because these churches were established prior to the 1853 and 1854 epidemics and contained the most complete and accessible records. Data collection from these records resulted in a sample of 197 baptisms and 166 burials. From this sample size I produced two graphs (Figures 5.5 and 5.6) that emphasize separate but equally important aspects of child mortality during the cholera epidemics of 1853 and 1854.

Figure 5.5 shows the age at death distribution of children aged 13 and under in Hamilton during from January 1853 to December 1854 (Anglican Diocese of Niagara Archives). The results paint a fairly grim picture of childhood mortality during the 1853 and 1854 cholera epidemics in Hamilton. As discussed earlier in the chapter, the 19th-century medical understanding of *Cholera Infantum* indicates that it affected children during their second summer when they were being weaned and had begun teething. Interestingly, Figure 5.5 shows that 32 37

Children

percent of the deaths, and the highest mortality, occurred among children under the age of one (28 to 364 days age group), which is not consistent with *Cholera Infantum*.



Figure 5.6 displays the number of deaths relative to the number of births based upon the burial data retrieved from the Anglican Diocese of Niagara Archives between January 1853 and December 1854. Using a three-year floating average analysis a distinctive pattern emerged from the data. The criterion for *Cholera Infantum* along with the pseudonyms "summer complaint" and "summer fever" suggest that this illness was most prevalent during the hot summer months. During the summer months delineated in Figure 5.6 the 1853 epidemic deaths did not significantly outnumber births although they are slightly higher. The 1854

epidemic on the other hand exhibits a radical increase in the number of deaths in relation to births. This increase can only be explained by the advent of an epidemic such as cholera. This rapid increase in child deaths coinciding with the adult deaths would have significantly reduced population growth in Hamilton, at least in the short term.



Invisible Children, Invisible Deaths

This chapter endeavours to illustrate as accurately and vividly as possible the conditions in which children in Hamilton lived during the 1800s. The perpetuation of child labour and the disregard for the value of education during this time made children indistinguishable from adults as well as making them a useful addition to the workforce. Child labour effectively rescued families from being destitute; however, children were working alongside adults and within the 39

community making it possible for them to come into contact with cholera as frequently as adults. It is clear that *Cholera Infantum* was a serious illness that baffled physicians who, in a time before effective treatments, developed homeopathic remedies intended to cure the child. My analysis has shown that although these remedies may have alleviated some discomforts, they may have caused more damage while at the same time making the illness seem far worse than it truly was. Furthermore, I believe that *Cholera Infantum* should be seen as an umbrella term used during times of epidemic panic to explain an abrupt rise in child mortality. Children may have continued to die of gastrointestinal diseases that were not cholera but that may have resemble it, or they simply may have died from cholera; the observation of so many deaths among children gave rise to the new term that attempted to explain them.

Having examined the church records from the Anglican Diocese of Niagara Archives it can be said that there was a proportionately large number of deaths that occurred in the first year of life, not around the age of two when *Cholera Infantum* was believed to occur. It is clear, however, that a higher proportion of deaths occurred in the hot summer months, an observation that is significantly more dramatic for the 1854 epidemic. Social structure, socio-economic status, and the necessity of child labour affected 19th-century children on a daily basis. Ultimately children fell prey to the same diseases that adults were susceptible to and in the end child deaths, just like child workers, remain silent and invisible in the grand scheme of historical account of epidemics; the cholera epidemics of 1853 and 1854 in Hamilton are no exception.

Changing Waves: The Epidemics of 1832 and 1854

Brianna K. Johns

The wave subsides and the wave rises. The flower withers and the flower blossoms. There is no end to human wants and achievements. Nothing is permanent and nothing is fleeting... (Chinmoy n.d.).

The people of Hamilton, and citizens of many other cities and towns across the world during the 19th century, stood in awe and fear as decimating waves of cholera crashed through, leaving crippled populations in its wake. This chapter examines the damage that the inhabitants of Hamilton incurred and is organized into five issues: (1) the environment in Hamilton in 1832; (2) the number of deaths from the 1832 cholera wave; (3) the context in which the 1854 wave occurred; (4) the death rate that characterized the 1854 cholera wave; and (5) how these two cholera waves compare and were experienced.

I use a political economy approach to compare the 1832 and 1854 epidemics. This approach blends the political-economic approach with human ecological perspectives to determine the interaction among social, political and economic processes with regard to health and demography (DeWalt 1998). I attribute the differences in experiences between the 1832 and 1854 waves of cholera to political, economic and social changes in Hamilton's society, and interpret the reactions to each epidemic as stemming from these same influences. Here this framework is used to examine how necessities arose and changes were demanded, and how this conflicted with and altered beliefs over time.

Lost in Translation

Before turning to the 1832 and 1854 cholera outbreaks, some issues that affect the analysis must first be addressed. These issues pertain to problems that arise from addressing a time so long ago. One of the major difficulties experienced during my research relates to the fact that the Province of Ontario did not register deaths prior to 1869. As a consequence, the recording of deaths was largely left to the discretion of clergymen. Unfortunately, even in instances where death was recorded, the likelihood of finding a reliable cause of death is minimal at best, and the impossibility of verifying the diagnoses amplifies the problem.

Furthermore, the underlying current of fear that permeated society during these times contributed to a number of limitations to this research, especially regarding the accuracy of the number of recorded deaths. The fear of cholera during the 1832 epidemic resulted in an increasing use of unmarked mass burials,



also referred to as common burials, which left record-keeping in shambles. The interment records for various cemeteries show an obvious lack of burials during the cholera epidemics. Considering the large number of deaths that resulted from cholera, however, this is the opposite of what one would expect to find. There is, however, a list compiled for the 391 individuals who were buried in a mass grave at the Hamilton Municipal Cemetery, many of whom were only identified as

immigrants (Hamilton Municipal Cemetery 2002). Cholera came to be interpreted as a disease of immigrants, as Figure 6.1 demonstrates. Also, even when it became compulsory to notify the Board of Health of the death of a family member or patient, cholera deaths continued to be underreported (Burkholder 1954b). Many bodies were simply left in the cemetery, "such was the terror inspired by the plague that at the gates of lonely country cemeteries bodies were left unburied, the friends of the deceased arriving after night-fall, dropping the body, then running away, leaving the people living close at hand to devise some means of burial" (Smith 1961:137-138). Similarly troublesome is identifying the people who contracted cholera. As many of the sick were immigrants newly arriving in Hamilton, they are unidentifiable as well as forgotten (see Chapter 10 for a discussion of who got sick). There is a significant chance as well that governments of the time wanted to suppress information on the outbreak for economic and societal reasons, further aggravating the under-reporting problem. The terror and panic that ravaged Hamilton, which resulted in sparse records, has been further disadvantaged by the passage of time. In this regard, the destruction and loss of records restricts the accuracy of this study, and is particularly problematic for the 1832 cholera epidemic.

The Incoming Tide

In 1832, Hamilton was a small town unprepared to take on the onslaught of cholera. Certainly, cholera was not a new disease to the world, as Chapter 2 demonstrates. Its unknown nature and the high mortality rate it produced made controlling the disease a complex matter. It did not help that during this period of time cholera was understood through miasma theory, which explained it as a disease spread through the air when, in fact, it is a water-borne disease (see Chapter 4).

Large waves of immigrants were arriving in Canada at the time, which is why cholera and immigration are so explicitly connected to one another. The filthy, crowded ships on which immigrants arrived fostered the spread of cholera among the passengers in the holds (Evans 1970). When immigrants disembarked from these ships and dispersed to various locales, cholera followed with them (Bilson 1980). As a port city, Hamilton experienced waves of arriving immigrants throughout the summer of 1832 (Houghton 2010), so it is perhaps unsurprising that on July 12, 1832 cholera was carried into the village of Hamilton (Burkholder 1954b).

The fear of cholera arrived much earlier than the disease itself, however, prompting Hamilton's inhabitants to launch a massive cleanup campaign on June 20 (Smith 1961:137-138). Unfortunately, these methods were ineffective and did not prevent the devastating effects of the disease. Cholera is a summer disease that flourishes in the hot months of July and August; by September, the epidemic began to recede. William Hare and his wife (name unknown) are believed to have been the final victims of the 1832 cholera epidemic (City of Hamilton 2005:69).

Bring Out Your Dead

The 1832 wave of cholera had a catastrophic outcome for the village of Hamilton. It is estimated that one in 20 citizens died from cholera during this time (Burkholder 1954b); another account places the death toll at 142 individuals (Smith 1961). This is significant given that on March 21, 1832, prior to the arrival of the cholera epidemic, Hamilton's population was 805 inhabitants (Kingston Chronicle 1832). These figures suggest that 17.6 percent of the population died during this wave.

As cholera swept through the village during the summer months and into early autumn, people fled to rural locations to escape the deadly disease (Epstein et al. 2008). However, as one estimate suggests, by August 9, 1832 there were about four deaths per day as the epidemic continued to gain ground (Burkholder 1954b). On one day alone there may have been as many as 16 deaths (Burkholder 1954b). While this may not seem like a large number, this was very significant in 1832. To put this in context, if 17.6 percent of Hamilton's current population were to die, the total number of deaths would be approximately 91,500 citizens.

Of course, Hamilton was not alone in experiencing significant mortality rates. Cholera took a large toll of deaths in Toronto during the summer months, with estimates ranging from one in 20 (Smith 1961) to as high as one in ten

citizens (Raible 1992). Raible (1992) applies these rates to Toronto's population in 1992 and estimates that 200,000 citizens would have died. Other cities in Upper (Ontario) and (Quebec) Canada Lower were bv overwhelmed cholera. Lower Canada is estimated to have lost 5,820 citizens and Upper Canada at least 6.820 citizens before the cholera epidemic subsided September in (Raible 1992:43). It is difficult to verify these accounts for reasons discussed earlier.



Figure 6.2: Cleaning up Toronto (McConnell 1910-14).

Deny All, Admit Nothing

A second major wave of cholera hit Hamilton in 1854 and was largely ignored at first. It appears that no one wanted to cause undue alarm among the citizens of the now recognized City of Hamilton. I attribute this decision to mask the presence of cholera to a concern by city officials that commercial activity would decrease and that citizens would attempt to leave before cholera had begun to flourish. In other words, I suggest that the political and economic implications connected with the arrival of cholera strongly influenced the disregard of the emerging epidemic. Instead, newspapers articles encouraged farmers and others who lived in rural areas outside of Hamilton not to worry and to come to the market (Henley 1994). The actions that the City of Hamilton took in suppressing the impending cholera epidemic were all for naught as, by mid-July, it was clear they had another epidemic on their hands. Business was considered to be at a standstill, church services were suspended and all public gatherings were forbidden (Henley 1994). Life in the City of Hamilton had effectively been put on hold.

The first deaths from cholera in Hamilton were blamed on some fault or weakness of the sick individual, with newspapers advising citizens that there was no cause for alarm, but to pay attention to diet and cleanliness (Henley 1994). The first death occurred on June 26; the individual, S. Jenave, was a German

immigrant (Henley 1994). The second recorded death occurred six days later on July 2, when another German immigrant, Mrs. Peway, died (Henley 1994). This presents a five-day gap between the first and second death, but it is likely that there were unreported deaths in between, especially when cholera first affected new immigrants who



could easily be overlooked. Board of Health reports on the death toll did not begin to be placed in the newspapers until July 15 (Figure 6.3). I again attribute this delay in reporting to an attempt to keep cholera deaths hidden from the public for social and political reasons.

In an effort to curtail the cholera epidemic and console the public, a day of fasting and prayer took place on August 7 (Henley 1994). The epidemic continued until the end of August, when it was suddenly reported that it was over. The Board of Health discontinued public notices after August 22 and the last recorded death from cholera was listed on August 26, 1854 (The Hamilton Spectator 1892). Whether this was actually the end of cholera or, more likely, just the abatement of the disease, remains to be seen. While Hamilton had encountered cholera a number of times before 1854, and was perhaps better prepared to deal with it, the epidemic nevertheless had a significant impact on the population and economy.

The Tide Recedes

The mortality rates during the 1854 wave were recorded more thoroughly and, as such, provide more statistical information than is available for 1832. The Board of Health reports on the number of deaths per day prove useful for analyzing the progression of the epidemic wave. Figure 6.4 is based on daily records of cholera deaths kept by the Board of Health. July was the worst month for cholera deaths, with July 19 to July 29 showing the highest numbers of deaths during the entire wave (Daily Reform Banner 1854a,b; The Hamilton Spectator 1854d,e).



There are several estimates of the number of deaths attributed to the cholera epidemic of 1854 from different sources (Table 6.1). The official Board of Health estimate cites 533 cholera deaths from late June to late August. It is still

Total	Source
Deaths	
533	(Daily Reform Banner 1854a,b;
	The Hamilton Spectator 1854d,e)
750	(Smith 1961:138)
552	(McGuinness 2010:A03)
469	(New York Daily Time 1854)
524	(Houghton 2003)
Table 6.1: To	tal number of deaths in Hamilton from various
sources.	

very probable that the number deaths is underof represented. article One claims that there were as many as 72 deaths in one day, the largest death toll in a single day (Henley 1994). However, the highest number of deaths from cholera ever reported by the Board of Health was 24 deaths (The

Hamilton Spectator 1854d). It is more likely that the one-day estimate of 72 deaths is a gross exaggeration, very possibly due to fear and the impression that there were more deaths than actually occurred. Hamilton's population in 1854 was approximately 15,000 (Smith 1961), which suggests that 3.6 percent of its citizens died during the 1854 wave.

Other places were similarly hit during this cholera wave and the New York Daily Times (1854) reported on mortality rates only until August 14 so the figures underestimate the true impact of the epidemic (Table 6.2). Unfortunately, population estimates could not be found for Cornwall or Grosse-Isle and they are left out of the table, although the New York Daily Times (1854) listed 49 deaths and 11 deaths occurring respectively at the given locations. As the table shows,

Hamilton lost over 3 percent of its citizens and appears to be the hardest hit place listed in the table, even though its death toll is clearly an underestimate.

Location	Population	Total	Percentage
		Deaths	
City of Hamilton	15,000	469	3.12%
City of Quebec	42,052	693	1.65%
City of Montreal	57,715	847	1.47%
City of Kingston	11,697	135	1.15%
City of London	7,035	21	0.3%
Table 6.2: Population to de Times 1854: Statistics Can	eath comparison for ada 1851-1852).	various location	ons (New York

The Same but Different?

Hamilton's cholera epidemics fit the pattern of sporadic epidemics. As Sawchuk (2010:116) describes, "cholera was chameleon-like – in one year devastating, and in another, remaining well within the normal range of mortality". Although Sawchuk was describing the cholera epidemics of 1860 and 1865 in Gibraltar, his description applies equally well to Hamilton's experience from 1832 to 1854. While this chapter focuses on the major outbreaks of 1832 and 1854, there were other slight visitations of the disease.

In 1832, the village of Hamilton lost 17.6 percent of its population to cholera, yet in 1854 the percentage had significantly decreased to that of 3.6 percent. Figures 6.5 and 6.6 demonstrate the differences between the 1832 and 1854 waves. What might account for this? The main factor to note was that in 1832, the people of Hamilton, or Canada for that matter, had never experienced cholera and were unprepared for this previously unknown disease. Even though the disease was still poorly understood in 1854, changes had occurred during the 22-year gap that reduced cholera's impact.



The significant reduction in the virulence of cholera in 1854 can be attributed to perhaps two significant factors. First, it is important to note the role 49

played by politicians and medical officials in better protecting the citizens of Hamilton from cholera. New by-laws added after the 1832 cholera wave, but before the 1854 wave, helped to contain cholera to some degree. Some of these by-laws focused on improving the cleanliness of the city which reduced the disease risks associated with unclean environments (City of Hamilton 1911). By-law 46 seemed to have had an important influence on cholera because it required that physicians report infectious and contagious diseases (City of Hamilton 1911:152). Through the power of the Board of Health and other local officials who instituted these by-laws, the contaminated environment that allowed cholera to thrive was improved (see Chapter 13 for more information on political and economic responses).

The second significant factor that likely reduced the number of deaths in the City of Hamilton comes from the development of new treatment methods. Prior to 1854, treatments for cholera were quite brutal and had the unfortunate tendency to kill patients faster than the disease did. However, by 1854, the radical treatments were being replaced with the safer methods associated with homeopathic medicine, although these were still based on misconceptions of the disease. These treatments had the added benefit of being less likely to kill people suffering from cholera (for more information on treatments see Chapter 7). This shift in popular treatment methods was in large measure a response to social demand at the time for less extreme treatments than, for example, leeching. The public had spoken and so both medical practitioners and local governments followed suit for economic and political reasons. This change in medical practice from 1822 to 1854 had significant ramifications for the anidemia ways of 1854.

from 1832 to 1854 had significant ramifications for the epidemic wave of 1854. Even with such a sizeable drop in cholera mortality in 1854, it is still significantly large compared to recent statistics. In 2010, Haiti experienced an outbreak of cholera that resulted in 3,990 reported deaths out of 179,379 cases (World Health Organization 2011). The population of Haiti was approximately 9,446,000 during 2010 (World Health Organization 2011). Based on these numbers, only 0.04 percent of the overall population died from cholera. Similarly, Angola experienced a cholera epidemic in 2006 and 2007, which culminated in 3,092 deaths from 82,204 cases of cholera (World Health Organization 2009). The total population around this time was 15,941,000 (World Health Organization 2009), meaning that only 0.02 percent of the total population died from cholera. By comparison Hamilton's outbreaks in 1832 and 1854 were far more severe. Of

course, this must be considered in the context of time and in recognition that much more is known about cholera now.

Over the Rolling Waters Go

When untreated, cholera can result in a mortality rate anywhere between 25 to 50 percent of the sick. The true number of cholera cases in Hamilton in 1832 and 1854 is unknown; only the remnants of these terrible epidemics can be seen. Yet, it is likely that the majority of individuals who became sick with cholera also perished from it. More people succumbed to cholera in the past than today, simply because effective treatments methods in the form of oral rehydration therapy are available. On the other hand, patterns observed for epidemics today can also be observed during the 1832 to 1854 cholera epidemics in Hamilton: the introduction of a new disease, little understanding and ability to treat it, and unbridled fear and shock resulting in a high number of fatalities. As Sawchuk (2010:116) notes, "the effects of an epidemic cannot be measured by the toll of sick and dead alone". Although the 1832 and 1854 waves differ to some degree, they have at the same time similarities between them. Clearly, both had a momentous effect on the population of Hamilton.

Charcoal, Lard, and Maple Sugar: Treating Cholera in the 19th Century

S. Lawrence-Nametka

On the whole of the history of therapeutics before the twentieth century there is no more grotesque chapter than that on the treatment of cholera, which was largely a form of benevolent homicide (Howard-Jones 1972:373).

During the 19th century, treatments for cholera were some of the most diverse, injurious, and extraordinary methods ever employed. This chapter examines these methods, and unfolds in three sections: (1) treatments administered by licensed medical practitioners; (2) unorthodox homeopathic remedies; and (3)recommendations for the prevention of cholera. Each section discusses the procedures, rationale, and effectiveness of the various methods of treatment and prevention. I explore the evolution of cholera treatments from the early to late 19th century through the lens of social representation theory. While a lack of medical understanding remained constant throughout the century, treatment options were variable. I attribute this variability to the capacity of individuals "to orient themselves in their material and social world and to master it" (Moscovici 1973:xiii). A social representation is a phenomenon constructed by a community; it is enacted by society to bring order to a world turned chaotic. Social representations therefore are comprised of the thoughts and feelings, expressed in verbal and explicit behaviour, by the individuals of a community (Wagner et al. 1999). This framework can be employed to study psychosocial phenomena within societies, and here it is used to discuss how the progression of treatment methods

during the 19th century, from radical surgeries to homeopathic remedies, represents the collective desires of a choleraic community to restore hope and order to a fear-stricken society.

Put a Cork in It



Figure 7.1: Bloodletting (Greenspan 2012).

Put simply, the treatment methods undertaken by orthodox medical practitioners during the cholera epidemics of the 19th century were torturous, ineffective, and unpleasant. The most common method employed in Europe and North America was bloodletting. Also known as phlebotomy, bloodletting was considered "the anchor of a successful practice" (Howard-Jones 1972:374). It is one of the oldest forms of medical therapy in the world, and was used in the treatment of numerous diseases until the end of the 19th century (Bennion 1979; Howard-Jones 1972). The widespread use of bloodletting was based on the belief that a weak heartbeat and reduction in the

natural heat of the body could be remedied with the removal of blood – doctors trusted that this would increase the heart rate and excite the nervous system, in turn improving the circulation of blood throughout the body (Howard-Jones 1972). Bloodletting was also believed to be effective in preventing and removing obstructions in the veins. Unfortunately, 19th-century doctors failed to realize that cholera patients were often already so dehydrated that the abstraction of additional fluids from the body would only serve to further shorten the life of the patient (Howard-Jones 1972; Stimson 1835). While bloodletting was regularly accomplished through a direct incision to the vein or artery, allowing the patient's blood to flow into a shallow bleeding bowl, many doctors also made use of leeches to serve the same purpose. Leeches were often applied to the abdomen, sternum – or most uncomfortably – to the anus, where as many as 15 leeches were fastened to extract the patient's blood (Bennion 1979; Howard-Jones 1972; London Medical Gazette 1837).

Additional widespread blood-related treatments included cupping, cauterization, scarification, and amputation (Hamilton Herald 1831; Howard-Jones 1972; Peters et al. 1885; Stimson 1835; Stott 1995). Cupping is a form of 53

treatment in which a glass dome-shaped cup is applied to the surface of the body, often on the spinal column, temples, or behind the ears of a patient. Historically,

cups were warmed over a flame before being placed on the skin, in order to create an isolated area of suction. In dry cupping, the skin beneath the cup is unbroken, whereas in wet cupping, the skin is typically scarified first so that the suction draws blood from the body, similar to bloodletting. A scarificator is a small brass instrument from which sharp steel blades protrude when a trigger is released, used in both cupping and bloodletting since the 17th century. Cupping has been used



cross-culturally in the treatment of illnesses since ancient times and is still used by some traditional medical practitioners in the 21^{st} century (Bennion 1979; Coulter 1973). The rationale for the use of cupping in the treatment of cholera in the 19^{th} century was based on the belief that all bodily nerves were connected to the spinal marrow – the central source of human energy. Thus, like bloodletting and cauterization of the spine, cupping was seen as a practical procedure to excite the nervous system, increase blood flow, and restore the victim (Hamilton Herald 1831; Stimson 1835).



Figure 7.3: Scarificator (Wellcome Library, London c. 1800).

Cauterization usually involved the application of red-hot irons along the vertebral column, similar to cupping, but doctors in India are reported to have treated cholera by applying a hot iron to the patient's heel, held there until the patient cried out; "the iron was then removed and the heel was beaten with a slipper to prevent the appearance of blisters" (Howard Jones 1972:382). Undoubtedly, the most horrific medical remedies for cholera-induced diarrhea include the injection of air or cold water into the patient's rectum, or "plugging the anus with a tapering cork, smooth and oiled, and secured . . . with a T bandage"

(Howard-Jones 1972:384). Other notable treatments include: rocking the patient on his or her back as if on a see-saw from 80 to 100 times per minute (Peters et al. 1885), and immersing the patient into an 'acid bath' to stimulate blood flow

(Howard Jones 1972:383). The vast majority of these treatment methods were impractical and unsuccessful, to say the least.

In cases where a medical practitioner was not immediately available to

attend to a patient, doctors of the 19th century published recommended procedures for treating the patient at home. The

"The doctor comes with free good will But ne'er forgets his calomel" -19th century folk-saying (Coulter 1973).

following example is typical of what many 19th-century doctors advised in the treatment of a choleraic adult in the home (Stimson 1835):

- 1) Draw from the patient a minimum of three half pints of blood
- 2) Give 5 grains of calomel with 5 grains of capsicum; repeat once after half an hour until the patient has been given 3 doses
- 3) Between doses give 20 to 30 drops of peppermint, cloves, or origanum in hot ginger or allspice tea

If the patient's condition progresses:

- 1) While rubbing the patient with hot flannel clothes, continuously draw blood until it flows in a full stream, bright red in colour
- 2) Give 10 grains of calomel, 10 grains of capsicum, and 40 drops of oil or peppermint

With this particular recommendation, the assumed effectiveness of bloodletting is emphasised with the advice that if one at first fails to extract blood from the victim, one should "make a large opening in the vein, even make an orifice in each arm..." (Stimson 1835:23). The use of calomel is ubiquitous in 19^{th} -century cholera remedies and was used as a purgative for much of the early 19^{th} century in treating an array of illnesses; however, calomel is a mercury compound that is highly toxic if consumed in excess. Origanum and capsicum are herbs; capsicum is derived from red pepper or chili pepper – an herbal remedy still used in naturopathic medicines to treat indigestion (Coulter 1973; Howard-Jones 1972).

While records of cholera treatments in Hamilton during the early 19th century are not extensive, there is certainly evidence to suggest that similar treatment methods were being employed within the city (Stott 1995). Many doctors emigrated from Britain to Hamilton and surrounding areas by the 1850s; James Hamilton and John Duff Macdonald came with the military, while many

other emigrants such as George Ryall were attracted by the land. Communications among doctors in Hamilton were poor as they were living on small plots across vast stretches of land, and most practiced medicine and made their own medical instruments in the home (Stott 1995). Hamilton doctors did not begin to assemble

Mercury was used in the treatment of infectious disease well into the 19th century. "Quicksilver," which was another name for this metal, was the basis for the term "quack" – used to represent unethical or incompetent physicians (Greenspan 2012). regularly until the 1850s, the Hamilton City Hospital was not permanently established until 1853, and the Hamilton Medical and Surgical Society did not officially form until 1863. Consequently, a variety of radical medical treatments were used throughout the early 19th century to treat

cholera since there were no set standards for treating infectious diseases; patients were faced with few alternatives to seeing a licensed practitioner for medical aid (Stott 1995).

Bloodletting and other drastic techniques dwindled in popularity by the middle of the 19th century in Europe and North America and were rarely used in the treatment of cholera during the 1854 epidemic in Hamilton (Bennion 1979; Stott 1995). Medical practitioners may attribute the decrease of radical treatment methods to advancements in knowledge regarding the etiology of disease, but in truth the causes of cholera were still greatly misunderstood. Medical schools taught rational thinking such as the need to purge patients of their illnesses, and allowed doctors to gain sufficient surgical experience. However, human physiology and bacterial infections were still unfamiliar concepts (Stott 1995). As an alternative to improved conceptualizations of disease, I attribute the abandonment of orthodox treatments and the adoption of unorthodox homeopathic treatment methods to the phenomenon of social representation. Citizens of Hamilton collectively initiated the shift in prevalent cholera remedies from orthodox to unorthodox in order to diminish fears associated with harsh medical treatments and restore hope of survival; remedies that were less likely to expedite imminent death became a logical alternative to the former.

Homeopaths or Sociopaths?

The growing popularity of homeopathic medicine in the 19th century can be largely attributed to the miscomprehension of infectious disease causation at the

time (Coulter 1973; Stott 1995). Not knowing the etiology of disease resulted, at the start of the century, in the use of many ineffective and dangerous treatments by medical practitioners who resorted to extreme measures to assert their authority and prove themselves capable of curing catastrophic diseases. Homeopathic medicine became fashionable by the middle of the 19th century because homeopaths offered safer treatment methods that, although not necessarily more effective, were certainly less frightening and less harmful than traditional treatments (Coulter 1973; Patterson 1975). Many patients who underwent the treatment of medical doctors died as a result of the treatment methods, rather than from the disease itself. The public grew increasingly intolerant of both hospitals and medical practitioners. Citizens lost confidence in the legitimacy of treatment methods, displeased with the cost of treatments and the overall unsympathetic nature of orthodox medical practices (Coulter 1973; Patterson 1975; Stott 1995). Thus, treatment methods became preferred based on how drastic they were relative to other methods; if we assume, for instance, that both orthodox and unorthodox treatment methods were equally ineffective, the methods that did not involve torturous procedures that almost certainly resulted in death, were sensibly avoided.

During the mid-19th century in Canada and the United States, homeopathic remedies were regularly advertised in newspapers and widely circulated throughout cities such as Hamilton. Within the City of Hamilton, homeopathic remedies, taken in pill or liquid form, soon came to be favoured over the prospect of being scorched with hot irons or bled to death. However, medical practitioners and the Board of Health did not initially condone unorthodox treatment methods, evident in numerous contradictory newspaper articles and other publications that warn against "quack" doctors and the dangers of administering their recommended treatments (Patterson 1957; Stott 1995). For instance, there is a plethora of contradictory literature regarding the beneficial versus catastrophic effects of alcohol consumption to treat cholera (Hamilton Herald 1854b,c; New York Times 1852b). I suggest, however, that a collective preference for homeopathic remedies during the mid-19th century cholera epidemics resulted in the Board of Health eventually accepting many unorthodox treatment methods and advertising them as legitimate.

At this time, numerous concoctions to treat cholera became available to purchase or prepare in the home. Most common were stimulants such as calomel;

emetics such as mustard; cathartics such as sulphuric ether; and narcotics such as opium (Coulter 1973; The New York Times 1852a; The Quebec Gazette 1854; Stimson 1835). Stimulants were used to excite the heart and clear blocked vessels; emetics were used to evacuate sickness from the bowels; cathartics were used to induce nausea; and narcotics were used to reduce abdominal spasms and relieve pain (Coulter 1973; Stimson 1835). If an

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individual were to experience a slight bought of diarrhea, for instance, he or she would be advised to consume a concoction of castor oil, salts, sulphuric acid, and opium. Alternatively, one might consume 20 or 30 grains of calomel and two grains of opium followed by the application of a mustard plaster to the stomach (Peters et al. 1885). Some homeopathic recipes were even more exotic – "Huxham's Tincture" was "prepared by infusing in three half pints of spirits or whiskey, 2 ounces of Peruvian Bark, 1 ounce of dried Orange Peel and half an ounce of Virg[inia] Snake Root" (Stimson 1835:36).

In addition to advertising homeopathic remedies in newspapers, unorthodox practitioners frequently took to the streets to promote their products. For example, in 1832 the Montreal Herald reported the appearance of an extraordinary stranger in the city during the midst of the cholera epidemic. This man, named Stephen Ayres, advertised himself as the "Cholera Doctor" and promoted an oral antidote of "two spoonsful of charcoal, two spoonsful of lard, [and] two spoonsful of maple sugar" (Patterson 1957:178). Citizens were instructed to mix these ingredients together and after one half hour consume some spruce beer, chocolate, and a piece of dry bread.

Salt of the Earth

Medical understandings today suggest that the treatment procedures undertaken by licensed medical practitioners in the 19th century, such as bloodletting and cauterization, were unsuccessful in treating cholera. The only consistently successful treatment in use at present is oral rehydration therapy (ORT). ORT is

used to treat diarrheal diseases worldwide, simply by replacing water, salt and sugars in cholera patients (Farthing 1994; World Health Organization 2006). For example, a homemade ORT recipe consists of six teaspoons of sugar, half a teaspoon of salt, and one litre of clean drinking water (Wadhwani 2012). Notably, some of the unorthodox treatment methods recommended in the mid-19th century are comparable to ORT. Although the etiology of cholera was unknown at the time, and 19th-century remedies were usually made up of an unfavourable combination of ingredients, the rare practitioner did come close to replicating current ORT recipes. For example, in 1832 a doctor named James Sampson from Kingston, Ontario proposed "injecting into the veins of a patient a fluid comprised of two ounces of sea salt, two scruples of subcarbonate of soda, whites of three eggs, [and] five pounds of water" (Patterson 1957:178). Labelled at the time as a "quack" remedy, the combination of salt and water would likely have been moderately effective in treating cholera patients (Coulter 1973; Farthing 1994). The discovery of effective rehydration via the intravenous injection of salts and water into cholera patients was later recognized in the early 20th century (Farthing 1994).

A number of medical reports written on 19th-century homeopathy suggest that homeopaths were successful in treating cholera (Bradford *in* Ullman 2012; Coulter 1973; Peters et al. 1885). For instance, following the 1849 cholera epidemic, homeopathic doctors in Cincinnati, Ohio claimed that in over 1000 cases of cholera only three percent of patients died. By comparison, the report stated that patients treated for cholera by licensed medical practitioners died approximately 40 to 70 percent of the time (Bradford *in* Ullman 2012). Additionally, in a treatise on *Asiatic Cholera*, Peters et al. (1885) illustrate the percentage of treatment failure among 800 patients throughout Scotland and England following the 1854 cholera epidemic. The treatment methods reported by Peters et al. (1885) include the use of a variety of remedies such as opium, calomel, acids, and plant extracts. The authors report a success rate of over 95 percent with the combination of sulphuric acid and opium. In fact, combinations of opium with a variety of other ingredients such as calcium carbonate and lead acetate are all suggested to have been highly successful.

While many of these reports seem convincing, it is important to be skeptical of the information presented and consider the broader context of 19^{th} -century medicine. By the middle of the 19^{th} century, homeopaths and medical doctors were locked in a battle over the legitimacy of their treatment practices. 59

Inevitably, medical reports from both parties may have been embellished to gain legitimacy. Limited knowledge of the etiology of cholera would have also led to frequent misdiagnoses of the disease, making it even more difficult to identify the effectiveness of cholera remedies (Coulter 1973). In truth, the concoctions used by unorthodox practitioners were probably no more effective than orthodox medical treatments; instead, as I will conclude, the public's perception of effectiveness associated with safer and more practical homeopathic remedies shifted in the latter half of the century.

Don't Worry, Be Happy

A significant portion of the newspaper articles published by the Board of Health during the 19th-century cholera epidemics in Canada and the United States address the prevention of cholera, undoubtedly in an effort to avoid the prospect of treating a disease yet to be properly understood. These recommendations pertained primarily to issues of cleanliness, what to eat and drink to stay healthy, and what types of environments to avoid. This approach to cholera prevention is relevant to the discussion of homeopathic remedies, as preventative advice was, in a sense, homeopathic in nature; in other words, prevention recommendations promoted the natural attainment of good-health without the use of extreme measures. Thus, prevention and homeopathy can be constructively discussed in the same context.

Recommendations for the prevention of cholera primarily concern the nature of the environment, with a particular emphasis on cleanliness. Examples include the avoidance of: stagnant air, night air, and bad smells; heat, sunlight, and moisture; crowded areas; swamps; and unventilated environments (Cartwright 1854; Hamilton Herald 1831; Hamilton Herald 1854b,c; New York Times 1852a,b; Upper Canada Herald 1832). Many of these suggestions are based on the understanding of cholera as an airborne disease (see Chapter 3). Notably, the avoidance of heat and sunlight contradicts the medical practise of bloodletting; heat was to be avoided because it causes dehydration – particularly the "drying up of the bowels" (Cartwright 1854) – while doctors who practiced bloodletting were ignorant of the fact that this procedure greatly dehydrated the patient and increased the severity of the patient's condition.

Secondly, prevention advice was commonly given regarding the consumption of foods and drinks. Citizens were advised to avoid unripe fruits and

vegetables, fermented beverages, fish, garlic, pastries, and hard boiled eggs; general overeating was also opposed (Hamilton Herald 1831; Hamilton Herald 1854b,c; New York Times 1852a,b; Upper Canada Herald 1832). The rationale behind avoiding raw fruits and vegetables was that such food would result in indigestion, which is associated with some of the symptoms of cholera (New York Times 1852b). Conversely, justification for some of these recommendations are questionable; however, on the whole, the implicit tone of newspaper articles regarding prevention was that it was better to be safe than sorry. Medical practitioners and the Board of Health also imply that cholera might be a result of psychosocial factors. This is evident in the recommendations to avoid mental exhaustion, fear, anxiety, and depression. One of the most notable suggestions was, simply, to be cheerful (New York Times 1852a; Upper Canada Herald 1832).

They May Be Quacks, but You'll Relax

The evolution of treatment practices from the 1800s to the 1850s – from radically invasive surgeries to orally administered drug treatments – represents the evolution of a society coping with a disease that was greatly misunderstood. The introduction of homeopathic medicine in the latter half of the 19th century brought with it the reestablishment of order in society, a reduction in the fear of disease, and optimism for a more healthful future. With a reduction in the number of traumatic deaths resulting from horrific bleedings, injections, and cauterizations, it was the *perception* of effectiveness associated with more practical homeopathic treatments that shifted in society. Thus, with a preference for home remedies, homeopathy became recognized as legitimate by the government and Board of Health and in turn began to be used by many medical doctors. Remedies administered by the so-called "quack" doctors of the 19th century, therefore, came to be advertised as legitimate through newspapers and other media, favoured over medical practitioners for easing societal fears and causing patients the least amount of harm.

How Disease Instills Fear into a Population

Jacqueline Le

Some shunned their neighbors; others crept into the churches. They prayed for deliverance from the pestilence that walketh in darkness and from the sickness that destroyeth in the noon-day (The Hamilton Spectator, 1960:19).

During the 1832 and 1854 epidemics, what spread through Hamilton more quickly, cholera or the fear that anyone could be the next unlucky victim to contract this deadly disease? The social aspect of illness and its presence within a population can often induce an environment where panic and anxiety spread just as quickly as the disease itself.

Taking as its point of departure psychological and cultural anthropological models concerning disease and the social environment, this chapter focuses on how cholera inspired fear in the people of Hamilton who were still unaffected by illness but were left to deal with the epidemic around them. What is of interest is how the disease was portrayed in the media, specifically in prominent newspapers at the time, such as The Hamilton Spectator. Other general themes that I bring forward include how the sick were treated by others and the accompanying stigmatization that was experienced, as well as the type of language used in newspapers reporting the disease.

Self-awareness, Mortality, and Fatal Diseases

To begin understanding how and why panic can be generated so quickly when an
epidemic is taking place, it would be best to outline some theories that help frame this situation. The two models that I bring forward work together to add context to the actions and *re*actions taken by the people of Hamilton during the 19th-century cholera epidemics.

The first framework, based in socio-psychology, is termed "terror management theory". Developed by cultural anthropologist Ernest Becker, the theory argues that because humans have an innate sense for self-preservation,



Figure 8.1: On the front page of Le Pètit Journal, cholera sweeps across the globe (Le Cholèra 1912).

circumstances where death seems imminent lead to a heightened perception of fear. This is due to the fact that humans are aware of their mortality and thus, seek to protect themselves in fatal situations (Arndt et al. 1997). The need to escape Hamilton as the cholera epidemic swept through the town led people to flee areas where disease the was concentrated and seek refuge in the isolated countryside. In one such case, the panic that the 1832 epidemic of cholera was creating compelled a boy to visit his uncle who lived on the outskirts of Hamilton. Wanting to seek refuge until the epidemic was over, he was allowed to stay but soon felt "agitated" upon arrival (The

Hamilton Spectator 1885:4). It was quickly realized that the boy had contracted cholera. In the interview, the man indicated that he felt his hands were tied once he recognized his nephew displayed symptoms of the disease. "I couldn't keep him with us. What was I to do?" (The Hamilton Spectator 1885:4). The boy was told to go back to his home, all the while being urged to run faster by his uncle who followed on horseback.

As this example illustrates, physical proximity plays an important role in the mentality of survival and those who were able to remove themselves from the 63 situation did so. In studying mass behaviour during epidemics, Epstein et al. (2008) found that fleeing disease centers was a very common response and sometimes even if a disease was not confirmed within a population, the panic surrounding the possibility of contracting it was enough to cause people to leave. The countryside was seen as a safe haven away from the crowded, unsanitary conditions of the city. Not only did people try to distance themselves from the perceived centers of disease, but also from their fellow Hamiltonians. A man who worked for a newspaper during the 1854 epidemic recalled the changes that occurred around town: "Business was at a standstill. Services in the churches were suspended, and, by official proclamation, all public gatherings in theatres and halls were forbidden" (Henley 1994). It would seem that certain parts of daily life was thought to be contaminated while the home and remote countryside were seen as places that offered greater protection from cholera.

The second theory that lends itself well to the topic of this chapter is epidemic psychology, which proposes three difference phases of psycho-social epidemics. Strong (1990:251) points out that unlike physical symptoms of disease, any member of the population can become "infected" with these social "outbreaks" of panic, explanation, and action.

The first stage is the epidemic of fear that occurs as members of the population become aware of an outbreak of disease. There are many contributing factors in this stage, such as lack of information. In 19th-century Canada and elsewhere, concrete medical knowledge of the disease was still developing and thus, another factor in the first stage of epidemic psychology is the fear of contagion. As physicians were divided amongst themselves in terms of how cholera was contracted, there would have been widespread panic and notions that one could become ill through any means, such as sneezing or coming into contact with infected people (Strong 1990:252). As the examples above demonstrate, this first stage of fear can cause people to take drastic actions, such as leaving their homes to try to remove themselves from danger. In certain cases, fear of cholera clouded judgment and may have led to ill-advised decisions. In a letter written to her sister, a woman who lived through the 1832 epidemic commented on families leaving their homes in Hamilton, noting that she thought this decision to be impulsive as in the city "there is more safety within reach of good medical aid" (Powell Family Letters 1832).

Once disease has been confirmed in a population, the second stage of

epidemic psychology may begin and involves the need to explain the outbreak through reasoning and moralization. This second stage is also considered to be one of "conversion", where disease essentially becomes used as a platform for change (Strong 1990:255). An example of this can be seen in a transcript of a sermon titled *Evil in the City*. Delivered by Reverend Irvine at Knox's Church in 1854, he argued that cholera was sent by God to punish the wicked and to eliminate "social evils" (Irvine 1854:6). From a religious standpoint, the focus was not on how the disease's symptoms should be treated, but rather on *why* it was occurring in the first place. The religious reasoning behind why cholera was running rampant was because it was God's way of punishing the wicked:

When God visits our cities with commercial embarrassment, or with pestilence, or famine, or plague, or sickness, or death, are we to regard such evils are merely accidental? Ought we not the rather to seek for the provoking causes of such calamities in the drunkenness, and blasphemy, and licentiousness, and Sabbath-breaking, and dishonesty, and public and privation vice of our inhabitants? The philanthropist may attempt to prevent the prevalence of distemper; the physician may attempt to account for it or to cure it; but the Christian who reads and believes his Bible, must and will trace the judgements of God which abound among us as readily to the sins of the people (Irvine 1854:15-16).

James Lesslie, a Scottish immigrant who came to Canada during the 1832 epidemic, wrote in his journal that the outbreak of cholera was "providential". He believed that the epidemic was divine retribution that would purge the world of sinners (Raible 1992:43). Lesslie wrote that the term "cholera" may have been a derivative of the word "choler", one of the four bodily humors associated with the emotion of anger. Thus, cholera was perceived as "the hatred of God against sin" (Raible 1992:45).

In seeking to explain why the epidemics occur, questions begin to spring up and often take a moralistic tone that has less to do with the mechanics of cholera and more to do with blame and reasoning. As in the example above, Irvine's sermon implied that cholera only affected those who were not Christians. One of the major themes in the second stage of epidemic psychology is finding answers where there are none, which often results in scapegoats being marked out.

The third and final phase in Strong's epidemic psychology model involves

an epidemic of action. There were many strategies put forward to try to quell the cholera outbreaks in Hamilton, ranging from quarantines to limiting public gatherings. Following the 1854 outbreak, sanitary improvements issued by the Board of Health, such as creating the first city dump and constructing a new water system, were developed in order to prevent another epidemic (Henley 1994).

The Fear of Not Knowing

These days, we take communication systems for granted as internet searches, cell phones, and news broadcasts are easily within our reach. These all act as information gateways that allow for the transmission of information to a wide population. In examining modes of knowledge transmission in 19th-century Hamilton, primary sources, such as newspapers proved to be a valuable resource. Not only were they an important source of information for the public, but as I discuss later in this chapter, the descriptive writing and imagery used by journalists to describe cholera may have generated fear.

Although much can be said about cholera in terms of its debilitating symptoms, in the 19th century very little information was available about its actual cause or how to prevent it. Returning to the first phase of epidemic psychology, Strong (1990:251) notes that an "epidemic of suspicion" is often present in which the lack of information about a disease can lead to fear and anxiety about how it spreads, such that "the whole environment, human, animal and inanimate may be rendered potentially infectious". Indeed, the shortage of knowledge presented in newspapers can create a sense of panic, especially in cases where the reporters themselves admit that there is no new information. This can be seen in the following excerpt from an 1832 article in The Hamilton Spectator:

The Cholera: under his head we are aware our readers will look for exact information with respect to the state of this disease in this place. But it is totally out of our power to give it- no correct information can be obtained on the subject. The physicians no longer report to the Board of Health the number of cases in their practice, therefore we have to depend on hearsay and our own observation (Burkholder 1954a).

Based on factors such as the illiteracy rate in Hamilton (see Table 12.1 in Chapter 12) and diverse socioeconomic status, it should be kept in mind that many groups

may not have had access to newspapers (for instance, those who could not afford it, immigrants who did not speak English, and those who could not read). Thus, fear may have been generated in different ways. For instance, people may have relied on rumours rather than health notices printed in the paper. Their knowledge of the disease would have been much more limited than someone who had access to newspapers.

Dew (1999:383) states that journalists often rely on recognized experts to deliver information. However, as mentioned above, physicians' opinions differed on the modes of contraction and methods of treatment. The issue here is two sided. If reporters did not provide Hamilton residents with information on cholera, then this lack of knowledge would surely cause panic (as is usually the case in the first stage of epidemic psychology). On the other hand, Dew (1999:384) also points out that when media outlets question leading medical authorities, this can cause people to lose trust in those deemed to be "experts".



Figure 8.2: Alfred Rethel's engraving, titled "Death as a Cutthroat" (1847).

Disease Personified: The "Language" of Cholera in Newspapers

The use of descriptive language about cholera can be boiled down into two main categories: cholera as a metaphor for death and cholera as a personification of a living being. Both of these categories serve to dramatize the disease in a way that makes it seem even more deadly and Writing powerful. about essential language's role in human society, Strong (1990:258) notes that fear is an "unusually powerful pathology of social interaction". Through language, fear of а disease can be transmitted quickly.

As a metaphor for death, the disease takes a transcendental form, becoming elevated beyond human understanding. This notion is prevalent in artistic representations of the disease. Often times, cholera was depicted as a robed figure wielding a scythe, much like the personification of Death as the Grim Reaper (Figure 8.1). In Figure 8.2, the connection between Death and cholera is brought up again. Cholera is represented as the robed figure sitting on the far right while Death takes center stage in middle of the image. Since death is beyond human control, the allusion here is that cholera is also uncontrollable.

This imagery of cholera can also be found in written form. Writing about the earlier days of the 1832 epidemic, Harry Morris notes that "when emigrants just landed in Canada [they] were swept down by the plague as grass before the scythe" (Like The Slaughter of a Battlefield n.d.).

In the majority of cases, the disease is discussed as if it were a person. It is no longer simply an illness to be suffered, but cholera "visits" and "attacks" cities. In one letter from the London Times, the writer notes that nothing "can stop or delay its onward march" (The Hamilton Spectator 1846). In certain cases, cholera was treated like an unwanted houseguest, something that needed to be tolerated since its arrival seemed inevitable. In the same correspondence, the author writes "there is time to consider what we can do to make it as little mischievous as possible, if it should visit us, probably in a few months" (The Hamilton Spectator 1846).

Allusions to war and other militaristic descriptions were also used in conjunction with cholera, emphasizing its "attacks" on towns. In an interview, Morris recounts his memories of the disease:

The bodies were carried in carts from the place of death to the place chosen for the burial, and were then dumped into great trenches and pits such as are made on a battlefield when the wrecks left by the strife and conflict are being gathered up (Like The Slaughter of a Battlefield n.d.:64).

If Hamilton were a battlefield and cholera the intruder, then the heroes were none other than those who fought against the disease. As someone who lived through the second epidemic, a newspaperman recalled how the local residents "fought" the epidemic alongside individuals in the medical field, allied with the Sisters of St. Joseph. They were described as heroic, "courageously [visiting] stricken households to offer medicine, food and other comforts, unmindful of the dangers of

contracting the contagious disease themselves" (Henley 1994).

The theme of heroism can be seen in an article in which the reporter reminisces about the 1854 epidemic that was "depriving parents of their children and children of their parents" (The Hamilton Herald 1923). These articles often follow a narrative or plot, laying out the news more like a storyline complete with villains and fearless heroes to capture the reader's imagination. During the height of the epidemic, the writer mentions how "it was at such a time that the heroic spirit of self-sacrifice which is a peculiar characteristic of Holy Church, shone so conspicuously in the clergy and the sisters" (The Hamilton Herald 1932). Certain churches were seen as being at the forefront of the battle against cholera for they still held burial practices. The following anecdote demonstrates how the church was held in high regards by journalists:

On one occasion while visiting the west end of the city, the sisters were informed that an old couple in the vicinity had not been seen for some days. The sister went fearlessly to the house where they found the poor old man and woman dead and the bodies frightfully decomposed. Two coffins were brought into which the sisters placed the remains and with great difficulty carried them to the door of the dwelling (The Hamilton Herald 1923).

In a poem printed in the newspaper, the author compares cholera to a conqueror, noting that "from the south to the north hath the Cholera come, he came like a despot king; He hath swept the earth with a conqueror's step" (The Kingston Chronicle 1832a). Again, this imagery evokes images of war and the military. It is also important to note that the disease is sometimes referred to as "King Cholera", which again, makes allusions to the disease as a ruler and conqueror.

Stigmatization of the Sick and Deceased

In 1832, a division of the Burkholder Cemetery on Mohawk Avenue became known as the "cholera section" where people who succumbed to the disease were buried. That an entire part of a cemetery was allotted to cholera victims is indicative of the fear that persisted even after someone had passed away. Smith (1961:137) noted that after the epidemics, "fear drove the settlers to close that area over and no one has molested it since." In a newspaper article in The Hamilton Spectator, a person who lived through the epidemic had this to say about cholera: 69

Such was the terror inspired by the plague that at the gates of lonely country cemeteries bodies were left unburied, the friends of the deceased arriving after night-fall, dropping the body, then running away, leaving the people living close at hand to devise some means of burial. That means usually consisted in getting a rope on the body and dragging it to a hole which had been prepared. The people did not linger for religious rites or ceremonies (Smith 1961).

Indicative of the need to disengage themselves from the disease in every way possible, this example illustrates how citizens viewed the sick (and even those who were deceased) as being an "other", someone who, through contracting disease, was no longer considered to belong to the group (for more information on changes in burial practices, see Chapter 16).

Eichelberger (2007:1285) argues that "high levels of fear and blame during a deadly epidemic are associated with lack of information and perceived loss of control". As a result, it becomes easy for stigmatization to occur, especially if disease is prevalent in one area of town or within a specific division of the population. Stigma was often attached to groups believed to be at the highest risk of developing the disease. Lesslie commented in his journal on how he would stay in town rather than flee, but would try to distance himself from cholera since he thought the immigrants were the cause of the disease (Raible 1992:46). In one account, the arrival of immigrant ships to Hamilton evoked actions that were less than welcoming:

The first schooner met a hostile reception. Armed with pitchforks and clubs, terrified citizens refused to allow the vessel to dock or its anguished passengers to land. Even the sight of the pale listless children clinging to their mothers' skirts moved only one individual (Campbell 1996).

Nonbelievers were stigmatized and viewed as sinners. As noted earlier, individuals who became sick were seen as being punished by God. Another aspect of stigmatization can occur when the disease takes a political or historical tone (Eichelberger 2007:1285). Here, cholera became a metaphor for social inequalities and ethnic backgrounds and was used to single certain groups as being more prone to infection (see the next chapter on blame and "othering" of immigrants).

A New Plague in Town: Fear

Not everyone in Hamilton contracted cholera during the 1832 and 1854 epidemics, but just how many of them were "infected" with fear and panic? In studying disease from a psychosocial standpoint, we stand to gain more information on the cultural anxiety that was created by cholera. The development and consequent spread of fear in a population can shed light on how disease was understood from a cultural standpoint, rather than from a purely biological perspective. Given that communication systems with which we are familiar today were not available during this period, it is interesting to see how a lack of understanding of the disease played a role in its interpretation. Whether cholera was seen as divine judgment or an "immigrant's disease", one feature remained constant: fear of anyone who contracted the disease and anxiety that anyone could be the next unlucky victim. The terror engendered by cholera can be summed up as follows:

All kinds of disparate but corrosive effects may occur: friends, family and neighbours may be feared - and strangers above all; the sick may be left uncared for; those felt to be carriers may be shunned or persecuted; those without the disease may nonetheless fear they have got it; fierce moral controversies may sweep across a society; converts may turn aside from their old daily routines to preach a new gospel of salvation; governments may panic. For a moment at least, the world may be turned upside down (Strong 1990:255).

9

The Blame Game

Andrew Turner

The peril was everywhere. No longer could cholera be dismissed as a disease of the emigrant, the intemperate, or the impoverished. Everyone was in danger (Raible 1992:48).

When the cholera epidemics of 1832 and 1854 struck Hamilton, one of the questions foremost on people's minds was why here? Why now? It did not take long to ascribe blame for introducing the epidemic: immigrants, especially the Irish, were targeted. The poor were also held responsible for the crises. These attitudes resulted in further marginalization of both groups which only exacerbated the spread of cholera. In many ways the social responses to cholera were as harmful to the inhabitants of the city as the pathogen itself. In this chapter, I explore the social circumstances that resulted in some social groups being blamed for the epidemics.

Thinking 19th-Century Style

Primary sources are essential for positioning oneself in the mindset of the people who experienced the ravaging effects of Hamilton's cholera epidemics. Many newspaper articles reflect how quickly the literate middle-class citizens made cholera a disease of the poor. Charles Durand, who studied law in Hamilton, recalls hearing "of the poor people dying in dozens—some young and some old. I never had any attack and never feared it" (The Hamilton Spectator 1887).

Personal communications, from letters and diaries to interviews, are also invaluable sources for accessing the thought processes of people experiencing the epidemics. They allow us to see how the individual's explanations for the crisis are formed and expressed.

Given the fragile medium of newspapers and personal communications (some more than a century old) it is sometimes necessary to find these thoughts preserved in secondary sources. One example of this is the collection of interviews transcribed from the Hamilton Herald, attributed provisionally to one "Jaques" (The Hamilton Herald 1903). These accounts contain a wealth of personalized, humanizing accounts of the second cholera epidemic. The original context has been lost though, due to an incomplete transcription. Lost in the transcription is its position in the paper (its pages and section) as well as the true identity of the author. While it retains good quality information, giving credit and properly citing the source is more difficult.

"Othering" Separates "Us" from "Them"

In the context of epidemics, "othering" is a process whereby "disease origins and risk of infection are explained through moralizing metaphors of cultural superiority so as to locate risk and responsibility among marginalized populations" (Eichelberger 2007:1285). It is common for this process of "othering" to be directed toward people of lower socioeconomic status as they already exist in a marginalized position, and this was the case in Hamilton. In the 19th century a great deal of Hamilton's populace would have been poor ordinary working people; farmers and labourers engaged either manual labour such as canal digging and construction, or factory labour in the railway and metal shops (Kristofferson 1998). I should step back a moment here to elaborate on what I mean by "marginalized position". Much of Hamilton's population were on the margins of society because they lacked power, and by extension, influence. Also, they were socially marginal and stigmatized because they represented the bottom of a class-stratified, capitalist society. Immigrants constituted another marginal population who were easy to blame, given their association with the introduction of cholera. They presented an easy target to define as culturally inferior given the cultural distinctions (differences in speech, religion, dress) that could be exploited. These attitudes are exemplified by Lesslie, who "tried psychologically to distance himself from the disease. At first he believed victims were only among 73

the arriving immigrants" (Raible 1992:46). When residents succumbed to the illness he attributed it to their lifestyles, remarking that an African-American victim had failed to appease God and a poor man owed it to his intemperate lifestyle (Raible 1992:46).

There was a kernel of truth in the association made between immigrants and cholera. As of 1832, cholera had been making its way through the British Empire, moving along trade and transportation routes from East to West (see Chapter 2). As one of the last colonies exposed to cholera, its initial entry into Canada surely occurred with immigrants from areas of the British Empire where cholera was endemic (Godfrey 1968). Even though immigrants may have introduced the pathogen, this in and of itself can not cause an epidemic. A specific suite of conditions (lack of sanitation, feces contaminated water) must exist for cholera to reach epidemic proportions. These conditions, along with social attitudes that marginalized the poor and immigrants, were present in Hamilton.

The Marginalized Become Even More So

Groups that are already marginalized by society (those in low socioeconomic groups, and immigrants; especially Irish immigrants in this case) are assigned blame and further marginalized. This then turns into a self-fulfilling prophecy in which those who are disadvantaged are further disadvantaged by this process. In turn they are unable to seek treatment or better their conditions and cholera proliferates. This certainly occurred in Hamilton, as evidenced by the fact that "the largest number of deaths from cholera occurred in Corktown and down in the outlying districts near the bay..." (The Hamilton Spectator 1892), the parts of the city in which the Irish and poor neighbourhoods were located.

Indeed it was accepted that "where poverty dwells, there can be found the seeds of disease" (The Hamilton Spectator 1892). Cholera does indeed need a specific environment in which to flourish, one where water is contaminated by human feces containing the vibrio; crowding and lack of sanitation are associated with poverty. One needs only to look to Northeast Brazil's battle with cholera in the 1990s for a current illustration of this. Here similar "othering" and stigmatizing language ("filthy, dirty person" and "stray mutt dog") were employed to equate cholera with the poor. These social constructs were used to punish and blame the poor and consequently inhibit those at greatest risk of

contracting and dying from the disease from seeking treatment at an early enough time to make it effective (Nations and Monte 1996). Unfortunately this scenario describes slums all over the world and throughout history, whenever access to clean water and an effective waste management system is absent (Rao 1992).



While efforts were made by officials to remove filth in Hamilton, it is important to keep in mind "boards of health are like many house servants, they keep everything on the surface bright and clean, but if you want to find the filth the dark corners must be searched" (The Hamilton Spectator 1892). There was likely little motivation to enter the domain of the poor who had been branded as agents of the disease, dehumanizing and separating *them* from what happened to *us*. This is evident in the way in which

The town's authorities were trying to act, but like Lesslie they tended to see the problem as somehow *others*', not theirs. They tried to punish: "all drunkards found on the streets taken up and put either in Jail or the Stocks." They tried to cleanse: "Houses occupied by poor persons cleaned & washed" (Raible 1992: 47).

The same trepidation and "othering" that impeded action by health officials was adopted by medical professionals as well. Even during the second epidemic of 1854 the Board was forced to arrange for a doctor to deal exclusively with the poor because of "the want of Medical attendance on the poor" (Hamilton Spectator 1854). One can infer by 'the want of Medical attendance' that very little had been occurring previously. The poor not only lacked medical attention and measure for preventing cholera, but they also lacked the resources to better their conditions. This process of "othering" and isolating the poor both socially and institutionally served to degrade their living conditions even more drastically. This, in turn, encouraged the prevalence of cholera. This is illustrated by the way in which "city government delayed action in cleaning up the alleys and slums till after the disease had gained full headway" (The Hamilton Spectator 1892).

A similar cyclical process can be seen with regard to the immigrants as well. Seemingly doomed from the time of their departure, cholera "spread like wildfire in the crowded and unsanitary holds" of the ships (Evans 1970:98). The arrival of immigration vessels was often met with fear by the local populace, and immigrants remaining in Hamilton and not travelling onward were often isolated together in crude shelters. A sister of St. Joseph recalls "on one occasion fifty or more immigrants were sheltered at the orphanage due to lack of accommodation space. Sheds were also prepared at the back of the hospital [St. Joseph's Hospital] as a place of refuge" (Hamilton Herald 1903). This ensured that those who had escaped sickness on the ships were kept in cholera-promoting conditions: overcrowded sheds with little thought to sanitation or clean water. Even after the disease subsided, it was difficult to convince residents to take immigrants in. Thus, immigrants became ghettoized in marginal shantytowns such as Corktown and Hamilton's north end where "crude shelters were built for them on the bay shore" (Evans 1970:98), isolated from middle class and affluent residents. Their

living conditions were similar if not at times worse than those experienced by the poorest people in Hamilton.

The Irish were an exceptionally stigmatized immigrant group and they were especially hard hit by cholera. To some extent, this is a reflection of the position of the Irish within the context of the British Empire. Like Canada, India and many other modern nations, Ireland was a colony of the British Empire. A stereotype of the Irish prevailed among the British, who saw them as "carefree, disorderly, immoral casual labour" (Lustgarten 1977:300). Modern studies also assert a marginalizing social attitude towards the Irish; a social and institutional association between the Orient and the Irish concocted by the British Empire for the purposes of colonial exploitation and administration, and general "othering" (Jeffrey 1996; Lennon 2008).



As previously stated, the largest numbers of deaths outside the outlying districts around the bay used to shelter immigrants was the largely Irish neighbourhood of Corktown (The Hamilton Spectator 1892). It is likely that the conditions common amongst other immigrants and the poor reached their zenith in Corktown. As the epitome of a marginal place, little concern would have been given to cleaning up living conditions, preventing overcrowding and removing waste, or providing immediate and high quality medical treatment. Even the dead would be largely ignored, as a great deal of the Irish deaths would have been interred in Catholic cemeteries and perhaps did not received the same media coverage or memorialization as Protestants (see also Chapter 16). There may also be an inherent bias in the preservation of parish records in archives, given the availability of Anglican records in the McMaster Archives and no evidence of burial records for Catholics.

Social Solutions

In Hamilton, as in many other parts of the globe "individuals and groups may project the risk of infection and death onto an 'Other' in order to reduce the powerlessness experienced during a deadly epidemic" (Eichelberger 2007:1285). Regrettably this process reveals social attitudes of blame, discrimination and marginalization and these social factors can wreak greater havoc than the disease itself.

By "othering" those who already exist on the edges of social and physical space and in substandard conditions that encourage epidemics, a self-fulfilling prophecy is created whereby pre-existing conditions are exacerbated, increasing the prevalence of the disease. To reverse this process, the immediate and comprehensive attention must be given to these sectors of society, giving power to those who experience the worst effects of an epidemic.

Virulence Victims in Victorian Hamilton

Jodi E. Smillie

Mr. George Little, who had just married his young wife before leaving Scotland, and who seemed to be in perfect health when he returned from the mournful rite performed to the remains of his deceased sister, was taken sick at ten o'clock that night and died at two o'clock next morning. The townspeople, though very kind, became alarmed, and were fully aware of the danger of coming in contact with us (Houghton 2010:19).

Cholera moved into Hamilton and Canada as a whole with ferocity and no mercy. In a letter written to his sister by Thomas Sheldrick, a resident of Dundas, Sheldrick explains how he often was asked to make a coffin for an individual even before they had actually died as it was generally only a matter of time from the onset of cholera until death arrived (Sheldrick 1834). This chapter considers who contracted cholera and whether or not this illness targeted the periphery of society (the poor and immigrants) alone, or if the middle class and rich residents of Hamilton were just as susceptible to cholera as their less affluent brethren. I also examine whether cholera targeted to a greater extent the very young and elderly residents compared to the adolescent/adult population. I look at whether or not immigrants were more likely to contract this illness than the resident population.

Who Was Pushing Up Daisies?

On July 12, 1832 the great killer known as cholera reached Hamilton. The first Hamiltonians to succumb to cholera were the local jailer and his wife. In an attempt to stop cholera from taking root in the unsanitary and unkempt jail, all but one criminal were released under the supervision of prominent citizens (Burkholder b). Cholera claimed one in every twenty people during the 1832 epidemics in both Hamilton and its larger sister city, Toronto. Moreover, Burkholder cites an un-named doctor's report dated from August of that same year, in which he predicted that on average about four patients would be diagnosed with cholera per day (Burkholder a). Recalling the 1854 epidemic in Hamilton, those young men tasked with distributing The Hamilton Spectator recounted that there were days in which between seventy two to forty people died (Henley 1994). Burkholder (b) estimates that in 1832 and 1854 one hundred and forty and seven hundred and fifty citizens of Hamilton, respectively, died from cholera. Since most deaths occurred during the summer months of June through August, and began to taper off in the fall, cholera was considered to be a summer sickness (Burkholder a; Church of Ascension). Johns (this volume, Chapter 6) explains the epidemic waves in which cholera was present in the city during the two major outbreaks of 1832 and 1854.

In a pamphlet produced in Montreal in the late 19th century, the authors recount the overall effects of all of the epidemics of cholera on Upper Canada. These pamphlets discuss how cholera, although assumed to be directly related to the accumulation of stagnant water and waste in poor areas of town, was also found in the "clean and upscale" neighbourhoods in Hamilton and Montreal (McConnell 1885). In an attempt to forestall panic by the population of Hamilton at large, the Health Board Secretary stated however "the disease is confined almost entirely to the filthy, debilitated and intemperate people who have no care for themselves and whom it is impossible either to persuade or threaten into the adoption of precautionary measures" (Elliot 1996). Henley (1994) recounts how even though most of the victims were newly settled immigrants, there was not one section of the city that cholera did not touch. It is difficult to determine patterns of cholera deaths by age and socioeconomic status because the only evidence available comes from parish burial records. Occupations are even less likely to be documented. Burial registers from Christ's Church Cathedral (1853-1854) list mostly blue collar jobs, such as carpenters, tailors, and laborers. Interesting to 81

note, Sir Allan MacNab of Dundurn Castle, the first premier of Canada West, contracted and died from cholera (Christ's Church Cathedral 1853-1853). This shows that even the most powerful members of Canadian society were not immune to this deadly disease.



The View from Parish Registers

Figure 10.1 illustrates the age distribution of deaths due to cholera collected from parish registries for Christ's Church Cathedral and the Church of the Ascension, as well as internment records from the Hamilton Municipal Cemetery. In order improve the sample size so that patterns could be studied, I amalgamated the

burial information from the two epidemics in 1832 and 1854. Only deaths listed as due to "cholera" were used. I did not use deaths attributed to diarrhea simply because I could not be sure whether they were undiagnosed cases of cholera, or simply a severe upset stomach. Most deaths occurred among people between the ages of twenty one and forty with the most deaths occurring in the twenty to thirty age range. It is important to note that this pattern was observed in both men and women. This age range constituted the backbone of the work force, people who were out in the community and susceptible to contagion. Moreover, people in this age range would most likely have had to care for sick children and older parents, and therefore would have had a greater possibility of contracting cholera.

As expected, Figure 10.1 shows a substantial amount of deaths of children between the ages of one to ten years of age. With an immature immune system and a tendency to put anything in their mouths, it is no wonder that so many young children perished from cholera. It is interesting to note that there is no substantial difference between the number of men and women who perished from cholera as one might have expected. Relatively few people over the age of 60 died from cholera, even though they may have been viewed as the frail members of the population. One might assume that there were relatively few elderly people living in Hamilton in the 19th century and this is therefore reflected in the lower number of deaths in this age group in Figure 10.1. The eldest person recorded as having perished from cholera was a 75-year-old woman.

In terms of occupations, most registries did not list the deceased's job and only a few of those listed were legible. For women, "wife" and "governess" were the only listings for occupation. Men, on the other hand, were listed with bluecollar occupations, such as tailor, bookkeeper, carpenter, and clerk. These are occupations in which the person would be in contact with numerous people each day and thus would have been exposed frequently to the cholera bacterium. Occupational hazards take on a whole new meaning during the cholera epidemics. Burkholder (a) explains that some occupations were at one point considered to be the sources of cholera. Because butchers were ordered to wash down their shops with lime (the most current cure at the time), they must therefore have been the perpetrators! The Gore District Board of Health ruled, moreover, that no animal could be slaughtered within the city because reports of cholera cases around slaughterhouses were becoming more frequent (Burkholder a).

Figure 10.2 illustrates the origins of 236 people buried in the Hamilton Municipal Cemetery during the cholera epidemic of 1832. The first death due to 83

cholera in the 1854 epidemic in Hamilton was a German immigrant who died shortly after his arrival in the city on June 26. The next death did not come about until July 2 when another German immigrant died shortly after contracting the disease. People born in England made up 72 (30 percent) of the cholera deaths. Scottish immigrants came in second with 61 people (25 percent).



Forty one of the people who died from cholera (17 percent) were native to Canada. Godfrey (1968) discusses how the Irish potato famine drove hundreds of Irish immigrants to Canada and yet Ireland came in fourth with thirty three (13 percent) of the burials. The small number of Irish people being buried in this cemetery could be due to the fact that they were perhaps buried elsewhere, for example in a Catholic cemetery. Two conclusions can be drawn from the pie chart in Figure 10.2. First, one can deduce that if these people were recent immigrants to Hamilton the unsanitary and crowded ships were prime vectors for the distribution of cholera. Second, if these people were immigrants who had been

living in Hamilton for a number of years prior to the outbreak, other factors (such as local living conditions or unemployment) need to be considered.

The true number of people who actually succumbed to cholera may never be known. Burkholder (a) cites a medical report from August 1832 which states "the physicians no longer report to the Board of Health the number of cases in their practice, therefore we have to depend on hearsay and our own observation". This may have been due to the enormous amount of sick patients needing the doctor's care that it was impossible to document all of the cases, or, more likely a lack of recording due to the stigma attached to those who became sick with an illness that was attributed to the poor and unrighteous. More simply put, doctors may not have recorded cholera cases because they (or their patients) did not want to disclose that cholera had infected their family or neighbourhood.

Scurvy Wasn't the Only Sickness on Board

Godfrey states that the ships coming into North America "carried the chief vector of cholera - the emigrant" (1968:12). Many were coming to Canada from countries where cholera was endemic: the overcrowded and unsanitary shipboard conditions endured on the multiple week journey across the ocean created the conditions in which cholera could run rampant. Furthermore, the unhygienic conditions immigrants faced upon landing served to further its spread (Godfrey 1968:13). The Board of Health discusses how the areas hit hardest by cholera were those in which immigrants first landed in Hamilton (Burkholder a). Church records within a publication by the Head-of-the-lake Historical Society provide quantitative accounts for immigrants buried in Christ's Church cemetery "from June 7, 1845 to January 3, 1847 there were 150 burials, and the majority of them were emigrants..." (1967). Godfrey suspects that cholera would most likely have come to Canada in any event: "it is not known whether the attack would have been as widespread, or as malignant" (1968:13). Even though the general public was not knowledgeable about the intricacies of cholera in terms of how it spread between people, they did understand that immigrants coming from abroad brought the disease to Canada (Burkholder a). During the 1832 and 1854 epidemics in Hamilton, immigration was booming (Burkholder a). As explained by Turner (Chapter 9, this volume), thousand of immigrants continued to flock to Canada and the United States even with the threat of cholera looming in the background.

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As stated previously, many physicians either did not report all of the cases of cholera they came across, or they misdiagnosed the disease. This was especially the case for immigrants because many physicians did not readily diagnose them to be suffering from cholera, but rather from complete physical exhaustion from the strenuous journey across the ocean.

Time Flies in the Archives

This chapter utilizes quantitative analysis of burial records. Since a system of death registration was not implemented until 1869 (Library and Archives Canada), I focused on extracting age, occupation, country of origin, and of course cause of death, from the burial records kept by the local parish priests from Christ's Church Cathedral, Church of the Ascension and Hamilton Municipal Cemetery. I also looked at diary accounts and newspaper articles to develop a comprehensive view of who was succumbing to cholera. As indicted above, not all physicians were willing to document all of their diagnosed cases of cholera, by looking at first hand accounts I was able to decipher a much more accurate account of whom exactly the victims were.

Unfortunately, problems occurred all too often during my research. Not every record has all of the information I was seeking. Although most burial records state the age of the individual, their country of origin and occupation are almost always left out. Moreover, even the cause of death information was not as straightforward as one might expect. For example, does "diarrhea" equate to cholera or did it just really refer to a bad stomach bug? Unfortunately, I could not use over 100 burial records from the time period because the cause of death was not given. Quite a few parish registries only specified the name of the individual and where they were buried. The lack of records for cholera can also tell us something. By not recording every death caused by cholera, the clergyman in charge of documenting interments in his parish cemetery may have been attempting to dampen the fear created when the public became aware of a new cholera death. It may also show that people were not divulging the true nature of their loved one's death to avoid the stigma attached to cholera.

Was Cholera in Hamilton Unique?

In August 1854 The Hamilton Spectator ran a story about the spread of cholera to Barbados. As was the case in Hamilton, the disease had no mercy in who it struck in terms of sex, age, or class. However, the city of Bridgetown was said to have suffered over four thousand deaths in cholera's six week run on the island.

Towns around Hamilton also saw cases of cholera appear at their doorsteps. Conway (1899) describes how the epidemic in the city of Galt may actually have been the worst outbreak in Canada. Many people had flocked to Galt from neighbouring communities to catch a glimpse of the 'wild beast menagerie exhibit' on an exceedingly hot Monday. One of the showmen had come to Galt already stricken with cholera, and by Thursday people had begun to die. Guelph on the other hand, remained relatively unscathed by cholera (Conway 1899). The city of York had a cholera death rate of one person in ten which "today would be some two hundred thousand Toronto deaths" (Raible 1992).

Concluding Thoughts

This chapter illustrates the ferocity with which cholera attacked Hamilton in terms of its choice of victims: no one was safe from it. Cholera moved through every age range, but took an especially high toll among people in the prime of life. Other cities such as Galt and Bridgetown were hit harder by cholera, while Toronto showed similarities to the experience in Hamilton. Cholera, no matter which city or country it struck, did not show a preference in terms of who it infected. In this particular area, Hamilton was just like every other city that cholera overtook. In terms of the perception that immigrants succumbed to cholera more readily than the native population, there is no information to back this statement up. As shown in Figure 10.2, people born in Canada placed second in terms of cholera burials in the Hamilton Municipal Cemetery. Furthermore, someone listed as having been born outside of Canada, could have immigrated to Canada much earlier in their life. They may not have been part of the new wave of immigrants to Hamilton who brought cholera with them from abroad.

Even though cholera was believed to be a disease of filth and the result of a sinful lifestyle, it infected the pious just as often as the sinners (Godfrey 1968). Burkholder (b) notes that, the disease was able to infect a person in the morning

and for them to be dead by dinner. Since no one was safe from this disease, we have cholera to thank for bringing about a public water system in Hamilton.

11

On the Edge of Death: Cholera's Impact on the Surrounding Towns and Hamlets

Mackenzie Armstrong

There have been several deaths at Dundas and Flamborough West since our last publication. We have heard of five at the former place (Hamilton Free Press 1854:3).

While Hamilton was a major port of entrance for cholera, many of the surrounding towns that make up the City of Hamilton today existed during this period. Though the central part of Hamilton has received the most attention, it would be wrong to discuss Hamilton without also taking into consideration how other towns in close proximity managed to avoid or and survive the cholera outbreaks. Many of the same immigrants coming through Hamilton and the quarantine zone settled the surrounding lands, which were still relatively untouched land at this point (see Figure 11.1). According to statistics published just prior to the cholera outbreak in the Kingston Chronicle, in 1832, Hamilton only had a population of 800 inhabitants (Kingston Chronicle 1832b:5). However, by the 1850s, several thousand residents lived in Hamilton even with the death of an estimated one quarter to one half of Hamilton's population depending on the source.



While undoubtedly the rural towns and hamlets were impacted by the cholera outbreak in Hamilton, the lack of surviving material makes it difficult to determine how widespread the disease may have been. It is difficult to determine whether the lack of documentation of cholera deaths is due to the stigmatization of the disease or the result of lower numbers of cholera cases on the periphery of Hamilton. To deal with such a large topic, the information has been divided into the localized areas of Ancaster, Dundas, Flamborough, Stoney Creek, Glanbrook, and the Six Nations Reserve/Brant County, similar to the districts represented in Figure 11.1. Through the examination of evidence for the cholera outbreak mentioned in letters, death records, and documents as well as the remembrance of the outbreaks among residents and historical societies, we may be able to determine if cholera was an event that had as much impact in its shaping of these rural towns as it did on Hamilton.

Ancaster

Ancaster was founded in 1793 by United Empire Loyalists who had fled the United States, and by 1832 it was an established town with its own doctor and a sizeable population (Ancaster Township Historical Society 1973:8). Unfortunately, the records leading up to and during the first cholera epidemic are relatively scarce in Ancaster. By piecing together several bits and pieces, including the records of Rev. John Miller of St. John's Ancaster, the information distributed by the Ancaster Board of Health, and local rumours of cholera cemeteries existing near Zion Hill Cemetery and the Cooley/Hatt Cemetery, we can begin to see how cholera impacted Ancaster, and what was done to prevent its spread.

May 16, 1832 was designated a general feast day in Upper Canada for the purpose of praying for deliverance from the "dreaded scourge" of Cholera Morbus (Ancaster Township Historical Society 1973:43) This was recorded in one of the few surviving documents from Ancaster during this time, the records of St. John's Anglican Church, written by Rev. John Miller, who began preaching in 1830 in Ancaster, Dundas, and Hamilton prior to the cholera outbreak. There are not many mentions of cholera in Rev. Miller's records as occurring outside of Hamilton, within Ancaster or Dundas, but he does take precaution to avoid parts of Hamilton during the first epidemic "Sunday, September 2nd, 1832 - Preached at Barton. N.B. - Hamilton Court-house being considered infectious from cholera, I did not use it this day'" (Miller 1830-38). In an interesting series of events, Rev. Miller calls upon his brother, Dr. James Miller, practicing within the quarantine zone in Lower Canada, to tend to Rev. Miller's illness (Miller 1830-38). It is hard not to speculate that cholera may have been the cause behind this event, as Rev. Miller does not mention anything other than being ill. Within a few weeks of arriving, Dr. Miller also became sick, and died on January 31, 1834 (Miller 1830-38). According to Rev. Miller, his brother died of Brain Fever (meningitis), though there is no mention of who provided this diagnosis; the fatally ill James Miller, the recovering, yet untrained Rev. Miller, or someone else entirely (Miller 1830-38). The only other entry of relevance to cholera is the mention of the deaths of two men as the result of cholera. "July 31st, 1834 – Buried in Ancaster Churchvard, Isaac Bunnel Kelsy, aged about twenty-six years, and James Davis, aged twenty-six years (two deaths by cholera). John Miller, Minister" (Miller 1830-38).

Following the outbreak of cholera in Hamilton, "the villagers of Ancaster appointed a Board of Health, consisting of Rev. George Sheed, Job Lodor, Matthew Crooks, James Chep and Samuel Andruss. The gentlemen inspected all outhouses and ordered them and all cellars to be whitewashed and limed" (Ancaster Township Historical Society 1973:43). The response to the outbreak by the Board of Health in Ancaster was extensive, using a cleaning agent called lime, made from heating up and pulverizing limestone from the escarpment and used as a multipurpose disinfectant at this time. Remnants of the large scale use of lime has nearly been erased from memory, except for the few 19th-century sources that speak of this practice, and the continued use of the name "Lime Kiln Road", where one such kiln was located. "They also ordered all butchers' offal, tainted meats and fish, and stinking brine to be buried" (Ancaster Township Historical Society 1973:43). Today we know that there are certain strains of cholera that are caused by rotting fish and meat, which meant that the actions of disinfecting the town would likely have given Ancaster some advantage in containing cholera. "The new Board of Health members also described the symptoms of Cholera and recommended that anyone with these symptoms should take a glass of brandy and a teaspoon of laudanum and see a doctor immediately" (Ancaster Township Historical Society 1973:44). Those mentioned to have caught the disease were said to be sick no more than a full day, "they got the symptoms on in the morning, and died before night" (Ancaster Township Historical Society 1973:44).

There are two cemeteries in Ancaster that have been rumoured to contain nearby cholera pits, and it seems that these two cemeteries, the Zion Hill Cemetery, not far from Copetown, and the Cooley/Hatt Cemetery on Lime Kiln Road have kept the presence of cholera during this period alive in the collective memory of the town's oldest families. Unfortunately, the location of the Zion Hill cholera pit seems to be lost to time, and while there has been some archaeological work done on the Cooley/Hatt Cemetery full excavations have not been conducted, and the cemetery itself was only rediscovered after development allowed the archaeological survey of this land. Since none of the graves have been fully excavated, but instead the archaeology team used a method of locating these graves based on the disturbance patterns of the soil, it is unknown whether any of the graves found are from the mid 19th century. While locating evidence has been a problem, it is said that Richard Hatt, the owner of the land, requested reimbursement for the upkeep of troops on his property and the use of his land for 93 the burial of several soldiers during the War of 1812. There is a good chance that these burials, with over 99 found outside of the cemetery proper, may have been from the 1812 era, though the discovery of these graves could also suggest a cholera burial. Unfortunately, the discovery of the graves has halted the investigation into this cemetery as much as it has halted development, and this site is still under discussion as it is an unauthorized cemetery that was forgotten by the families until its discovery in 2004.

Dundas

Dundas was named after Henry Dundas, a Scottish lawyer and politician, who was a friend of Lieutenant Governor John Graves Simcoe, and a man who never visited North America (Watson 1947:60). Before being named "Dundas" in 1814, the town was known as Coote's Paradise, as part of the Coote's Paradise inlet off of Burlington Bay, an area that still retains this name today (Watson 1947:60). Dundas maintained a great deal of importance until the early 19th century, when the port city of Hamilton began to surpass Dundas in size (Watson, 1947:59). However, Toronto's Dundas Street did originally terminate at Dundas, and was a major route for new immigrants travelling west (Watson 1947:60). At the time of the cholera epidemics the construction of the Desjardins Canal had begun, and not surprisingly, the newly immigrated workers on the canal project were the first to fall victim to the disease (Woodhouse 1965:45). The response by the town has been documented in T. Roy Woodhouse's "The History of the Town of Dundas," the letter of Thomas Sheldrick, and newspaper articles of the period.

Dundas was hit hard by cholera in 1834 in addition to 1832 and 1854, but the 1832 outbreak was especially important for the fear it generated. "Cholera came to Dundas in 1832, spreading terror because of its mysterious origin, its rapid spread, its terrifying speed in killing, and its appallingly high fatality rate. Parents feared to fondle their children, and everyone shunned the dead, fearing even to bury them" (Woodhouse 1965:14). The response to the outbreak was one of desperation, though it came after a worker on the Desjardins Canal had already died of cholera, with many more workers succumbing to the disease before Dundas became affected. The town "cleaned up the gutters and slaughter houses, impounded wandering animals, spread quick lime and copperas in the outhouses, burned pitch pine knots in the doorways (to disinfect the air), lit bonfires in the streets, and fired cannons (to keep the air in motion)" (Woodhouse 1965:45).

"Some drank the doctor's evil tasting medicines, but many depended on whiskey. Others carried camphor in a bag on their chest" (Woodhouse 1965:45). "In 1834, Dundas was again warned that *Cholera Morbus* was approaching, but its citizens were not worried because Dr. Rolls, who had come to town the year before, published in the Dundas Weekly Post a sure cure for the disease" (Woodhouse 1965:45). Dr. Rolls' cure did not work, and not surprisingly, many people still became sick with cholera. Woodhouse mentions that Dr. Williamson, "who had ministered so faithfully to the invalids of Dundas for the last seven years, caught the disease in the morning and was dead before supper time" (Woodhouse 1965:45). Woodhouse remarks that, as was the case in 1832, many deaths were unrecorded due to a general sense of hopelessness and thus the death rates were much higher. The last major outbreaks of cholera in Dundas occurred in the



(Robertson).

1850s, but were relatively mild in comparison (Woodhouse 1965:41).

One of the few surviving documents from this time was the letter of Thomas Sheldrick to his sister back in Suffolk in 1834. Within the letter he mentions that he has had the privilege to be in good health while a number of people had become sick with cholera: "I am sure I ought in great measure to be thankful to the Lord for preserving me in such a good state of health as I do enjoy more particular when I look back and consider the many many souls that are gone

into eternity round about me, by the awful scourge the Cholera, but bless the Lord there has not been anything of it about us for a month past" (Sheldrick Letter 1834). Most notable is Sheldrick's comment on the coffins he had constructed: "I have been with them before they died. I have made the coffins for them, I have carried to the grave; I have been called up at night when in bed to make the coffins for them who a little before has been in good health and strength..." (Sheldrick 1834). Sheldrick notes that often the coffins and the graves were dug before the sick had died: "I knew a young man here that was taken on Sunday a little before dinner and his coffin was carried in the room before he was dead as soon as he was dead he was put in the coffin and buried directly" (Sheldrick 95

1834). What is unique about this letter is that Sheldrick also provides an estimate of the numbers who died in York and Galt: "There was between 6 and 7 hundred died at Toronto, late York, in a population of about 11,000, sometimes 40 in a day; at Golt [Galt]... there was little more than a hundred inhabitants and 50 died; there was ten graves in a row and 3 or 4 in a grave without any coffins, buried just as they died... I should think there was about 40 died here..." (Sheldrick 1834).

Another source of information on cholera in Dundas comes from the local newspapers. Unfortunately few copies of papers from this time survive, and most records are reprints in newspapers in the early 20th century. One such reprint from the Saturday Musings of a Hamilton Spectator article mentions one of the first deaths attributed to cholera in Dundas:

Died – In this city, on the 4th of July, 1854, B. P. Leland. Agent of Phinney and Co., booksellers, Buffalo... He had been engaged all the forenoon in Land's bush, making preparations for the picnic party to celebrate the 4th of July, and the day being excessively hot, he overexerted himself, and drank copiously of iced water, which caused cramps in the stomach and which carried him off in a few hours (Hamilton Spectator, 1854).

While there are several possible cholera gravesites in Hamilton and Ancaster, Dundas does not appear to have had one of its own, and this may be due to a combination of smaller family plots as well as the use of several Hamilton cemeteries by Dundas residents.

Flamborough

Flamborough was not much more than a small farming community in the first half of the 19th century. In fact, it was following the outbreak, in conjunction with the influx of European immigrants, which caused rural towns and villages to flourish. The main source of information pertaining to small towns that received a number of Irish and Scottish immigrants survives in the reflection of Major John Glascow, who had emigrated with his family from Scotland, and survived quarantine:

On enquiry it was found impossible to procure a dwelling house on account of our having passed through the cholera district. The immigrant shed, in the north-eastern part of the town, seemed too filthy to enter. By the time that we reached the wharf on our return. Bella Little had been seized by the cholera and died. The solemn but small funeral procession left the wharf about four o'clock in the afternoon, and the corpse was laid in mother earth at the Methodist church, erected in 1824, on the corner of King and Wellington streets, the only public burying ground in the town at that time. On our return to our headquarters at the wharf, Mr. Gunn and his clerk, Mr. Vallance, took pity on us and kindly had us placed in the storehouse, under cover. Mr. George Little, who had just married his young wife before leaving Scotland, and who seemed to be in perfect health when he returned from the mournful rite performed to the remains of his deceased sister, was taken sick at ten o'clock that night and died at two o'clock next morning. The townspeople, though very kind, became alarmed, and were fully aware of the danger of coming in contact with us (Houghton, 2010:19-20).

It does appear that unlike Hamilton, the farming families that settled in Flamborough, many who themselves were new immigrants, escaped the effects of cholera during this time, and while several newspapers have suggested that Flamborough West had reports of cholera deaths, burial and death records from this time do not provide enough information to corroborate the newspapers.

Stoney Creek and Glanbrook

History is determined and remembered by those in the present, and the emphasis placed on certain historical events is a good example of how fluid and active history recollection can be. While it is quite certain that Stoney Creek was also affected by cholera in the mid-1800s, due to the fame of Stoney Creek as a battle location during the War of 1812, it is hard to find information about this region that does not pertain to the Battle of Stoney Creek. Stoney Creek was not officially a town until the 1980s, and prior to being called Stoney Creek, the settlement was known as Old Town. The City of Stoney Creek has adopted the history of the War of 1812, reinforcing this significant event, but in effect making 97

it hard to determine the growth and defining moments of the town thereafter. What is known is that, like Flamborough, Stoney Creek was mostly settled during and following the cholera epidemics, and was nothing more than a sparsely settled farming community. Glanbrook was another small farming community at this time, which began to grow through the late 19th century. Again, Glanbrook has few surviving documents from this time, but it is likely that Glanbrook and Stoney Creek as farming communities were not impacted by cholera the same way Hamilton was. In an attempt to ensure that nothing was missed Saltfleet region death and burial records were consulted, but there is little information provided on the cause of death, and the records from this period are few.

Brantford, Brant County, and the Six Nations Reserve

While most of the concentration has been on the Wentworth region, the Six Nations Reserve is not far away, and given the history and contact that Brant County and Wentworth County have had with each other, a brief analysis of the impact cholera had on Brant County has been included. Unfortunately sources for information on the reserve are lacking, likely due to a little interest in the Six Nations Reserve, and few doctors living within this area. It is noted that some of

the first doctors in Brant County, in nearby Paris, did not arrive until 1834 (Reville 1920:420). One of the more significant deaths from cholera in this region was that of John Brant, the son of Joseph Brant, who like his father, was known as a great leader and politician (Cummings 1907). While little is mentioned about how the Six Nations coped with the cholera outbreaks, in Brantford, cholera was only confined to several health officers, and some of the Irish immigrants (Reville 1920:99). While only a handful of Brantford's residents died of cholera, its unknown and unrecorded how many immigrants died from the disease. Interestingly, it would be an outbreak of Ship Fever in 1847-48 that would make a more significant impact on this area than cholera ever did



Figure 11.3: Portrait of John Brant (Ahyouwaighs), son of Joseph Brant and victim of the 1832 cholera epidemic (Toronto Public Library).
Remembering Cholera

The process of searching for information on how cholera affected the communities surrounding Hamilton can tell us a lot about the way in which cholera has been remembered. While Hamilton's battle with cholera was much greater, there are still examples of some of these battles being waged on the periphery of Hamilton as well. However, in comparison, it seems that cholera did not have as significant of an impact on the outlying communities with the exception of Dundas due to its close proximity to Hamilton's contaminated water source, the lake. Events such as the cholera epidemics are not so visible in the collective consciousness of the outlying towns due to the relative lack of remaining physical evidence for cholera, which has been seen more prominently within the City of Hamilton, and now it appears that Hamilton is also losing this long-remembered piece of history. Due to the importance that people play in keeping an event in motion within collective memory, it is up to the people of the City of Hamilton to know this history. Instead these events are slowly being forgotten, and as more individuals move in and out of the area, the family ties to this region, and the historical events that shaped Hamilton, are being slowly lost to time.

Avoid Cholera: Practice Cleanliness and Temperance

Karolina Grzeszczuk

Ne pereat populus scientia absente! (Lest the people perish from lack of knowledge!) – Motto of the Ontario Provincial Board of Health (Jackson 2011:217)

We live in an age where information about diseases is communicated to us by various institutions and organizations, including: on a global level, the World Health Organization; on a national level, Health Canada; on a Provincial level, the Ministry of Health and on a municipal level, the City of Hamilton. We expect that these institutions will provide us with the information we require to stay healthy.

In an effort to understand how we arrived at this expectation this chapter utilizes a broad understanding of institutional theory to explore the changing relationships between Hamiltonians and two of the major institutions in the mid-19th century — the State and the Church. Institutional theory is particularly suited to this type of analysis as it considers how social structures and institutions change over time and how norms become incorporated into the social fabric (Scott 2005:460). The information disseminated to Hamiltonians from these institutions is discussed. More specifically, this chapter considers the content of information about cholera transmitted to the public in newspapers and relayed through sermons.

I use the terms "State" and "Church" loosely. In this chapter, the "State" refers generally to government, and more specifically, to the local level of

government as it was represented by Boards of Health. The Boards of Health appear to have become more active between the first outbreak in 1832 and the second outbreak in 1854, which is indicative of the strengthening relationships between local/Canadian branches of government and Canadians. I use "Church" to refer to religion generally as there were several denominations, including a significant number of Presbyterians and Methodists, in Hamilton at the time. Churches provided people with a spiritual explanation for the epidemics and may have acted to allay fear by encouraging acceptance of the crisis. The Church and State offered different explanations for the origins for cholera, different information regarding treatment and prevention and both had different methods of delivering their messages.

Before Public Health

The 1832 and 1854 cholera pandemics arose during a period of Canada's history that predates public health legislation. There was no real process in place to warn individuals of potential disease threats. This is why the governor-general, Lord Aylmer, learned that cholera had descended on England through newspapers, not through pre-existing official health channels (Bilson 1980:5).

The cholera epidemics also occurred during a time of change for Canada, one which saw a move towards self-government. In fact, the political face of Hamilton changed several times. During the 1832 epidemic, Hamilton was part of the Gore district in Upper Canada, while during the 1854 epidemic Hamilton had become a city in the Province of Canada. As Canada and Hamilton grew and came into their own, the relationship between the soon-to-be State and its citizens tightened, while the relationship between England and Canadians grew more distant. Broader political processes were also at play during this time. After the 1837 rebellions of Upper and Lower Canada, Lord Durham advocated for local government institutions, which resulted in a system of elected district councils and marked "the beginning of Canadian local self-government" (Brown 1950:315). This change in the political landscape can be seen in legal changes that occurred during the cholera outbreaks. At the onset of the first outbreak in 1832, existing British laws focused on quarantine, but there were no laws that stipulated it was the responsibility of the government to inform citizens they were under threat of disease (Atkinson 2000:9). As a direct result of the cholera epidemics, the Canadian Legislature passed several laws outlining public health 101

measures (Bilson 1980:170). During the course of the two epidemics, Hamilton passed a series of by-laws (see Chapter 13 "New Rules to Battle the Cholera Outbreak").

Cleanliness is next to Godliness

Local newspapers, including The Hamilton Spectator, Hamilton Gazette, and The Dundas Warder, published information from local Boards of Health as well as information about cholera from abroad. The information from the Boards of Health often included reports of morbidity rates in order to monitor the spread of the disease as well as to allay the public's fears (Hamilton Gazette 1854e). In addition to morbidity rates, Boards of Health took it upon themselves to notify the public of actions that should be taken in the event they found themselves suffering from cholera. In Kingston, for example, the Board of Health "resolved that the public be notified by advertisement that any person seized with cholera would be received at the hospital immediately. Inhabitants of the house in which the afflicted person became ill were to assist him to the hospital" (Godfrey 1968:31). Newspapers also included the Board's instructions on the signs of cholera, advice on the importance of cleanliness, and recommendations on stores where medicine could be purchased (The Daily Spectator 1854). Information gathered from the Hamilton City Council Minutes suggests that the Board of Health in Hamilton received funding from the city for advertising purposes as well as for printing its regulations (Hamilton City Council Minutes 1854).

A pamphlet published in 1893 by the Ontario Provincial Board of Health entitled, *Advice to the Public for the Restriction and Prevention of Asiatic Cholera*, provides a glimpse at what the health authorities felt the public ought to know about preventing cholera. For example, the ninth item in the list of "Personal Precautions Against Cholera" urges individuals to "pay great attention to personal cleanliness, and also to that of clothing" (Provincial Board of Health 1883:5). Similar precautions may have been published during the 1832 and 1854 cholera epidemics but I have not been able to locate them. Their absence from the historical record may be due to their ephemeral nature; on the other hand, it is also possible that none were ever published because governmental responsibility for providing information to the public may not have been a high priority.

Bilson (1988) suggests that there was a power struggle between some of the local Boards of Health and the Central Board of Health. While power

struggles between institutions regarding the division of responsibility are not unique to this time period, this particular power struggle appears to have mirrored the struggle to remain autonomous within the British Empire. The Hamilton Spectator spoke out against the Central Board of Health stating that its power to control local Boards was undesirable "our townsmen are compelled to obey the dictation of a paid Board at Montreal consisting almost entirely of French Medical Men... who of course know nothing of the locality" (The Hamilton Spectator 1849). The issue of local versus central authority was explored further in that same article calling the problem "taxation without representation" with a vengeance" (The Hamilton Spectator 1849). The onus of keeping cholera at bay seemed to fall on local Boards of Health who may not have appreciated having the will of a different level of government imposed upon them.

Who Received the Information?

The Canadian *Boards of Heath Act* of 1833 created Boards of Health to monitor cases of cholera and to ensure that locales were kept clean (Atkinson 2000:9). The Boards of Health took responsibility for disseminating information to the citizens of the cities and districts that they represented. In Hamilton, information from the Boards of Health was disseminated through newspapers; however, this information would have only been useful to people who were literate. Although literacy rates in Hamilton during the 1832 and 1854 pandemic are unknown, an estimate can be made based on figures from the 1861 Census results which counted individuals over 20 years of age who could not read or write.

The census information for Hamilton for 1861 returned a total population of 19,096 individuals, of which 8,743 were over 20 years of age. Of these, 927

	Number	Percent
Males over 20	360	4.1%
Females over 20	567	6.5%
Total individuals	927	10.6%
Total households	565	17.0%

Table 12.1: Illiteracy in Hamilton in Individuals over 20 years of age (Census Canada 1861).

people, or 10.6 percent of the adult population, were recorded as unable to read and write. The census also indicated that 17 percent of households had at least one illiterate adult (Table 12.1, Census Canada 1861).

If the same percentage of people and households were illiterate during the 1832 and 1854 epidemics, this would have meant that hundreds of people and households may not have received information via official governmental channels.

God is Everywhere

Religious belief imbued many facets of life in Hamilton and the Church appears to have provided citizens with additional information about cholera. The government also was not immune to appealing to divine power during the epidemics. When Proclaiming a Day of Thanksgiving in 1832, Lieutenant Governor Colborne declared that citizens of Upper Canada appeal to God to end the pandemic:

And we do strictly charge and command that the Public Fast be reverently and devoutly observed by all our loving Subjects in our said Province of Upper Canada, as they tender the favour of Almighty God, and would avoid His Wrath and Indignation, and upon pain of such punishment as We may justly inflict on all such as contemn and neglect the performance of so religious and necessary a duty (Fraser 1907:354).

Declarations of Days of Thanksgiving and Fast Days appear throughout government documents and newspapers, along with the invocation of God's will. City officials likewise obeyed the Lieutenant Governor's proclamations and entreaties calling upon Hamiltonians to observe Days of Thanksgiving can be found in the City Council Minutes (Hamilton City Council Minutes 1849-50).

Census information supports the view that religion played a prominent role in daily life. The 1851 and 1861 censuses for Hamilton include a "religion" category, which was completed for most people. The main denominations present in Hamilton included Roman Catholic, Church of England, Presbyterian, Methodist, Congregational, and Baptist. Generally, there was a rise of religious activity throughout Upper Canada during the cholera outbreak and "as a result 3,652 joined the Methodists which was a three-fold increase over the previous year's admissions" (Bilson 1980:63). By contrast, Hamilton saw a much larger increase in Presbyterians than Methodists. According to the 1851 and 1861 censuses, Methodist participation remained consistent at 16 percent of the total population while participation in various Presbyterian churches rose 4 percent

from 19 percent to 23 percent of the total population (Canada Board of Registration and Statistics 1855; Census Canada 1861).

While more information is required to ascertain whether the rise of religious activity in the Presbyterian churches was due to conversion or immigration, it is important to note that only 55 individuals reported having no religion in the 1861 census which means that religious interest did not wane significantly during the cholera epidemics in Hamilton (Census Canada 1861).

In view of the significance of religion in daily life, it is important to consider the information that the churches provided about cholera.



Intemperance and the Church

Although people belonged to different religious denominations, the content of sermons that mentioned cholera appears to have been similar. According to Charles E. Rosenburg "the pious of every sect... accepted cholera as a chastisement appropriate to a nation sunk in materialism and filth" (1987:121). Although Rosenburg was referring to the United States, the same could be said of those living in Upper Canada/Province of Ontario.

It has proven difficult to locate sermons preached in Hamilton, however, sermons from religious denominations in the USA and Europe provide some of the information Hamiltonians may have heard at their churches. A sermon delivered on one of the prescribed Days of Fasting by Rev. Irvine at Knox Presbyterian Church in Hamilton, however, provides some insight on local views of cholera. In his sermon, Evil in a City, Rev. Irvine assured his parishioners that "afflictions are therefore a blessing—a real good to the man of God—a real good to the sinner whom they bring to Christ..." (1854:3). The sentiment that cholera was a blessing to people-that it was sent by God in order to make people turn back to the church—was a common message throughout the cholera epidemics. Another sermon, preached in England in 1833, brought a similar message to Church of England adherents: "whilst he acknowledges in the visitation of pestilence a chastisement justly due to sin, [he] will at the same time thankfully receive it, both as a token of God's concern for sinners, and as a help to the edification of his flock" (Girdlestone 1833:3). For those who felt hopeless against the threat of cholera, the message of acceptance may have helped assuage their fear. It also may have brought them closer to the church.

Public Dissemination of Information

In addition to publications and sermons, there were other ways to obtain information about cholera in Hamilton. Town meetings, for example, may have provided a venue for discussions. Although it has proven difficult to find evidence of town meetings held in Hamilton, some communities in Upper Canada had committees whose role it was to respond to newspaper accounts of the spread of cholera. The committees pre-date the Boards of Health and appear to have been active in the beginning of the first wave in 1832, organized by residents, rather than by official authorities (Atkinson 2000:13-14).

Public Health Information and Cholera's Legacy

The cholera pandemics struck during a time of dramatic change for Canada and Hamilton. Politically, Canada was becoming more autonomous and shifting away from England. This growing independence from England is mirrored in the responses to cholera from local governments. Godfrey claims that, "the only political heritage of the cholera epidemic would appear to be the establishment of the Health Boards and the setting up of quarantine regulations and the first organized effort of public sanitation" (1968:40). It can be argued that the government response to the cholera epidemics also marked the beginning of State involvement in providing public health information. During this period the Church was instrumental in providing counsel in the spiritual context and remained an important institution after the cholera epidemics.

While cholera is no longer perceived as a threat in Canada, it remains a problem in developing nations. Understanding which institutions hold prominent roles in the lives of individuals affected by cholera today may aid in the dissemination of information related to prevention and treatment. Today, citizens of Canada expect that government will provide information about possible epidemics, and that the information will also be provided in ways that can be understood by the public.

New Rules to Battle the Cholera Outbreak

Alexandra Saly

On June 20, lawyer Robert Berrie, clerk of the peace called a public meeting at the Court House, at which it was resolved to remove all piles of filth from the streets and lanes, burn rubbish and clean interiors of buildings, especially dark corners where the sunlight seldom penetrated (Smith 1961:137).

The cholera outbreaks of 1832 and 1854 in the City of Hamilton provoked numerous changes to life in the city, such as where people lived, their standard of living, and improved sanitary conditions for the city. The government response to cholera is evident at both provincial and municipal levels. Initially, Boards of Health were established to prevent cholera, but they provided a service that could not be eliminated and eventually became permanent institutions.

This chapter examines the by-laws that were passed by Hamilton City Council in anticipation of cholera's arrival in Canada, as well as regulations implemented to prevent its spread through Upper Canada. Provincial acts and city by-laws also represent attempts to control cholera and its impact on the population. The by-laws and provincial Acts thus reveal prevailing ideas about cholera and measures deemed important to prevent and reduce outbreaks.

A Different Life

In 1832 Hamilton was a small police village with a population of nearly one thousand (Hamilton Spectator 2012). The village consisted of "four public

buildings, seven taverns, 16 stores, two watchmakers, two saddlers, four merchant tailors, four cabinet makers, four boot and shoe makers, two bakers, four newspapers, one druggist, one tin and sheet iron manufactory, one hatter and three millineries" (Hamilton Spectator 2012:A3). Thirteen years later, the small police village, which had expanded because of growing commercial activity, became recognized as a city and became the City of Hamilton (Hamilton Spectator 2012). Epidemics were capable of causing extreme devastation, even in small villages and cities of the 19th century. For this reason, when word reached Hamilton in 1832 that cholera was spreading to Canada from Europe. Authorities agreed it was imperative to put preventive measures in place.

Better Late Than Never

Provincial regulations attempted to stop cholera from reaching Canadian shores during the epidemic of 1832. Quarantine became the major measure to prevent it from spreading.

Quarantine is an imposed isolation of the sick designed to prevent the spread of disease. It can be imposed on ships, people, animals or plants. Isolating the sick was a form of quarantine that had been practiced in Europe for centuries (Atkinson 2000:87). One of the earliest recorded uses of quarantine occurred in 14th-century Europe in an attempt to limit the spread of the Black Death. The length of quarantine can vary, but it is traditionally put in place for a period of forty days.

Newspaper accounts and personal correspondences acknowledged cholera epidemics in Europe; concern about the disease rose as growing numbers of emigrants were arriving in Canada (Atkinson 2000). As early as January 1829, ships from Europe were reportedly carrying numerous sufferers of cholera (Atkinson 2000:79). As a result, the Quarantine Act of February 25, 1832 was passed to prevent cholera spreading into Canada (Godfrey 1968:16). The Quarantine Act established a quarantine station at Grosse Isle, north of Quebec City (Godfrey 1968:16). Grosse Isle is an island that was inaccessible without permission, "and it had safe ports with good anchorage" which made it a perfect strategic location for a quarantine station (Patterson 1957:168). The intention was to isolate all immigrants to ensure that no passengers had cholera. Ships from ports infected with cholera experienced a three-day quarantine (Bilson 1977:415). Ships that had previously had cholera cases onboard performed a fifteen-day 109



Figure 13:1 Parliament buildings with immigrant sheds at the extreme left (Toronto Public Library 2012).

quarantine, and ships with cholera cases had its sick taken to hospital while the rest of the passengers were placed in a thirty-day quarantine (Bilson 1977:416). With the large number of European immigrants coming to Canada, the Quarantine Station at Grosse Isle was overwhelmed and could do no more

than a general inspection. It was impossible to inspect every passenger, but people who were visibly sick were separated from the rest and sent to the cholera sheds (Godfrey 1968:16). Cholera sheds were the quick response to the required buildings needed to house the sick. These were a long row of wooden buildings that were erected wherever required (Godfrey 1968:23). The Quarantine Act remained in effect until February 1, 1833.

Quarantine measures were not immune to criticism. They were considered an impediment to commerce as immigration was "considered essential to the commercial and agricultural expansion of the colony" (Atkinson 2000:74-78). Quarantining immigrants only weakened the economy by restraining the very people who provided wealth to the country. Supporters of the miasma theory of cholera who understood the disease to be the product of "noxious vapours in the air, or by putrid emanations from rotting animal and vegetable matter" argued that quarantine was a waste of time and ineffective (Atkinson 2000:77-78); nevertheless, even when cholera returned to Hamilton in 1854 there were calls for the Board of Health to implement quarantine measures. By this period, it was widely accepted that cholera was contagious; notwithstanding the new understanding of cholera, citizens called for the reinstatement of quarantine: If there are insuperable difficulties in the way of a Quarantine, then Hamilton is an exception to every city over which the British flag floats, whether in the Imperial or Colonial dominions of the Empire.

It does not follow that because we *have had* no quarantine, therefore we ought to have none. Does it not rather follow that the past healthy state of Hamilton rendered no such salvatory necessary? But now that our population is falling before cholera morbus in the ratio of one to the thousand daily, and that by a disease literally imported by our emigrants, why should we not at one establish a quarantine; or, if our geographical position interpose a difficulty, why not establish some substitutionary measure, by which the lives of our respectable citizens may be protected against the invasion of the present alarming epidemic (Daily Reform Banner 1854d).

Taxes on emigrants were imposed in Quebec as another cholera prevention method (Godfrey 1968:16). The income from the tax of five shillings per person was divided between two Quebec hospitals, The Emigrant Society of Quebec, and The Emigrant Society of Montreal (Godfrey 1968:16). The tax ensured that emigrants passed through Quebec as quickly as possible while additionally providing a fund to meet the needs of sick emigrants (Bilson 1977:413). The proponents of miasma theory claimed that keeping people in quarantine would only "simply exacerbate their weakness, making them even more susceptible to miasma" (Atkinson 2000:92).

Despite quarantine measures and quick passage out of the province, cholera cases appeared in Quebec (Godfrey 1968:16). This prompted citizens in Upper Canada to begin to take preventative action as emigrants carrying cholera dispersed through Canada.

The Formation of Boards of Health

Canada was not prepared to deal with any form of epidemic. There were no Boards of Health, and the few hospitals that existed in Ontario were located at garrison ports (Godfrey 1968:16). Health problems were dealt with informally, and only when they became apparent (Harris 1905). When cholera cases appeared in Quebec, Upper Canada prepared for the arrival of the disease.

In the 1830s, Upper Canada was divided into thirteen districts. Each district was administered by magistrates and justices of the peace, who formed the Quarter Sessions. On 20 June 1832 the Quarter Sessions sent instructions to the thirteen districts calling for each to establish a Board of Health (Godfrey 1968:16-17). The Lieutenant Governor, who appointed the Quarter Sessions, authorized the magistrates "to form Boards of Health to assume all necessary authority to preserve health" and provided 500 pounds for expenses for hospitals and medical attendants (Godfrey 1968:17).

The inefficiency of local governments had serious repercussions on the 1832 cholera epidemic. Magistrates controlled all the public funds available for "building roads, bridges, or alleviating disasters, such as the increased immigration and the sudden outbreak of cholera" (Patterson 1957:166). The magistrates did not know the needs of the districts and were not anxious to supply them (Patterson 1957:166). Many of the magistrates were "old army officers, and most of them of sufficient income to render them indifferent to the hardships and needs of the average hard-working settler" (Patterson 1957:166). This situation made it difficult to acquire sufficient funds from the government to take care of the sick (Patterson 1957:165).

The Boards of Health were intended to perform two essential duties. The first duty was to "provide reception centers for patients with cholera" (Godfrey 1968:18). This resulted in the establishment of several new hospitals and receiving centers throughout Upper Canada, some of which were converted from schools or other buildings (Godfrey 1968:18). The second duty of the Board of Health "was to establish and attempt to enforce reporting and quarantine measures" (Godfrey 1968:18-19). Unfortunately, many communities did not have the services required to receive patients or enforce quarantine measures, with the result that cholera spread further into Upper Canada.

Boards of Health were not permanent bodies until the revised Health Act was passed in 1884, creating a Central Board of Health (Harris 1905). Before 1884, Boards were appointed and created in the spring each year when there was an epidemic threat and then disbanded in the fall (Harris 1905). Hamilton's City Council minutes record this practice: "By-law 24: To repeal By-L 14 establishing a Bd of Hlth wtn t C" (1848:118) which translates into, By-law 24: To repeal By-law 14 establishing a Board of Health within the City. Even though Boards were appointed annually, they made progress in "enacting sanitary regulations on

domestic cleanliness, burials, the operations of local hospitals and the condition of public areas" (Atkinson 2000:115).

New City Rules

Authorities in Hamilton attempted to prevent cholera outbreaks by cleaning up the city, one result of which was the formation of a Board of Health in 1832 (Harris 1905). The Board of Health approached the sanitation problem in accordance with the miasmic view of disease by "causing foul yards and dirty alleys and streets to be cleaned up, and the removal of nuisances within the city, and a plentiful supply of lime scattered in all such impure locations" (Magill 1854). The City Council introduced new by-laws which demonstrate how important improving the general cleanliness of the city had become. By-law No. 30, Respecting Streets, for example states, "no person shall throw or discharge dirty water of refuse into or upon any highway, street, lane, alley, public space or square, or into any of the gully drains made by the City Corporation thereon" (City of Hamilton 1911:90). Although these new by-laws make sense in terms of improving sanitation in general, they also proved to be extremely important in clearing cholera in 1832, and minimizing the cholera outbreak in 1854.

The city cleanup was not implemented early enough, however, to prevent cholera from attacking Hamilton on 12 July 1832 (Harris 1905). Many of the actions of the Board of Health, moreover, were ineffective. The nearest hospital was located at Burlington Heights. This was too far from Hamilton to provide any medical services and Hamilton's city physicians were not reporting cases of cholera to the Board of Health (Harris 1905). The city's new sanitary reform did nothing to stop cholera because proper care was not taken or afforded to those who were sick, and thus cholera ravaged Hamilton.

In response to increased waves of immigration and the continuing threat of cholera, a new Board of Health was established in 1849. Additional sanitary by-laws were created and enforced, based on the miasma theory of disease, which attributed the spread of diseases to bad or poor air. Fortunately, fixing the problems that caused stench in the city also helped prevent the spread of cholera (Harris 1905).

The new by-laws were far more thorough than any that had existed before. In By-law 46, Respecting the Public Health, outlines the duties of the Medical Health Officer: Whenever it shall appear to the Board or to any of its officers that it is necessary, for the preservation of the public health or for the abatement of anything dangerous to the public health, or whenever they or he shall have received a notice signed by one or more inhabitant households of this municipality, stating the condition of any building in the municipality to be in a filthy or dirty condition or to be dangerous to the public health or that upon any premises in the municipality there is any foul or offensive ditch, gutter, drain, privy, cesspool, ashpit or cellar, or that upon any such premises an accumulation of dung, manure, offal, filth, refuse, stagnant water is kept, it shall be the duty of the Sanitation Inspector to enter such buildings or premises for the purpose of examining same, and, if necessary, he shall order the removal of such matter or thing as aforesaid (City of Hamilton 1911:146).

By-laws were created that mandated the cleaning of cesspools and other aspects of waste collection. By-law 46, Respecting Public Health has a section dedicated to wells (City of Hamilton 1911:147-149):

All wells in this municipality which are in use, whether such wells are public or private, shall be cleaned out before the 1st day of July each year, and in case the Board of Health certifies that any well should be filled up, such well shall be forthwith filled up by the owner of the premises (City of Hamilton 1911:147).

By-law 46 also outlines sanitary standards and fines for not adhering to the regulations of cleanliness for privies, cesspools, earth closets (a type of lavatory where dry earth is used to cover excrement), and so on (City of Hamilton 1911:147-150).

The cholera epidemic in 1832 was a calamity made worse because physicians were not reporting cholera cases to the Board of Health. This misrepresented the severity of the outbreak and resulted in lax by-law enforcement of sanitation regulations, which only encouraged cholera to spread. By-law 46 also required physicians to report infectious and contagious diseases (City of Hamilton 1911:152). The Medical Officer provided every medical practitioner with blank forms to report cases of "diphtheria, smallpox, scarlet

fever, cholera, typhoid fever, measles, whooping cough...or other disease dangerous to public health..." accompanied with forms that report death or recovery from the disease (City of Hamilton 1911:152). Each new case was to be reported within twenty-four hours (City of Hamilton 1911:152).

In addition to reporting cases of cholera, notice of the disease had to be given to neighbors, visitors, and contacts to prevent further spread of the disease. This was accomplished by the use of place cards affixed to the homes of the afflicted:

Rule 5. - The Medical Health Officer, within six hours after he has received a notice of the existence of scarlet fever, diphtheria, smallpox, cholera...or other diseases dangerous to public health in any house, may affix or cause to be affixed by the head of the household or by some other person, near the entrance of such house, a card, at least nine inches wide and twelve inches long, stating that such disease exists in the said house, and stating the penalty for removal of such card without the permission of the Medical Health Officer or Board of Health (City of Hamilton 1911:153-154).

Not all of the new by-laws and regulations were popular. The Board of Health's recommendations regarding rapid burial of the dead was resented because there was no mourning period and the dead were not allowed to be buried in cemeteries; instead, they were interred in mass graves or pits outside of towns (Bilson 1977:425). In 1832, health regulations were no more than recommendations and advice; there was no legal power to enforce them (Patterson 1957:176).

The cholera epidemic of 1854 prompted stricter sanitary regulations. Municipal governments implemented by-laws that stipulated dates, fines, costs and government procedure for Medical Officers, physicians and citizens. City officials, therefore, were in a stronger position to confront the 1854 cholera epidemic.

What This Meant for Hamilton

Cholera caused a great deal of havoc, but stimulated drastic reforms to the City of Hamilton. In preparation for the epidemic of 1832 quarantine measures were 115

instituted throughout Upper Canada. The establishment of Boards of Health drew attention to the necessity of hospitals and maintaining sanitary public places, homes and places of work. Filth was cleaned and removed at regular intervals. Records of sick individuals provided statistics to determine the relative severity of a disease within the city.

Political reforms and improved sanitation were aimed at controlling cholera. Recognition that contaminated environments stimulated the spread of cholera prompted changes to the urban environment and lifestyles of citizens. Cholera has often been seen as a test of social cohesion, straining the different social factions, and unsettling the normal functioning of a society (Evans 1988:126). This is certainly evident in the epidemics of 1832 and 1854 in which there was a public backlash when governments attempted to force a different, cleaner lifestyle on citizens. In addition, the government's health regulations were perceived as an invasion of privacy and property, all in the name of preventing cholera (Bilson 1977:425).

The political changes that resulted from cholera outbreaks reveal aspects of Hamilton's social evolution. Disease affected government policies more intensely and faster at both provincial and municipal levels than any other social force to date. It can be said that without the cholera epidemics, many of the common sanitary practices that exist today (sewers, clean stores and public places, and health records), might have taken years longer to be realized and even longer to be implemented.

Sanitary Conditions in Early Hamilton

Nathan G. Garrett

...the importance of having a supply of pure water, for all purposes, is forcing itself upon the attention of the inhabitants, and with the certainty of that dreadful plague THE CHOLERA being amongst us early in the ensuing season, it behaves us to adopt every precaution to promote cleanliness in the City (James and James 1978, as cited in the Hamilton Spectator 1848)

We live in a society obsessed with cleanliness. Even in the largest Canadian cities, with their extremely high population densities, the majority of residents searching for living quarters not only expect, but take for granted, the presence of a clean water source, or at least the ability to purify water; an effective waste disposal system; and a clean living space. We are unable to fathom the awful struggle it took to bring to Hamilton about the sanitary conditions we enjoy today, as one can hardly imagine early 19th-century Hamilton covered in filth, with large animals freely roaming the streets, piles of waste festering outside virtually every door, and privies draining directly into open-air ditches where they could contaminate sources of drinking water. Such conditions were ripe for the spread of infectious diseases, and it was cholera that exacted enough devastation in Hamilton such that the local authorities were finally motivated to clean their city up (James and James 1972).

This chapter gives a brief overview of the sanitation conditions present in Hamilton during the time period of the two major cholera epidemics that

occurred in the summers of 1832 and 1854. Specifically, I discuss the refuse left to rot in Hamilton's streets, the aforementioned open cesspools and waste drains, and the communal wells from which Hamiltonians drew water on a daily basis for basic functions such as consumption, cooking, and washing. I also explore the citizens' attitudes toward sanitation and why it ought to have been improved, mostly through quotes from contemporary newspaper articles. Finally, the chapter considers some of the proposals for improving Hamilton's sanitary conditions put forward to city officials, the failure to act on most of those proposals, and what was inevitably done to clean up Hamilton in the wake of the 1854 epidemic. The viewpoints of the chapter are expressed mainly through historical analysis, as the chapter relies on accurate recitation of historical events and facts, although interpretations of what the political and economic motivations of Hamilton's early leaders will certainly be made here.

A Growing City, Primed for the Cholera

The two decades between the two major cholera outbreaks were times of massive change and social development in Hamilton. At the time of the first epidemic in 1832, Hamilton had yet to gain official status as a village, let alone a city, as its population stood at a little over 1000 residents (Henley 1993). Although there was a palpable fear of cholera amongst the townspeople following the first outbreak, there was also a lack of knowledge of the conditions under which cholera was most likely to spread, which, unbeknownst to Hamilton's earliest residents, were rampant within the young settlement's limits (James and James 1978).

During the inter-epidemic period, significant push factors were propelling people out of Europe, and spurring massive waves of immigration to the Americas (Henley 1993). In particular, the potato famine terrorized Ireland from 1845 until 1850, and Hamilton became a popular destination for Irish immigrants searching for a better life, most of whom ended up populating the then southeast corner of the town known as "Corktown" (Kinealy 1997). Hamilton's growth was so rapid in fact, that the population exploded by a factor of ten between 1832 and 1854. With such unprecedented growth, Hamilton became incorporated as a village in 1833, followed by incorporation as a city in 1846 (James and James 1978).

Of course, all of this human growth necessitated changes to the infrastructure of Hamilton as well. Roadways, many of which had been used before the War of 1812 as either routes of the King's Highway or as trails used by tribes of Native Canadians, had to be expanded to meet the needs of the growing city. Hamilton's main arteries were established, such as King, James, John, Barton, and Catharine Streets, among others, and are still present today (James and James 1978). By our standards, however, these "streets" would have been little more than dirt paths. Some sections of Hamilton's early roads could even be called mud trails, as open creeks and streams flowed, without bridge crossings,



Figure 14.1: The three prominent N-S running streets in the top right are James, John, and Mary streets reading them from right to left. In 1842, the north ends of those roads, plus many of their E-W intersecting roads, would have been essentially swampland (Map 1842, artist unknown, my own photograph).

across some of major these through routes the city, including the north ends of James and John Streets, and very frequently over east-west running roads in the north end of the city such as Cannon and Barton Streets (see Figure 14.1).

Even with all of this

exponential growth, one must remember that Hamilton was still very much a rural town, surrounded by, and in some places even incorporated with, lush farmland. As such, farms and some of the early streets were contiguous, and livestock roamed freely in the town, littering the streets with excrement to an extent one can only imagine (Henley 1994). It took a Gore District Board of Health Report in 1832 which recommended to the Board of Police (Hamilton was a Police Village before being incorporated as a town in 1833) that livestock should be banned from openly walking the city streets, and that butchers be prevented from

dumping carcasses or rotting meat immediately outside their slaughterhouses, just to take this commonsensical step toward better city cleanliness (James and James 1978).

The most significant facet of early Hamilton's infrastructure. or lack thereof. however, was its original waterworks. Hamilton's residents drew water from five communal wells dispersed at strategic locations throughout the city. Although it is unknown where one of the five wells was located. the other four were found at the James-



Figure 14.2: Wells would have located at "Market House", "Gore Pk.", and in the SW corner of the square occupied by "Market House" (Map: Smith 1851, my own photograph).

Cannon Streets intersection, at what was then Gore Park, at the King-MacNab Streets intersection, and at the original Market at the center of town (James and

James 1972) (see Figures 14.2-14.4). This infrastructure deficiency was not addressed for the entire time between the two cholera epidemics, thus the exponentially growing population of the City Hamilton had to deal with water sources constructed to support a village. In an interesting possible reflection of the social attitudes of the time, that the wells whose locations we know were all constructed at the center of town or just north of it, far from the city's poorest Irish immigrants residing in the southeast corner in Corktown. It goes without saying that these five wells would all have been extremely vulnerable to contamination, with open sewers and effluent teeming and potentially leaching into the ground water being drawn into the wells. Yet, the most vulnerable of 121 Hamilton's early citizens endured the most unsanitary conditions, living close to open sewers but far away from water sources (James and James 1972).



Figure 14.3: One well would have been located where the prominent black box is shown on the map, at the intersection of James and Cannon/Henry Streets (Map: Smith 1851, my own photograph).

Awareness and Unrest

The ignorance of the time of what, exactly, allowed cholera to flourish and spread enabled the City of Hamilton to be devastated twice, and affected more times than that. However, when the population of Hamilton began to explode, townspeople were aware of the arrival of each new shipload of immigrants, and the risk of cholera that accompanied them (James and James 1978). Even then, the reasons were obvious; far more people had been crammed into the holds of ships than what was allowed by the law, and those people were forced to live, malnourished, for weeks on end. These conditions facilitated the spread of any number of diseases, and the citizens' reactions to each new ship of immigrants arriving in Hamilton became increasingly hostile, as they knew their city was incapable of

taking on the influx of people into Hamilton and the subsequent construction of poor quality temporary housing for them (James and James 1978).

Through all of this, Hamiltonians were becoming more aware of the importance of personal hygiene and sanitation, if not fully making the connection that infectious diseases such as cholera were attributable to contaminated water. Citizens began taking a more active role in contributing to the cleanliness of the city by changing their waste disposal habits, and keeping their own bodies clean.



Figure 14.4 (clockwise from top-left): The locations of four of Hamilton's original public wells correspond to the Hamilton City Centre at the original Market House, Go Tempura Japanese restaurant at the James-Cannon Streets intersection, the Hamilton Convention Centre and bus terminal at the King-MacNab Streets intersection, and what remains of the original Gore Park.

An 1842 Hamilton Gazette article stated "personal cleanliness, [and] frequent ablutions in cold water... are not only useful for protecting from cholera, but in warding off disease of any kind. Few persons, comparatively, are aware of the immense importance of a daily sponging of the whole person" (James and James 1978). The newspapers of the time also took it upon themselves to express 123

exasperation toward local authorities on behalf of their readers, especially when those in power were perceived to be foot-dragging in their responsibility to help protect the citizens of Hamilton from something as fearful as a cholera epidemic. As noted in The Spectator in 1848: "the attention of the authorities and the inhabitants should be directed to the absolute necessity of adopting proper sanitary measures to meet the dread scourge which is surely but silently approaching us" (James and James 1978).

Although the specter of a cholera outbreak loomed large in the minds of early Hamiltonians, there were still other pressing needs facing the city that an improved water system could address. As was the case in all of Upper Canada at the time, most buildings were made of wood and were usually heated with open flames. Improved waterworks were therefore also necessary for assisting with firefighting. In the summer, Hamilton's dusty, unpaved roadways were widely believed to contribute to susceptibility to cholera (James and James 1972). Rural Upper Canada, moreover, was known to be significantly cleaner than the urban areas at the time, and with the added fear of cholera in the cities, farmers were fearful to come into Hamilton to sell their produce (James and James 1972). Having an insufficiently fed population in the city was yet another obvious problem; all three of these factors were compounded by political and corporate elites pointing fingers at each other in an attempt to lay the burden of cost upon the other. These circumstances contributed to the development of proposals to improve Hamilton's water supply and general sanitary conditions, once and for all.

Proposals for upgrades

Although substantive action on the deficient state of Hamilton's sanitary conditions was widely discussed and eventually taken, it was delayed significantly by a lack of leadership in both the political and business spheres. An Act of the Upper Canada Legislature in 1833 established Boards of Health all across the province, including in the Hamilton region in the form of the Gore District Board of Health. These Boards had mandates to appoint a regional Health Officer, order city cleanings, and, perhaps most importantly, quarantine incoming ships and their contents (James and James 1978). However, the presence of the Board of Health alone was not sufficient enough to adequately address the issue of the general lack of sanitary conditions in Hamilton, simply because the Board

lacked both reliable funding and the authority to make decisions binding on the municipal government (James and James 1972).

While the Gore District Board of Health was able to achieve cleaner streets in Hamilton, the issue of a profoundly inadequate water supply had been effectively postponed until 1847, when the new City Council finally came to address it directly (James and James 1978). That year, with the potential for a major cholera outbreak on the minds of many, including the news media, the local government was finally motivated to study the possibility of procuring water from the mountain or the bay for all of Hamilton's residents. The City Engineer, William Hodgins, suggested that a gravity-based pipe system be used to deliver water to the city from springs on the escarpment (Keefer 1856). Unfortunately, the City Council of the time demonstrated profound shortsightedness on the issue and punted it to some later date, on the grounds that the cost was too great, and based on the opinion that Burlington Bay was a more feasible water source (James and James 1972). This same pattern re-occurred until 1854, where reasonable, well researched proposals for gravity-based waterworks were shelved due to lack of money and preference for Burlington Bay as a source (James and James 1972).

Today, it sounds very strange to us that relatively stagnant, potentially contaminated Bay water would be preferred to fresher sounding spring water; however one must consider that each resident of Hamilton would have had very little water each day to complete all of their chores, including cooking, cleaning, washing of clothing and bodies, and consumption. With this in mind, the Council's logic can be slightly better understood, because the Burlington Bay source would likely have proved a more reliable, year-round source of plentiful water. Also, using whatever tests they had available to them at the time, other engineers determined that water from Burlington Bay was softer, and therefore much more convenient to use for cooking, cleaning, and washing (Keefer 1856). These factors aside, the City Engineer Hodgins nonetheless made his concerns about Burlington's Bay's water well known:

With respect to the proposed plan of using the waters of Burlington Bay as a source of supply for this city, I believe that as long as another can be adopted this should certainly be avoided, the nearness of the extensive marshes of Coote's Paradise, Ferguson's Inlet, and others and their intimate connection with the Bay, the masses of decaying vegetable matter, with which they are everywhere impregnated; prove this in point of quality, no worse source could be selected.

It is true the water is very soft and suitable for washing and other domestic purposes, but in my opinion it would very soon affect the health of those obliged to drink from such a source (James and James 1978).

It is, of course, now a point of history, however. Only one month after the plague ridden summer of 1854 had ended, notice of a contest rewarding the best plan to procure enough water from Burlington Bay on a consistent basis for 50,000 residents was announced.

How Cholera Changed the Bones of Hamilton

Before the 1854 cholera outbreak, Hamilton, like much of the rest of Upper Canada, was caught in the throes of railway fever. Towns all over Canada were clamoring to be the next big railway hub, and Hamilton was no different, with the eminent citizen Sir Allan Napier MacNab convincing City Council to incur massive debts in order to prepare the city for an extensive network of tracks (James and James 1972). MacNab also had a large personal interest in the success of the railway in Canada, having invested large sums in Great Western Railway company stock (James and James 1972). The result of this incurred debt was the systematic postponing of several public works projects, as mentioned above. The local government had almost quixotically placed a grander, glorious vision of Hamilton over the basic needs of its people.

Following the epidemic, however, this position became untenable. After the waterworks designing contest had concluded at the end of 1854, the commissioner of the Montreal Public Works, Thomas Coltrin Keefer, was tasked with reporting on the actual feasibility of the contest winning model, which was accepted with a few modifications. Construction on the winning model began in 1857, and the Hamilton Pumphouse was completed in 1860 (see Figure 13.5). The Pumphouse represents the pinnacle of good that came out of the low point of cholera in Hamilton in the summer of 1854 (Keefer 1856).

Other less symbolically potent, but still extremely important infrastructural changes came about as a direct result of the 1854 devastation. By this time, Hamiltonians were sufficiently fed up with the uncontrolled amounts of garbage in the streets that there was enough political will mustered to establish the first city dump (James and James 1972). Simple sewers were also constructed,



Figure 13.5: The interior of the Steamhouse Museum today, with a commemoration to a very important contributor to the project, John Gartshore. Photo by Brian Kowalewicz of HistoricalHamilton.com (Kowalewicz n.d.b).

replacing the open surface pipe system that had for far too long polluted Hamilton's air (Snowling 2009). These were brick lined and connected directly to privies, which allowed for a speedier transportation of waste water away with any rain, although standing water and the chance of disease harbouring that comes along with it remained a problem in Hamilton after even the improvements following King Cholera (Snowling 2009). Despite this, however, cholera clearly left bright visible marks on Hamilton, including some of the most advanced public sanitation structures in what is now Canada at the time. The city was on an inexorable path toward the of cleanliness standards we are accustomed to expecting today. Through the dirty blot of cholera, Hamilton was becoming clean.

15

The Omnipresence of a Deathly Disease

Paul Dixon

Everything was dead. Here and there a few individuals were seen, engaged in an animated conversation : if the question was asked, "what subject ?" The Cholera. (Arfwedson 1834:44).

When cholera first struck Hamilton in 1832, people's lives instantly changed. The disease was an enigma, unknown to doctors and common folk alike (Raible 1992:43). Adverse reactions began to spread throughout the city, as everyone struggled to come to terms with those who had been infected by the disease. Cholera grabbed Hamilton by the throat, affecting the daily lives of its residents. It was always on people's minds; the topic of most conversations was almost certainly *The Cholera* (Arfwedson 1834:44). The degree to which life changed, especially around people who had the disease, was astonishing in both 1832 and 1854, but the change in lifestyle between the two outbreaks was much different.

This chapter outlines the changes that the people of Hamilton made to their daily lives in 1832 and 1854, from moving out of their houses (or in some cases being forced out), to ignoring those who had the disease (Arfwedson 1834:34, 43). Moreover, people were exceptionally aware of cholera, especially in 1832. As a result, there was great interest in general cleanliness and hygiene, which were believed to be important ways of preventing the disease. The involvement of various levels of government as well as the creation of the Board of Health also affected daily life, as these organizations put pressure on people to change their behaviour, and in some cases, exerted forms of coercion; this was

often in the form of enforcements, many of which were created by the Board of Health (for instance, being forced to clean ones house by Health Officers (Patterson 1957:183). Life changed between the years of 1832 and 1854, a truth which is ultimately revealed by the silences of 1854.

Reactions to Cholera and the Infected

During the epidemic in 1832, people with cholera were shunned and almost always seen in a negative light. When near someone who had the disease, people would often "pass each other with a singular rapidity, as if afraid of infection by contact" (Arfwedson 1834:43). No one understood the nature of the disease; they did not know whether it was contagious, and had no evidence to prove otherwise (Patterson 1957:169). This ambiguity created an ominous atmosphere in many communities (e.g. New York, Guelph, and Hamilton), and so people started moving out of their homes when they learned cholera had struck nearby. In one

instance, a "hopeful village [turned] into a charnel-house from which many fled in despair, whilst all but a few were paralyzed with fear" (Guelph Mercury 1899).

Villages that once had hope that their community would be unharmed by the disease were deserted when the first victim of cholera was announced; those who stayed lived in fear (Guelph Mercury 1899). In 1854, cholera was so devastating to Hamilton's inhabitants, "[t]hose whose pecuniary that circumstances permitted them to do so, left the city" (Author Unknown 1903). People did not know what to do to remedy the situation, so moving out (as well as closing businesses and civil courts) was the only option that seemed available to them (Patterson 1957:167). Immigrants also believed that they 129



Figure 15.1: Sisters of Mercy going to Hamburg to nurse cholera patients; providing care that was seldom seen by others (The Illustrated London News 1802).

needed to leave their community, however, for a different reason. When someone in their family had fallen sick with cholera, townspeople believed that the rest of the family was also infected. They were obliged to move away as they were no longer welcome (Houghton 2010), even though many immigrants did not have the financial means to do so.

Helping people who suffered with cholera was not a common course of action (Figure 15.1). In many cases people were too fearful to dispose of the bodies or even come close to them (Herald Scrapbooks 1923:27). In immigrant communities, similar scenes of abandonment occurred when people ceased assisting the sick. For example, when a "Norwegian immigrant who was known to have some money and property with him was suddenly taken ill; all his "dear friends" who had come with him believed that he would certainly die, and acted on this belief, without waiting for the result... [and] proceeded to divide the proceeds amongst themselves" (The Hamilton Spectator 1854). Some individuals, then, seemed to lose all hope when cholera hit, almost always assuming the worst possible outcome.

However, others helped out during the epidemic. A group of Mennonites sought to assist two English families who were devastated by cholera; "all but one of the parents and several children died" from the disease (Bloomfield 1997:38). The Mennonites adopted the children as their own, even though they had been in contact with cholera. These acts of kindness are remarkable considering they occurred in 1832, when many were unsure what the disease was or how it was transmitted. In 1854, there are more stories of assistance to families affected by cholera than are documented for 1832. Sisters of St. Joseph's, for example, went "from house to house performing acts of mercy", not caring if they themselves would get the disease (Author Unknown 1903). This selflessness was not typical and may have been a reflection of a belief that God would protect them when cholera struck. However, Robert Berrie, a lawyer, organized a town meeting in order to clean the inside of houses and remove the waste as it was thought that the disease was activated by unsanitary conditions (The Hamilton Spectator 1961).

Reactions to cholera were varied, but in almost all cases decisive action was taken. Hamilton's residents either fought cholera by employing sanitary measures and assisting victims affected by the disease, or by abandoning their homes out of extreme fear of the disease. People were pressured, then, to interact with their fellow citizens in entirely new ways. The reaction to cholera did not necessarily change much between 1832 and 1854, however, in 1854 people in

Hamilton were generally more prepared for it owing to an increased awareness of the disease; they knew what to expect.

Hamilton's Growing Awareness

In this chapter, *awareness* of cholera refers to the knowledge and information that was available about cholera, which was often reflected in a growing knowledge of the importance of sanitation for preventing the disease. This awareness was derived from a myriad of sources, including newspapers, regulations, and word of mouth. The latter was often less reliable, as exaggerations and misinformation were widespread; although it is important to recall that in 1832 the disease was still unknown. When cholera came to Hamilton, it became a more prominent feature of everyday life. In 1832, advertisements and articles promoting awareness and prevention of cholera were prevalent in local newspapers (in accordance with regulations set by the Board of Health) (Hamilton Gazette 1832). Newspapers often included articles pertaining to *The Cholera*. On 19 April 1832, a large article publicized that "[q]orantine regulations… [were] established" (The Hamilton Spectator 1932). Articles such as these, as well as notices, helped keep people informed about cholera and where it was occurring in Hamilton.

In 1854, similar articles and notices about cholera were published in newspapers, although to a lesser extent. Board of Health notices continued to be published on, for example, the availability of treatment, "medicine suitable to be taken upon premonitory symptoms of cholera will be disposed gratis to those who may be unable to pay for the same" (The Daily Spectator 1854). Furthermore, some understanding came from regulations that were enforced, such as keeping houses clean, and liming privies once a week (Patterson 1957:171). There was a growing awareness of the importance of sanitation in the prevention of cholera. Hamilton, for example, was criticized as being the only city without baths; in this way, attention was drawn not only to the disease itself but also to what *needed* to change in the city (Daily Reform Banner 1854).

The Pressure to Change

Changes to daily life were not only initiated because of the fear and lack of understanding of cholera, but because people were in one way or another pressured or forced to make changes to their lives (Figure 15.2). The district 131

Boards of Health had a significant effect on towns and cities, where regulations were put into place regarding the cleanliness of houses, as well as the implementation of quarantines (Atkinson 2000:115). Communities, in a sense, were forced to be clean; people had to enact sanitary measures or risk being fined (Patterson 1957:172). These pressures are not necessarily negative, but are enacted in such a way that people are limited in how they go about their daily lives.

Although quarantine was a strategy designed to help protect against the spread of cholera; its implementation impeded the day-to-day lives of those living



Figure 15.2: Cholera ravaging Rackclose Lane in Exeter; the Board of Health "gave several directions, to be immediately carried into effect towards cleansing the streets and sewers... and that, should these notices not be complied with, the nuicances in question be indicted" (Shapter 1849:85-86).

in Canada and Hamilton. On February 3, 1832, quarantine measures in Canada were first suggested by Lord Aylmer who "recommend[ed] that а bill should be passed for quarantine and health purposes" (Patterson 1957:168). A quarantine act was subsequently passed on February 25, which was the "first sanitary quarantine measure ever enacted in Canada" (Patterson 1957:168). The first areas put under quarantine were the ports of Grosse Isle, an island located below Quebec; quarantine was considered the first line of defense to prevent the disease (Bilson 1977:415; Nelson 1866:112-113). Ouarantine measures did not immediately affect the city of Hamilton, but a set of changes (regulations and enforcements) were ultimately imposed on its people. (Please

refer to Chapter 13, "New Rules to Battle the Cholera Outbreak" by Alexandra Saly for a comprehensive review of quarantine).

The enactment of guarantine measures allowed the governor to appoint officials to the Board of Health (starting with Quebec); this included a Health Commissioner, senior magistrates, and Resident Physician (Patterson 1957:168); a change that *empowered* these officials. Quarantine regulations were first acknowledged in Hamilton by the newspapers on 19 April 1832 (The Hamilton Spectator 1832). At first they were unable to enforce many regulations, but on 3 February 1833, an act was created that would allow sanitary regulations to be imposed province wide (Upper Canada); it was called "An Act to establish Boards of Health, and to guard against the introduction of Malignant, Contagious and Infectious Diseases in this Province" (S.U.C. 1833). Moreover, this act allowed the government to appoint a council deemed appropriate to act as Health Officers within towns across Upper Canada (including Hamilton), and empowered them with the authority to enforce changes with regards to sanitation. What this act did, however, was force people to constantly engage in sanitary measures that they may not have undertaken before. Health Officers were now able to go into an individual's house "and order them cleaned" (Patterson 1957:183), and anyone who did not follow sanitary regulations or impeded a Health Officer's effort could be fined 20 shillings (Patterson 1957:183).

This notion of forceful regulation meant that people were most likely looking over their shoulder with regards to the Health Officers, and had little choice but to keep their property in adequate condition. It was a pressure that disseminated from the guarantine act, which first empowered the Board of Health (an extension of the act), which in turn, reinforced an awareness of cholera and sanitary conditions in Hamilton. As stated earlier, these actions did not necessarily have a negative impact on cholera or on individual's lives, but they did change them. When looking at the difference between 1832 and 1854, then, there is a significant change in the enforcement of sanitation, since the revised sanitation act began in 1833. In 1832, people did not necessarily alter their lives, they were only advised to by the Board of Health. After 1833, with the passing of the new act to prevent a recurrence of the disease, individuals were forced to change, regardless of how they felt about the situation. However, by 1854 people were more aware of cholera and the Board of Health continued to implement new sanitary measures. This meant that household and property cleanliness was not too problematic; as such, health officers had less reason to take forceful action.

Silence and Untold Stories

Cholera changed life in both 1832 and 1854, but the marked reduction in the number of articles on cholera in newspapers during the 1854 epidemic meant that *The Cholera* was no longer the talk of the town. This, however, does not mean that cholera was not significant, only that people's awareness had risen dramatically. For example, in the Hamilton Gazette in 1854, less prominence is given to cholera than to the upcoming election. Furthermore, the Board of Health suggested that cholera was disappearing quite quickly, another reason why people may not have been as concerned about the disease as they were in 1832. Cholera may have been an afterthought, something that was there but no longer needed to be discussed in detail, as the disease was no longer new.

A New Life

Cholera had a significant impact on the daily lives of individuals in Hamilton, particularly in 1832 and 1854. In 1832, cholera was an unknown disease, and this can be seen in the way that people reacted to it; they fled from their homes, and were afraid to come close to anyone who had it. In response, the Board of Health was formed and continually reported in the local newspapers not only about the deaths caused by cholera, but advocated preventative measures as well. In 1854, however, the disease was *known*; people knew what precautions to take to prevent cholera. Yet this did not dramatically change the fact that they were still very fearful of the disease.

The pressures placed upon people by the Board of Health and government also changed how they lived, as they had to comply with the sanitary measures implemented, or in the 1854 epidemic, face the imposition of fines by Health Officers. The most dramatic change in 1854, however, was the way in which there was relatively little discussion about cholera in comparison to 1832; cholera was no longer the talk of the city as other issues rose to prominence, such as the increased focus on the upcoming elections in 1854. Cholera nevertheless had a major effect on the lives of individuals in 1832 and 1854, forcing the people of Hamilton into situations that changed the way they lived.
A Grave Situation: Burial Practices Disturbed During Cholera Epidemic

Rachel Duban

You want to know about the cholera epidemic? Well I'll tell you and I'm the man who should know. I drove the hearse for John Blachford who had most of the funerals in those days (The Hamilton Spectator 1960:19-22).

It is a heartbreaking time when one is struggling with the emotions of saying goodbye to a loved one who has passed away. The rituals surrounding death nevertheless are orderly occasions which help a grieving family in their time of sorrow and upheaval (Ramonoff and Terenzio 1998). They assist in physiological, emotional, and spiritual healing because a wide range of emotions can be expressed publicly and privately. Memorial services allow for life reflection, expression of cherished memories of the deceased and they help to justify the life of the deceased (Giblin and Hug 2006). Funerals help mourners evolve into their new social position within their families and the community (Ramonoff and Terenzio 1998). They also assist in community healing and strengthening relationships, as neighbours often support the grieving family (Smart 2011). Spiritual components of a funeral help reaffirm the deceased's continued journey after death and help mourners move forward as they are reminded of the deceased's new status (Giblin and Hug 2006). Therefore, burial rituals play a critical component in the healing process.

Burial practices around the world differ in their objectives, symbols, rituals, locations, timeframe, atmosphere, and grave goods. These traditions are

not static but change because of social and cultural influences, as do interpretations of their meaning (Hodder 1982). During the cholera epidemics of 1832 and 1854, Hamiltonians were met with the challenge of what to do with a rising death toll, along with the need to bury people quickly within an atmosphere of fear of contracting the disease.

This chapter outlines the numerous ways cholera influenced mortuary practice in Hamilton. There is very little information for the 1832 epidemic, therefore I examine burial practices for the mid-1800s to establish a baseline for understanding changes that occurred during the 1854 epidemic. I then discuss the substantial and extraordinary changes in burial practices that occurred during the cholera epidemic of 1854. I highlight the ritual and symbolic components of burial and discuss the disposition of deceased cholera victims into burial grounds in Hamilton. The following discussion can be interpreted using symbolic anthropology. This perspective is critical because cultural traditions are understood as reflections of the broader experiences of a time period. Furthermore, the famous anthropologist Clifford Geertz understood that symbolic investigation helps to reveal the culture of a population (Lassiter 2006).

Blood, Sweat and Tears: Hamilton's Traditional Burial Practices

When Hamilton was settled there were no formal cemeteries. Families reserved a section of their homestead for the burial of their loved ones (Mckee 2006). Although there was no official occupation entitled "funeral director" (Zietsma 1993), settlers established their own methods of honouring the dead and ensuring the memory of the deceased was not forgotten (Storti 1990).

Most of the new settlers adhered to the Christian religion, so it is helpful to examine what is known of Christian burial traditions in 19th-century Ontario. According to Smart (2011), when a family member died it was common practice to draw the curtains to minimize the light that entered the room and light candles in remembrance. Time ceased to progress for the mourners as clocks were often halted and all pictures were flipped over, so to be hidden from view. The mourners remained quiet, in fact, very rarely displaying any deep heart-wrenching emotions that can arise in times of loss; instead individuals uttered tiny sighs and moaned now and then. Members of the community supported the family in their time of need by preparing the body for interment through washing and positioning it for viewing, constructing a coffin, digging and covering the burial plot, 137

providing emotional support for the family, and taking on the families' domestic activities. A wake was held where the mourners would eat, socialize, reminisce about the deceased, and listen to scripture. There was often a gap of several days before an individual was buried in order to prepare, accept the loss and ensure the individual was actually deceased. A funeral service with symbolic religious components was held as the cloth covered coffin was carried by pall-bearers to the burial location where it was placed in the grave, and buried. Wood was plentiful so early Hamiltonians used wooden markers to mark graves (City of Hamilton 2005). Therefore, during the early 19th century, funerals were complex rituals that involved many individuals and took place over a period of several days, allowing mourners the time needed to grieve and begin the healing process.

If You Build It, They Will Come

It is important to review the development of cemeteries in Hamilton and how this process relates to burial practices during the cholera epidemic of 1854. However, to fully understand the transition from family plots to public cemeteries, I briefly touch on the 1832 epidemic. As Hamilton's population increased, people from various religious denominations, including Methodist, Presbyterian, Roman Catholic, Baptist, Anglican, and Jewish (City of Hamilton 2005), began to establish new churches, instead of holding services in their homes. Churches often had small cemeteries nearby so parishioners could be buried on church ground (Mckee 2006). In 1824, for example, the Methodists built Hamilton's first official church (Gemmel 2008) and established a cemetery in 1829 (Mckee 2006). When the first cholera epidemic emerged in 1832, it is likely that a mix of private and public burials were conducted, as the cholera epidemic occurred during the beginning of the transition from home to church cemetery burials.

Unfortunately, church cemeteries were soon inadequately maintained (Storti 1990). As a result, the City of Hamilton bought a large portion of land owned by the Anglican Church for a public cemetery (Storti 1990). In 1848, Hamilton Cemetery was constructed on Burlington Heights (Mckee 2008). The City of Hamilton benefited from this new cemetery because a fee was charged for burials, replacing the free plots used for pioneer burials in the past (Storti 1990).

Information on 93 cemeteries that were open in the Greater Hamilton area during the 1854 epidemic was gathered from the Cemetery Inventory of Hamilton (2005). They were located in Ancaster, Beverly, Binbrook, Dundas,

Flamborough, Glanford, Downtown Hamilton, Hamilton Mountain, and Stoney Creek.

Table 16.1 illustrates the numerous types of cemeteries used for burial during the 1854 epidemic, and the range of religious denominations present in Hamilton at that time. Christian denominations predominated, especially Methodists and Presbyterians. Family burials remained a popular practice for Hamiltonians in the mid-19th century. Therefore, by the 1854 cholera epidemic family burials, church cemeteries and the public cemetery could have been utilized for interring the dead.

Type of Cemetery	Subtype	Number
Community		3
Family		38
Family/Baptist		2
Family/Municipal		1
Municipal		4
Private		1
Religious	Anglican	7
	Baptist	2
	Congregation	1
	Jewish	1
	Methodist	19
-	Presbyterian	10
	Roman Catholic	4

The Show Must Go On...

It is evident that the ritual aspects of burial were greatly disturbed during the 1854 cholera epidemic. The mood in Hamilton was grim and "the wail of anguish was heard on every hand" (The Hamilton Spectator 1892). This expression of grief is a clear display of the terrifying atmosphere of the time. No family could escape cholera's deadly path and therefore, everyone was mourning. In the past the community would assist a grieving family (Smart 2011), but when everyone is grieving there is no one to help others. Community participation in funerals was abandoned and "only members of the families of the deceased went to funerals in those days" (The Hamilton Spectator 1892). This obvious decline of support from friends may, in turn, have hindered the grieving process and recovery.

In 1842, Mr. Blatchford and his son, both tradesmen established a company on King Street West that upholstered furniture, created cabinets and also supplied coffins to Hamiltonians (Zietsma 1993:7). The funeral business proved to be financially stable and the Blatchfords expanded their business to include additional services such as the use of hearses (Zietsma 1993). The shock of widespread loss of friends and family must have been terrible during the 1854 cholera epidemic. "Nearly entire families would be cut down inside of 48 hours. It was no uncommon sight to see the coffins of two or three members of one family carried to the cemetery in the same wagon" (Henley 1994). As a hearse driver employed by John Blachford recalled, "The father was taken in the morning. The next day the mother died. Then five children followed" (The Hamilton Herald 1903). The sheer volume of deaths, with many individuals passing away from one family, would most certainly have had an effect on mortuary practices. In some cases, there may have been no one left to mourn the loss of the deceased, or mourners could have been sick with cholera themselves and therefore too weak to plan and perform funeral rites. It is also possible that when both parents died their children would not have had the financial resources to arrange a service. The loss of many family members in a short period of time would have been shocking and terrifying, perhaps leaving people afraid to leave their homes out of fear of becoming ill themselves.

The situation became so dire that "church services were suspended" (Henley 1994). This is particularly significant because congregations in Hamilton lost the support of fellow parishioners and strength gained from communal prayers. Upon being asked about funeral services John Blachford's employee

responded, "Burial service, indeed! There was none. Who was to read it? The object was to get the bodies underground without loss of time" (The Hamilton Herald 1903). Clearly, there had been a shift from the previous strong religious components of burials, to none at all. In the absence of the traditional religious service it may have been difficult for families to feel that their loved one was able to continue the journey to the afterlife (Giblin and Hug 2006).

John Blachford's employee provides additional insight into the 1854 cholera epidemic through his account of his trips to the hospital to place cholera victims in coffins and bring them to the cemetery. He chillingly explains that upon arriving at the hospital the individual in charge instructed, "the attendants to force the bodies into coffins much too small for them, urging the undertaker to clear out and come back again" (The Hamilton Herald 1903). This is a startling change from the respect, care and time that was devoted to the preparation of the body of the deceased during pioneer burials (Smart 2011). The hospital seemed to have shipped out the dead in assembly-line fashion and one senses the desperate need for more coffins and manpower. Coffins were rudimentary, "Just boards fastened together. The best that could be done, under the circumstances. The number wanted was large, and there was no time for decent coffins to be made. Of course some people had a regular funeral, and special men were got to prepare the caskets, but it was a rush, I can tell you" (The Hamilton Herald 1903). Evidently, some people did try to retain aspects of traditional burial rituals during the 1854 cholera epidemic, but unfortunately, there is no way to know whether these funerals were modified or were typical of the pre-epidemic period.

The hearse driver recounted a heartbreaking tale of collecting a body during the 1854 epidemic. "Upon arriving at the house not a living person was in attendance. The place was entered and the body brought away, after being dead for two days" (The Hamilton Herald 1903). Whether the deceased was intentionally abandoned or just had no living relatives, we will never know. However, this story highlights the amount of time that could pass before the dead were even discovered.

The disposition of the dead, however, was in public view. "Every afternoon, a long line of wagons and hearses would file out King and York streets to the cemeteries" (Henley 1994). Death filled the streets. As another hearse driver recalled, "I used to drive to the cemetery every day and I've had as many as 10 in one load. I've seen coffins stacked up like cordwood. You couldn't get enough grave diggers" (Jones 1960). Hearse drivers and grave diggers were 141

overwhelmed by the sheer volume of deaths. How could the citizens of Hamilton provide their loved one with a decent funeral under the circumstances?

Even the Dead Cannot Escape Segregation

A vivid and disturbing account from the 1854 epidemic claims that a man hired to bury deceased immigrants in Burlington Heights was swindling the city (The Hamilton Spectator 1890). He installed a hinge on the end of a coffin; instead of burying each cholera victim in an individual coffin he would place the body inside the altered coffin. Upon approaching the final resting place, he would open the hinge and dump the body in the Burlington Heights mass grave (The Hamilton Spectator 1890). As a result, the swindler made a great deal of money as he was being paid for separate coffins for each body but simply pocketing the cash (The Hamilton Spectator 1890). The mass grave is known as the "cholera field" (Storti 1990) where the deceased were simply dumped then covered in lime (Elliot 2000). Not only were there no coffins, but bodies in this location were buried without markers to identify them or as a sign of remembrance (Storti 1990). Obviously, the use of the segregated pit saved time, space and prevented contamination. At the same time, it should be remembered that this mass grave contained mostly immigrants; by not marking the area in any way, it was intentionally forgotten by the people of Hamilton. This area remained unmarked until 1926 when Mayor Treleaven's wife unveiled a bronze memorial plaque attached to a large boulder (The Hamilton Spectator 1926). The plaque reads,



"Guard this Resting Place of these Unknown Soldiers, Immigrants and Citizens. Unknown Soldiers of the War of 1812-1814 Ship Fever 1847-1848 Cholera 1854-1855" (City of Hamilton 2005). During the construction of Highway 403 below Burlington Heights, the mass cholera pit was uncovered and the burials were relocated to the Hamilton Cemetery (Houghton 2003).



There is now a new memorial plaque in the Hamilton Cemetery located in section J (represented by the star on Figure 16.1). This memorial is exclusively for cholera victims and includes 391 individuals (Manneke 2008). The plaque reads, "The Stone was Erected to Honour The Diligence of the Late Gary Winston Hill In Disclosing the Burial Site of Hundreds of Dear Souls (Young and Old) Who Died of The Cholera Epidemics" (Hayes 2012).

Although many of the cholera victims ended up in the Burlington Heights mass grave, church grounds were still used for interments. The Inventory of Cemeteries in Hamilton notes other locations were also used for burials during the 1854 epidemic (City of Hamilton 2005). For example, the Zion Hill Cemetery on Powerline Road in Ancaster segregated cholera victims from other burials by placing them on the opposite side of the road (City of Hamilton 2005). The same is true for the Burlington Heights cemetery where cholera deaths are separated from the rest. This differs from home burials of the early 19th century where the dead were buried on homesteads (Smart 2011) and from interments in family plots within cemeteries that allowed the memory of the deceased to remain close (Storti 1990). Hamiltonians wanted the dead as far away from them as possible, as they were extremely fearful of the disease (City of Hamilton 2005). Cemeteries known to have cholera burials are illustrated in Table 16.2. However, by recalling the large number of cemeteries open during the 1854 epidemic (see Table 16.1), it can be inferred that many other locations were used. Unfortunately, we may never know all the cholera burial locations because the cause of death was often not recorded.

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Name	Location	Opening	Туре	Description	
		date			
Burlington	York Boulevard	1812	Municipal	Cholera pits	
Heights	- Barton			1832-1833	
	Township			1854-1855	
Hamilton	777 York	1847	Municipal	Cholera pit reburial	
Cemetery	Boulevard		-	1832 and 1854	
Zion Hill	Powerline Road	1806	Community	1832 and 1854	
Cemetery	- Ancaster		-	segregated cholera area	
Anne	York Road -	1832	Family	Stories of cholera	
Morden	Dundas		-	burials - Possibly	
Farm				William Hare and his	
Cemetery				wife	
Grove	York Road-	1854	Municipal	Burials from Anne	
Cemetery	Dundas		-	Morden Cemetery were	
5				reinterred here	
Fable 16.2: Cemeteries with known cholera burials (City of Hamilton 2005; Manneke 2008).					

Going Against the Tide

Despite the difficulties associated with maintaining traditional burial practices, there were attempts to retain them. One poignant story concerns the death of a young boy's mother whose body was quickly taken to be buried. The boy cried in protest, asking for his mother's remains to be returned. The boy was upset that his mother was not receiving a proper funeral. However, he did not have the money to provide this, so he needed extra time in order to ask the community for assistance. Fortunately, the boy's request was granted and his mother's body was temporarily returned; the public supplied him with enough money for him to bury her respectfully (Jaques 1903). To put the price of a simple funeral into perspective, in 1851 John Blachford charged Hamiltonians five pounds, seven shillings and sixpence for a coffin and hearse to take the body away (Wray 1960). This is no small amount and indicates how much the boy had to fight to bury his mother in the proper way. It demonstrates his bravery and tenacity during such a horrifying time and that it was possible to struggle through the terror and provide

a respectful last goodbye. Despite their own tragedies, the citizens of Hamilton were strong, compassionate and still attempted to provide the communal support to their fellow citizens, which was so essential to traditional burial practices.

Moving Forward

Clearly, there were distinct differences in burial practices during the cholera epidemic of 1854 compared to the years prior to it, revealing a dramatic interruption of tradition and culture. The changes were so drastic, I fear Hamiltonians were not able to adequately mourn the loss of their loved ones and heal physiologically, emotionally, and spiritually. However, the people of Hamilton did one thing that may have helped them heal once cholera passed and the chaos subsided. On August 7, 1854, Hamiltonians fasted for the day and gathered publically to pray for the loved ones that they lost (Henley 1994). The traditional burial practice of the time may not have taken place during the cholera epidemic but this important day was a turning point that marked the return to everyday life. With Hamilton's return to mourning through religious beliefs and community support, I hope individuals were able to heal from the devastating loss of human life during the 1854 cholera epidemic.

Modernity in a Monument: Memory and the Gore Park Fountains

Zach Hammel

To be a member of any human community is to situate oneself with regard to one's (its) past, if only by rejecting it (Hobsbawm 1972:3).

Between 1856 and 1859 Hamilton's pumphouse was constructed as a response to a demand for clean water made imperative by the cholera epidemic of 1854 (McGuiness 2010). More than 500 Hamiltonians died during the epidemic which claimed up to 72 lives per day at the hottest times in July (The Hamilton Spectator 1892). The summer months of 1854 were truly devastating for the people of Hamilton as one newspaperman recalled in 1892. He described Hamilton as a city in mourning that exclaimed a "wail of anguish" as the lives of entire families were destroyed (The Hamilton Spectator 1892). Remembering the past he lived through, this old newspaperman described the cholera epidemic as an affliction that took lives indiscriminately and caused Hamilton to suffer greatly. In the years following 1854, the epidemic was remembered as a disease that stemmed from unclean water and general filth.

The creation of the pumphouse was commemorated in 1860 with the construction of the Gore Park Fountain. The fountain promoted clean water and was a monument to its provision to the people of Hamilton, yet the events of 1854, the cholera epidemics that led to that water in the first place, were neglected. At the time of its construction the fountain's connection to cholera was already slight and with each new reincarnation of the fountain this connection

loosened even further. Increasingly disjointed from the cholera epidemic, the Gore Park Fountain means less today than it ever has. When it was constructed in 1860 only the outcome of cholera was remembered – the pumphouse and clean water it provided. In memorializing only a part of its past once seen as important, Hamilton has created a tradition of forgetting that persists today.

Fountain as Monument

The Gore Park Fountain was built in July 1859 and dedicated in September 1860 in part to commemorate Hamilton's new water system and pumphouse (McNeil 2010; The Head-of-the-Lake Historical Society 1986). In creating this monument to clean water and to the pumphouse, Hamilton was only remembering the



Figure 17.1: The Gore Park Fountain around 1860. The three men at the front of the photo are standing around a new public drinking fountain also made possible by the pumphouse (Hamilton Public Library PreVIEW Database c.1860).

cholera epidemic of 1854 indirectly and unintentionally. The epidemic was a time of death and disease and to truly monumentalize this event would be to remember the suffering experienced by the people of Hamilton. It would have been much more illustrious to instead create a memory of the pumphouse and the step on the road to modernity that it symbolized for the city. This was a monument to clean water, disconnected from cholera and from those who had died five years earlier. This is what Hamilton wanted to remember: not cholera, but rather the progress made in its wake.

The fountain would have evoked notions of modernity and cleanliness in response to filth and disease rather than memories of that filth and disease. For the people of 1860s Hamilton modernity would have meant something like progress. The notion of modernity that I believe would have prevailed at the time was one in which being "modern" was viewed as a giant step along the path to a better future. It would have been part of a teleological idea that a better way of living existed and could be reached through the process of human advancement. Much of this advance would have been envisaged as occurring through improved technology and processes that would have bettered the lives and living conditions of the people in Hamilton. The pumphouse exemplified such an advance, as did the cleanliness that it promoted; for this reason, the fountain also became a symbol for things modern.

The fountain can thus be understood as a proxy for remembering cholera yet that was not the intent when it was erected. An indirect connection can be made between the original fountain and cholera, yet it was truly intended to be a monument to the pumphouse and its modernity. By monumentalizing modernity and progress in the form of the Gore Park Fountain the people of Hamilton chose a meaning and a memory for the year 1854 that really represented developments in the city that took place between the years 1856 and 1859. The cholera epidemic itself was rejected and its products, the pumphouse and clean water, were remembered in its place. This created a positive memory, one that could be construed as a step forward rather than a step back.

That Hamilton city officials chose to memorialize only some aspects of the 19th-century cholera epidemics is not an entirely local or unique reaction. Three cholera epidemics struck Ancona, Italy between 1836 and 1865 that took the lives of 11 medical professionals who were later memorialized in 1869 when a monument was laid in a local cemetery (A Monument to Victims of Cholera 1869). Interestingly, other victims of the cholera epidemics outside of the medical

field received no recognition through this monument. This monument therefore reflects an admiration of modern agents who lost their lives attempting to help others. Their deaths represent an affront to the emergence of a clean and modern world. Their deaths were not tragic, but rather the setbacks those deaths meant for progress towards modernity. Much like Hamilton's Gore Park Fountain, Ancona's "public" or "everyday" deaths have been forgotten to make room for the memory that pays tribute to cleanliness and modernity.

More recently the choosing of specific memories identified with positive or beneficial outcomes has been observed in regards to Socialist monuments in a post-Socialist period. Budapest's Statue Park Museum is a "memorial to the end of communism" (Nadkarni 2003:194). The monuments in Budapest's park date from the Socialist period yet they also monumentalize its dissolution in that they represent sacrifices made in order to give rise to the post-Socialist state and to the future (Nadkarni 2003:194-195). These monuments serve to recall the end of an era in much the same way that the Gore Park Fountain serves only to preserve the outcome of a destructive two month epidemic, not the epidemic itself.

The Many Fountains of Gore Park

By 1959 the age of the Gore Park Fountain was becoming evident. It was torn down and its major pieces were put into storage (McNeil 2010). It was rebuilt a year later as a tall three-bowled monster, hated by the public who described it as flying sauceresque and as a fountain made of gravy bowls and pie dishes (McNeil 2010). Ironically, Hamiltonians also disliked the new, so-called "modern" look of the fountain (McNeil 2010). The original fountain represented a step along the teleological path to modernity while this new fountain, actually designed to look "modern", was seen as anything but. The newly rebuilt fountain was riddled with technical problems and often did not emit any water at all (McNeil 2010). Needless to say, it failed to convey the same message of modernity as the original.

Eleven years later in 1970 a third fountain was constructed for 135,000 – almost fourteen times the cost of the 1959 fountain (McNeil 2010). This third fountain was better. It did not suffer the same technical difficulties as its predecessor yet by the early 1990s it seems a sense of nostalgia was settling on the city. For Hamilton's 150^{th} anniversary the Head-of-the-Lake Historical Society sought to recreate the 1860s fountain utilizing the pieces of the original 149

fountain tucked away in 1959 (McNeil 2010). This final reincarnation of the Gore Park Fountain was completed and on May 8, 2010 it was rededicated to mark the 150th anniversary of clean water in Hamilton (Powell 2010:51).



Figure 17.2: The Gore Park Fountain just before it was taken down in 1959 (Hamilton Public Library PreVIEW Database 1959).

After two separate 150th anniversary celebrations Gore Park finally had a working and durable fountain identical to the original. Despite the similarities, today's Gore Park Fountain is not the same fountain as existed in 1860. In destroying the fountain and rebuilding it three more times the meaning of the original was lost. The original 1860 fountain had already neglected to acknowledge its ties to the cholera epidemic of 1854 and once it was rebuilt it became even more disconnected from the disease. Over the past 150 years the

memory of cholera has been fractured far beyond the splintering that took place in 1860. The fountain has become a symbol for Hamilton and its city centre rather than maintaining a connection to cholera. Even when it was rededicated in 1970 only the connection to clean water was made.



Figure 17.3: The Gore Park Fountain as it stands today. Photo by Brian Kowalewicz of HistoricalHamilton.com (Kowalewicz n.d.a).

So, Where is the Cholera?

In more recent years Hamilton's pumphouse has become its own historic site and Museum of Steam and Technology. It is described as a prime example of Victorian industrial architecture that exists as a "physical illustration of a Victorian use of industrial technology to improve quality of life" (Canada's 151 Historic Places). The museum exhibits a small section on cholera in Hamilton yet its focus is undoubtedly on Victorian industry, technology, and modernity. The acknowledgement of cholera is enriching as information on Hamilton's cholera epidemics is sparse. This nod to cholera occurs only because the pumphouse has become a museum. It displays the story of cholera in Hamilton, but it does not monumentalize it – and there is indeed a difference. The public may visit the museum and receive information regarding cholera in Hamilton but an exhibit does not evoke anything beyond an understanding of a factual history.

A monument evokes individual feelings and memories. It represents a general concept that evokes a personal response among those who pass by or interact with it. A historical display delivers hard facts in a way that is very structured. This rendering of things past creates a one way exchange as facts are delivered. These facts do not create an emotional reaction within the individual and thus are easily forgotten. The original Gore Park Fountain had the ability to evoke personal reactions to modernity and to Hamilton's history. This ability would have allowed people to feel a sense of connectedness with Hamilton's emerging modern self.

The original Gore Park Fountain evoked notions of the cleanliness and modernity given to Hamilton by its pumphouse. The fountain created a memory through individual evocations that would have meant more than facts displayed in a museum. It was chosen to monumentalize modernity yet each individual feeling or memory of modernity spurred by the fountain was different. The pumphouse museum remembers cholera through one of its exhibits yet the museum itself is very out of the way while the Gore Park Fountain was, and is, located in the centre of Hamilton. A small memory of cholera may exist within the walls of the museum yet through its distant location and focus on technology it becomes disconnected from Hamilton's experiences in the 19th century.

The Gore Park Fountain has loose ties to the cholera epidemic of 1854 but it was created as a monument to modernity instead. In remembering clean water and modernity the cholera epidemic has been forgotten. With each reincarnation of the fountain a little more of Hamilton's connection to cholera was severed. Every fountain was meant to represent a re-imagined modernity and with each seems to have come a feeling that Hamilton is not Hamilton without its Gore Park centrepiece. The fountain is a monument to Hamilton's modernity as well as a monument to a part of Hamilton's forgotten past.

Through the study of the history of the Gore Park Fountain its connections to cholera are clear yet these connections are not made by Hamiltonians when looking upon the monument. This book is helping to discover a piece of Hamilton's past that has been more or less forgotten. It is my hope that with a better understanding of things past the Gore Park Fountain can transcend its role as modern symbol of Hamilton and acknowledge its roots within the epidemic of 1854. As a monument, the Gore Park Fountain has the ability to evoke deep personal reactions within individuals who care to look. A clearer connection of the fountain to cholera could make it ideal for ensuring that the people of Hamilton remember their forgotten epidemic.

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