

Dissolving Illusions

Disease, Vaccines, and the Forgotten History

10th Anniversary Edition

Suzanne Humphries, MD

and

Roman Bystrianyk



Rally of the Anti-Vaccination League of Canada, Old City Hall

November 13, 1919

Photographer: William James

Thanks to the City of Toronto Archives

© 2013-2023 Suzanne Humphries, MD, and Roman Bystryanyk

All rights reserved.

ISBN: 979-8-9869363-1-4

Revised August 2024

Those who have had to take detailed notice of the immunisation accidents of the past few years know that to get the truth of what really went wrong generally calls for the resources of something like the secret service.

– Charles Cyril Okell, MC, MA, ScD, FRCP, 1938

Often have I wished that this work, for its own sake and the great issues involved, had been in more competent and less occupied hands, but the results of any investigations as to the effects of vaccination are given with the fervent hope that at least, they may promote inquiry, induce impartial consideration, and elucidate the truth on so important a question affecting the public health.

– J. T. Biggs, Member of the Leicester Town Council and its Sanitary Committee for more than 22 years. 1912

The fatal tendency of mankind to leave off thinking about a thing when it is no longer doubtful, is the cause of half their errors.

– John Stuart Mill (1806–1873)

Authors' Notes

The format of this book is somewhat unconventional, as it is filled with many direct quotes from a wide variety of historical and medical sources. We decided on this format to give you unfiltered information that will help you gain better insight into the true history of disease and vaccination. Oftentimes each quote tells a unique, self-contained story that can draw the reality of the past into view much better than a distilled summary would.

The book contains more than 50 graphs that are based on meticulously researched data. Each graph lists the references upon which the data is based. The graphs provide—in most cases—a never-before-seen view of the history of disease from the 1800s into the 1900s. They provide foundational evidence for the points presented in the text.

The book also includes many photographs extracted from numerous historical sources. Most of the photographs are presented with the exact captions that appeared in the original work.

Throughout the book, **bold text** indicates something that we think warrants special attention.

For more information related to the book, please visit ***www.dissolvingillusions.com***. There you can see photos, full-color graphs, and other information that appears in this book.

A “•” indicates something new in the 10th Anniversary Edition.

Dedications

To Bryan, Kyle, and Dylan, whose entry into this world inspired this investigation, and to Meryl, whose steadfast support, help, and love kept this project moving forward.

– Roman Bystrianyk

To all who continue to move forward with the Truth, despite tyranny nipping at their heels.

– Suzanne Humphries, MD

Acknowledgments

Foreword: Dr. Joseph Mercola

Cover Design: Salome Mumford,
Mumford Designs, www.salomemumford.com

Graphic Art Design: Sonja Carloff,
Red Sonja Graphic Design,
redsonjagraphicdesign@proton.me

Cover Photo: Arthur Smith, Jr. August 1915
(approximately 1 year after vaccination)

Special Thanks

Our thanks go to a great many people, including the following:

The staff of the New York Academy of Medicine Rare Book and History of Medicine Collections for providing some extremely valuable documents.

The Harvey Cushing/John Hay Whitney Medical Library at Yale for its outstanding historical books and wealth of statistical information.

Gary Null, who inspired Roman to think independently and to “pursue the truth no matter where it may take you.”

Clifford G. Miller, who supplied some excellent historical documents.

John Scudamore for providing some of the original raw mortality data for England and Wales.

Heather H. Georghiou, a local history librarian, and others at the Newburgh Free Library, who helped acquire some historical information.

Joseph Lieby for his meticulous research on Arthur Smith Jr.

To our many friends who helped make this book into what it is, including Sandy Lefebvre; Alisa Hunt, Ph.D.; Marshall P. Johnson; and Robert Mariano.

Cindy M. Nicholas, RN, for her outstanding vetting of information and her words of wisdom and support.

Suzanne’s dear friends Serena and Petros for their wisdom and guidance.

Dr. Jennifer Craig and Dr. J. F. for all their invaluable help.

J. T. Biggs, whose dedication to public health and dogged pursuit of the truth culminated in his 784-page book written in 1912 on the question of vaccination and sanitation.

The Not So Good Ol' Days

The scientists and researchers who, throughout the years, have done a great deal of important work that we were able to reference.

The few scientists in academia today who take the risks involved in reporting the truth about vaccines and vaccine components.

The countless souls who acquired, compiled, and maintained an enormous amount of statistical information.

Roman's parents, who were always there when he needed them.

Meryl Barr's seemingly infinite inspiration and support.

All parents who dedicate long hours of self-education in order to care for the precious lives that have been bestowed upon them.

Special Thanks in 2023

I would like to thank all the people who made *Dissolving Illusions* a success; those who purchased books, met me on my travels, invited me to speak in Scandinavia, Finland, USA, New Zealand, and Australia (barring the trolls and border patrol agents who detained me and canceled my visa on bogus charges in 2017).

Thanks to all the parents of vaccine-injured children who woke up despite the pain of realizing you were duped, the parents of never-vaccinated children who hold the precious control group in the balance of truth and illusion.

Thanks to the blind, the willfully ignorant, and the tyrannical opposition, that made me realize what a battle we are in, and forced me to become stronger and dig deeper. Thanks to my new circle of friends who are true, real, and unshakable. Thanks to the many other qualified doctors who now know and are unafraid to admit that vaccination has been 225 years of injecting witches' brew into humanity.

With love, Dr Suzanne.

A handwritten signature in black ink, reading "Suzanne Angles". The script is fluid and cursive, with the first name "Suzanne" and last name "Angles" clearly legible.

The Not So Good Ol' Days

We stand on the shoulders of giants. Their unwavering dedication, tireless efforts, and boldness in challenging the prevailing beliefs of their era laid the foundation for our work. Figures like Massey, Rowley, Maclean, Crookshank, Creighton, Magendie, Winterburn, Brown, Ross, Biggs, and countless others courageously pointed out the shortcomings in the medical notions of their time. To these heroes of yesteryear, I express my heartfelt gratitude. A special thanks that I neglected to give in the original *Dissolving Illusions* book to Neil Z. Miller, whose measles mortality chart in his book launched me on this journey of discovery all those years ago.

Thanks to all who made *Dissolving Illusions* a success and inspired us to investigate further and write the 10th Anniversary Edition. Whether through conversations, recommendations, or sharing insights, each of you has contributed to the broader discussion surrounding the book. This has spread awareness and fostered a deeper understanding of the critical issues in medicine, health, and society. Together, we form a community of individuals driven by a common purpose, and it is through your invaluable efforts that we continue to make a positive impact. To all of you heroes, I also express my deep gratitude.

Over the last few years, the love and support from my friends and family have been a source of strength and joy. I extend my heartfelt gratitude to each one of you. Your presence and encouragement mean the world to me, and I am truly thankful for the deep connections that have enriched my life. A final deep thanks to Michelle. Your unwavering love and support helped keep my ship right and inspired me to stay focused and move forward on many fronts.

Roman.

A handwritten signature in blue ink that reads "Roman Bystrianyk". The signature is written in a cursive, flowing style.

~ 1 ~

THE NOT SO GOOD OL' DAYS

As we passed along the reeking banks of the sewer the sun shone upon a narrow slip of the water. In the bright light it appeared the colour of strong green tea, and positively looked as solid as black marble in the shadow—indeed it was more like watery mud than muddy water; and yet we were assured this was the only water the wretched inhabitants had to drink. As we gazed in horror at it, we saw drains and sewers emptying their filthy contents into it; we saw a whole tier of doorless privies in the open road, common to men and women, built over it; we heard bucket after bucket of filth splash into it...

– Henry Mayhew (1812–1887), September 24, 1849

Passing along a rough bank, among stakes and washing lines, one penetrates into this chaos of small one-storied, one-roomed huts, in most of which there is no artificial floor; kitchen, living, and sleeping-room all in one... Everywhere before the doors residue and offal [waste]; that any sort of pavement lay underneath could not be seen but only felt, here and there, with the feet.

– Friedrich Engels (1820–1895), 1844

Many of us have a picture of the 1800s colored by a myriad of filters that impart a nostalgic and romantic view of that era. You may picture a time when gentleman callers arrived to meet a well-dressed lady in a finely furnished parlor. A time where people leisurely drifted down a river on a paddlewheel riverboat while sipping mint juleps. A time of more elegant travel aboard a steam train passing through the beautiful countryside, or a stylish woman dressed in a long, flowing gown, descending from a sleek horse-drawn carriage

The Not So Good Ol' Days

with the aid of a dapper companion in a top hat. You may think of those times where life was simple and ordered—a seeming utopia, free of the many woes that plague modern society.

But if those filters are removed, and a more objective light is cast upon that time, a different picture emerges. Instead, imagine a world where workplaces had no health, safety, or minimum-wage laws. The 1800s was a century when people put in 12 to 16 hours a day at the most tedious menial labor. Imagine bands of children roaming the streets out of control because their parents were laboring long days. Children were also involved in dangerous and demoralizing work. Picture the city of New York surrounded not by suburbs but by rings of smoldering garbage dumps and shantytowns. Cities where hogs, horses, and dogs and their refuse were commonplace in the streets. Many infectious diseases were rampant throughout the world, particularly in the larger cities. This is not a description of the Third World, but a large portion of what the United States and other civilized Western countries used to be only a century or so ago.



Photo 1.1: Syracuse, NY—Shanties Back to an Open Sewer. (1901)

*The “good old days,” when everything, in particularly human health, was supposedly better than it is today, are a myth. **The documented history of Western civilization describes an endless***

and unromantic struggle with sickness and death, tragically high infant mortality, and the premature death of young adults. Death-dealing epidemics attacked helpless communities nearly as often as summer and winter came to pass, and were followed every few years by major catastrophes. In Victorian England, the average age of death among the urban poor was 15 to 16 years.¹

During the 1800s, the number of factories grew along with a rapidly increasing population, which resulted in a flood of people from the countryside into the towns and cities looking for work. The population of the city of London, England, increased by almost ninefold during the 19th century. Industrialization rapidly multiplied threats to health because of the enormous simultaneous growth of towns.

*In 1750, about 15 per cent of the population lived in towns; by 1880 a staggering 80 per cent was urban. In 1801 one in five workers was employed in manufacturing and linked [jobs that are associated with manufacturing] occupations; by 1871 that had climbed to two in three. The largest city in the Western world, London had about 800,000 inhabitants in 1801; by 1841 its population had grown by a further million, and at the death of Queen Victoria in 1901 the heart of the empire [London] contained seven million inhabitants.*²

Hazardous housing

Housing could not accommodate the population explosion, which resulted in overcrowding and a remarkable buildup of human and animal waste. In some cases, large buildings, originally built for breweries or sugar refineries, were later divided into numerous small, dark

¹ Velvl W. Greene, PhD, MPH, "Personal Hygiene and Life Expectancy Improvements Since 1850: Historic and Epidemiologic Associations," *American Journal of Infection Control*, August 2001, p. 203.

² Roy Porter, *The Greatest Benefit to Mankind*, Harper Collins, 1997, New York, p. 398.

The Not So Good Ol' Days

rooms for families to live in.³ These conditions contributed to high disease and death rates.

*The stench from the “horribly foul cellars” with their “infernal system of sewerage” must needs poison the tenants all the way up to the fifth story... **the well-worn rut of the dead-wagon and the ambulance to the gate, for the tenants died there like flies in all seasons**, and a tenth of its population was always in hospital.*⁴

The Tenement House Commission long afterward called the worst of the barracks “infant slaughter houses,” and showed, by reference to the mortality lists, that they killed one in every five babies born in them.⁵

*If there is an open space between them [tenements], it is never more than a slit a foot or so wide, and gets to be the receptacle of garbage and filth of every kind; so that any opening made for the purposes of ventilation becomes a source of greater danger than if there were none.*⁶

Although advances had been made by the early 1900s, many still lived in abysmal sanitary conditions. Some tenements were furnished with indoor facilities, but they were often shared by multiple families. Tales of despair and suffering were commonplace



Photo 1.2: Jefferson Street. The shed barn at right contains three horses. The barn next in view contains six horses and two goats. The house in the center of the picture is full of Italian families and presents no redeeming feature. On the left are other tenements full of families. (1911)

³ Henry E. Sigerist, *Civilization and Disease*, 1943, Cornell University Press, New York, pp. 38–39.

⁴ Jacob A. Riis, *The Battle with the Slum*, 1902, Macmillan, New York, pp. 23–25.

⁵ *Ibid.*, pp. 36–37.

⁶ *Ibid.*, p. 115.

The Not So Good Ol' Days

among the working poor. Struggle for survival was a daily affair. People were often close to financial and physical collapse.⁷

Poor planning with the ever-increasing number of businesses and population led to haphazard city organization. Businesses of all types, including any of their hazardous environmental by-products, were built alongside crowded living quarters. The lack of health regulations and zoning rules resulted in a dangerous and demoralizing environment for the working-class people. An 1861 article on US cities and parks in the *Atlantic Monthly* described the situation in cities.

Narrow and crooked streets, want of proper sewerage and ventilation, the absence of forethought in providing open spaces for the recreation

*of the people, the allowance of intramural [within the walls of a building] burials, and of fetid nuisances, such as slaughter-houses and manufactories of offensive stuffs, have converted cities into pestilential enclosures, and kept Jefferson's saying—"Great cities are great sores"—true in the most literal and mortifying sense.*⁸



Photo 1.3: A so-called room of a three-room tenement, but it is merely a large size closet with a slanting ceiling, located under the main entrance stairs of the building. Here, in a three-quarter bed, sleep the father and mother and a little child. The rest of the family sleep in the front room and kitchen. This "room" has absolutely no light or ventilation. (1916)

Large numbers of families dwelled within poorly constructed houses. There was no running water and no toilet. An entire street would

⁷ Andrew Mearns, *Light and Shade: A Sequel to 'The Bitter Cry of Outcast London,'* 1885, p. 7.

⁸ Henry W. Bellows, "Cities and Parks: With Special Reference to the New York Central Park," *Atlantic Monthly*, vol. VII, April 1861, p. 416.

The Not So Good Ol' Days

share an outdoor pump and a couple of outside privy vaults or outhouses.

In 1934 Professor Arthur Cole described how some inhabitants of New York and Boston in the 1850s lived in dark cellars overrun with vermin.

While the larger cities possessed handsome residential districts in which the streets were paved and kept clean and the sewage was properly cared for, there was also crowded foreign quarters, veritable hives of humanity lacking ordinary comforts and often even necessities. New York in 1850 had 8,141 cellars sheltering 18,456 persons. There, as in Boston, about a twentieth of the population lived in damp, dark, ill-ventilated, vermin-infested underground rooms. By the end of the war [US Civil War] fifteen thousand tenement houses had been built in New York, many of them hardly more than "fever nests."⁹



Photo 1.4: The general insanitary conditions which surround the houses on both sides of the alley. The first house on the right is a small dilapidated frame house. Beyond it are three larger tenements. The outbuildings at the left are all dilapidated, and contain privies which are in a foul condition. There are not enough garbage boxes to supply the needs, and the ones provided are so seldom cleaned that the families dump their slops and garbage in the alley. (1901)

The working classes inhabited the most deplorable housing, which was described by Friedrich Engels in 1844. Engels visited the slums while in Manchester, England, and noted the horrors he observed. He described the people he encountered in London and other towns in England.

⁹ Arthur Charles Cole, *The Irrepressible Conflict 1850–1865, A History of American Life Volume VII*, 1934, Macmillan, New York, p. 181.

The Not So Good Ol' Days

...these pale, lank, narrow-chested hollow-eyed ghosts, whom one passes at every step, these languid flabby faces, incapable of the slightest energetic expression, I have seen in such startling numbers.¹⁰

Hordes of people crowded beneath smoldering, water-rotted roofs, or burrowed among the rats of clammy cellars.¹¹ Roy Porter, a British historian, noted for his work on the history of medicine, wrote about the plight of millions of people in the newly industrialized cities.

*For millions, entire lives—albeit often very short ones—were passed in new industrial cities of dreadful night with an all too typical socio-pathology: **foul housing, often in flooded cellars, gross overcrowding, atmospheric and water-supply pollution, overflowing cesspools, contaminated pumps, poverty, hunger, fatigue and abjection everywhere.** Such conditions, comparable to today's Third World shanty town or refugee camps, bred rampant sickness of every kind. Appalling neonatal, infant and child mortality accompanied the abomination of child labour in mines and factories; life expectations were exceedingly low—often under twenty years among the working classes—and everywhere sickness precipitated family breakdown, pauperization and social crisis.¹²*



Photo 1.5: The conditions of the filth-strewn alleys, of courts and yards littered with rubbish, of ill-smelling stables and manure boxes find their climax and in part their cause in the accumulation of garbage. (1901)

¹⁰ Friedrich Engels, *The Condition of the Working-Class in England in 1844*, Otto Wigand, Leipzig, p. 98.

¹¹ Jacob A. Riis, *The Battle with the Slum*, 1902, Macmillan, New York, p. 13.

¹² Roy Porter, *The Greatest Benefit to Mankind*, Harper Collins, New York, 1997, p. 399.

The Not So Good Ol' Days

Contemporary writers of the time tried to call attention to the plight of the wretched poor and their terrible living conditions. Andrew Mearns and William C. Preston wrote about the poor in their 1883 book *The Bitter Cry of Outcast London: An Inquiry into the Condition of the Abject Poor*.

*Few who will read these pages have any conception of what these pestilential human rookeries are, where tens of thousands are crowded together amidst horrors which call to mind what we have heard of the middle passage of the slave ship. To get to them you have to penetrate courts reeking with poisonous gases arising from accumulation of sewage and refuse scattered in all directions and often flowing beneath your feet; courts, many of them which the sun never penetrates, which are never visited by a breath of fresh air, and which rarely know the virtues of a drop of cleansing water. You have to ascend rotten staircases, which threaten to give way beneath every step, leaving gaps that imperil the limbs and lives of the unwary. You have to grope your way along dark and filthy passages swarming with vermin. Then, if you are not driven back by the intolerable stench, you may gain admittance to the dens in which these thousands of beings who belong, as much as you, to the race for whom Christ died, herd together.*¹³

The extremely stressful conditions rapidly aged the poor working-class people. Those who escaped death from disease or disability at an early age often only lived into their thirties or forties.

*Among the laboring classes, life expectation remained everywhere low—little more than thirty years—and from the 1830s photographs show working people looking old by their thirties and forties, as poor nutrition, illness, bad living conditions and gross overwork took their toll.*¹⁴

¹³ Andrew Mearns and William C. Preston, *The Bitter Cry of Outcast London: An Inquiry into the Condition of the Abject Poor*, 1883, James Clarke & Co., London, p. 4.

¹⁴ *Ibid.*, p. 425.

The Not So Good Ol' Days

Water and sewage and everything offal

Clean water, proper sewage treatment, and fresh air did not exist in these areas. Without any sanitary infrastructure, human and animal waste would flow into the streets, ending up in the local streams and rivers, which happened to also be the people's primary water supply. Sanitary facilities designed for smaller populations failed. Cesspools overflowed and seeped into the local water supplies.

*The manner in which the great multitude of the poor is treated by society to-day is revolting. They are drawn into the large cities where they breathe a poorer atmosphere than in the country; they are relegated to districts which, by reason of the method of construction, are worse ventilated than any others; **they are deprived of all means of cleanliness, of water itself, since pipes are laid only when paid for, and the rivers so polluted that they are useless for such purposes; they are obliged to throw all offal and garbage, all dirty water, often all disgusting drainage and excrement into the streets, being without other means of disposing them; they are thus compelled to infect the region of their own dwellings.***¹⁵

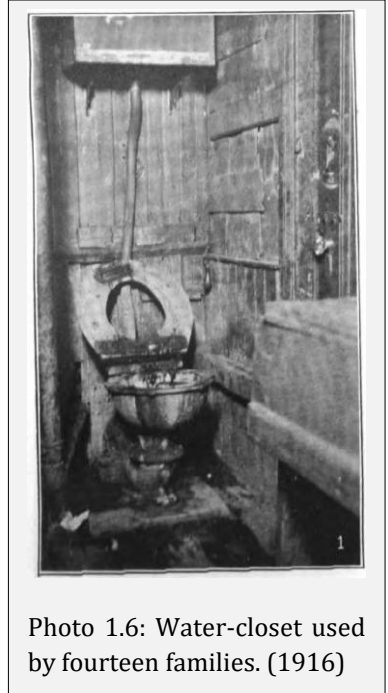


Photo 1.6: Water-closet used by fourteen families. (1916)

In the mid-1800s, public water supplies in McLean County, Illinois, and Chicago were described as being contaminated with human and animal waste. The Chicago Medical Society frequently criticized the city's water supply, which after 1853 was drawn from Lake Michigan

¹⁵ Friedrich Engels, *The Condition of the Working-Class in England in 1844*, Otto Wigand, Leipzig, p. 97.

The Not So Good Ol' Days

by means of a crude wooden inlet 600 feet long, close to where the sewage-filled Chicago River emptied.¹⁶

*Before the 1870s, all kinds of garbage and human and animal waste had been thrown into what became known as the "North and South Sloughs," originally small streams running into Sugar Creek. Over the years the Sloughs "became a... sodden pool of stench that was the breeding places for disease... because it drained sewage into the community's primary water source, Sugar Creek."*¹⁷



Photo 1.7: Public hall and sink. Sink supported only by string and flimsy wooden props. Hall floor covered with fecal matter and sewage. (1903)

Poor waste management continued in Paris even after World War I, with many of the city's cesspools still in use.

*Unlike Londoners, most Parisians were still getting their water in 1870 from fountains or water-sellers, and disposing of waste in court pits. Paris was a city of 85,000 cesspools; many remained until after the First World War.*¹⁸

Edwin Chadwick, an English social reformer who worked to improve sanitary conditions and public health, believed that sickness bred poverty. He enlisted the aid of three doctors who were sympathetic to

¹⁶ Thomas Neville Bonner, *Medicine in Chicago 1850–1950: A Chapter in the Social and Scientific Development of a City*, American History Research Center, 1957, Madison, Wisconsin, p. 179.

¹⁷ Lucinda McCray, *A Matter of Life and Death: Health, Illness and Medicine in McLean County, 1830–1995*, 1996, Bloomington Offset Process, Inc., pp. 54–55.

¹⁸ Roy Porter, *The Greatest Benefit to Mankind*, 1997, Harper Collins, New York, p. 416.

The Not So Good Ol' Days

sanitary reforms—Neil Arnott, James Phillip Kay-Shuttleworth, and Thomas Southwood Smith. Their 1838 report revealed the squalor in London.

*"The room of a fever patient, in a small and heated apartment in London, with no perflation [blowing] of fresh air, is perfectly analogous to the stagnant pool in Ethiopia full of the bodies of dead locusts," declared Southwood Smith. "The poison generated in both cases is the same; the difference is merely in the degree of its potency."*¹⁹

Animals: Dead and alive, dangerous and diseased

Because there were no environmental laws, industries simply discharged their waste into the air and water. In 1850s London, the environment was filled with dirt that spewed from factories. If human and animal waste in the city streets were not revolting enough, the people withstood an even worse addition to the loathsome scenario—putrefying corpses of animals.

*In manufacturing towns, factory chimneys spewed soot, and everything was covered with dirt and grime. Smoke was a major ingredient of the famous London fog, which not only reduced visibility, but posed serious health risks. Refuse, including the rotting corpses of dogs and horses, littered city streets. In 1858, the stench from sewage and other rot in London was so putrid that the British House of Commons was forced to suspend its sessions.*²⁰

Animals were found in great numbers in the cities, either roaming freely or in slaughterhouses. The *Annual Report of the Metropolitan Board of Health* in 1866 describes slaughterhouses that were intermingled with tenement housing.

¹⁹ Ibid., p. 410.

²⁰ Thomas F. X. Noble, Barry Straus, Duane J. Osheim, Kristen B. Neuschel, Elinor A. Accampo, David D. Roberts, and William B. Choen, *Western Civilization: Beyond Boundaries*, volume II, 6th ed., 2010, Wadsworth, Boston, Massachusetts, p. 579.

The Not So Good Ol' Days

*The suffering caused to animals by the present system of slaughtering is a source of pain and annoyance to all persons living near these establishments. The animals are seldom fed from the time they arrive until they are killed, and constantly give expression to their suffering. Many slaughter-houses are located in the centre of blocks of high tenement-houses, and the business of slaughtering, as viewed from the adjacent windows, is in the highest degree demoralizing in its effects upon the young.*²¹

People threw their garbage out onto the city streets, where it was consumed by scavenging pigs, dogs, and rats. The filth in New York City streets had amassed to a depth of two to three feet in the winter. Household refuse and animal waste from horses and the other animals mixed with the muddy streets.

*...nearly every city—from the national capital to some budding Western porkopolis—had its hog nuisance or some equivalent. The streets, squares and parks amounted to public pens, hog holes offending the eye and nose at every turn... In the fall of 1853 porkers were more numerous on the streets of Springfield [Illinois] than in the pens at the state fairgrounds. The near-by town of Urbana had a record of more hogs than people, and they had at least equal rights with citizens upon the streets.*²²

With the accumulation of garbage came the inevitable increase in vermin, such as rats, which became an accepted part of city life. Disease-spreading insects of all types, including cockroaches, were commonplace in tenements.

Prisons, dock-yards, and wharves have been celebrated for the multitude and magnitude of the rats which infest them, and the cruelty

²¹ *Annual Report of the Metropolitan Board of Health, 1866, 1887, C.S. Wescott & Co.'s Printing House, New York, p. 34.*

²² Arthur Charles Cole, *The Irrepressible Conflict 1850–1865: A History of American Life Volume VII*, Macmillan, 1934, New York, pp. 179–180.

The Not So Good Ol' Days

*of their voracious attacks upon the inmates of these receptacles of vermin.*²³

In 1916 the cities of New York and Boston were infested with millions of rats, causing a huge amount of destruction.

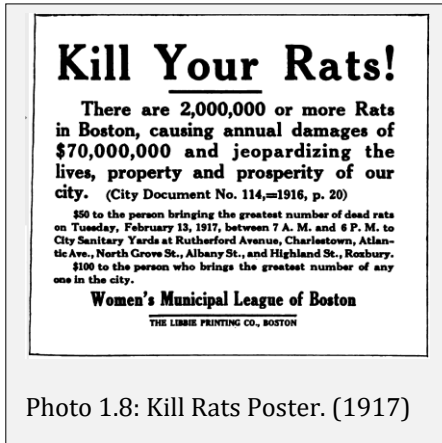


Photo 1.8: Kill Rats Poster. (1917)

*It is estimated by the bacteriological department of the Boston board of health that \$72,000,000 in damage is done yearly by the 2,000,000 rats that infest Boston. About \$91,250,000 in damage is done yearly by rodents in New York City.*²⁴

During the mid-1800s, hospitals were unsanitary and overcrowded. The American public looked upon them with little regard, considering them a place where the sick and poor went to die. An 1860 article entitled "Rats in the Hospital," published in *Harper's Weekly*, a leading journal of that time, exposed the horrific conditions at Bellevue Hospital in New York. The article was inspired by an incident of a baby who was eaten by rats at that hospital.

*This day, the inquest held on the body of the infant that was eaten by rats in Bellevue Hospital, New York, was concluded. The evidence of Mary O'Connor, the mother of the child, and that of numerous other witnesses, was taken... and recommended that proper means be taken to rid the hospital of the rats that now infest the institution.*²⁵

²³ *The American Medical Gazette*, vol. XI, 1859, Hall, Clayton & Co. Printers, New York, p. 387.

²⁴ *The Women's Municipal League of Boston Bulletin*, May 1916, p. 20.

²⁵ *Vincent's Semi-Annual United States Register*, 1860, p. 346.

The Not So Good Ol' Days

Diseased food

The limited sources of food consumed by the population were often of poor quality or contaminated. A lack of laws or unenforced laws and a systemically corrupt food supply chain led to an abysmal health situation for those eating diseased food. Attempts to improve the situation were almost always opposed by the individuals and businesses engaged in the offenses because it impacted their bottom line. In Chicago and New York City, milk was of such poor quality that it caused the deaths of thousands of children each year.



Photo 1.9: A case of Acute Milk Poisoning Having Vomiting, Diarrhoea, Mucous and Bloody Stools, General Emaciation, Acute Cholera Infantum, and Dysentery. (1914)

*...milk sold in Chicago came from cows "fed on whiskey slops with their bodies covered with sores and tails all eat off," a circumstance which enabled the editorial critic to explain "Why so many children die in Chicago." New York's milk supply was also largely a by-product of the local distilleries and the milk dealers were charged with the serious offense of murdering annually eight thousand children.*²⁶

*[Cows] shut up, without proper exercise or pure air, the milk is necessarily diseased, and is the cause of extensive mortality among young children and infants. Besides the unhealthy slops, decayed vegetables, and the sour and putrid offals and remnants of kitchens, are gathered up for food for these animals; the consequence of which is, that they become diseased...*²⁷

²⁶ Arthur Charles Cole, *The Irrepressible Conflict 1850–1865: A History of American Life Volume VII*, 1934, Macmillan, New York, p. 181.

²⁷ Jonathan Pereira, MD, "Milk as Affected by the Diet and Regimen of Cows," *A Treatise on Food and Diet*, 1843, J. & H. G. Langley, New York, p. 287.

The Not So Good Ol' Days

In 1860s England, city inspectors attempted to control the sale and use of diseased meats. To avoid financial losses, diseased meat was made into sausages, pickled and cured for ham and bacon, to be sold to an unsuspecting public. Meat that was too diseased for even sausage was fed to the pigs, which would later be eaten by humans.

*The dead-meat markets are contaminated by the carcasses of diseased animals from all sources... in the City markets alone his inspectors seize from one to two tons of diseased meat every week; and similar seizures, but to a less extent, are made in butchers' shops and slaughter-houses outside the City by Medical Officers of Health and their assistants. In Edinburgh [England], Mr. Gamgee tells us that 100 to 200 diseased cattle are sold in the dead-meat market every week, carcasses being smuggled in by night even from adjoining piggeries. In this way the best butchers, in ignorance "may and do serve diseased meat to the wealthiest in the land." ...**Pigs are largely fed upon diseased meat which is too far gone even for the sausage-maker, and this is saying a great deal; and as a universal rule, disease pigs are pickled and cured for bacon, ham, etc.***²⁸

People often consumed nutrient-deficient diets and contaminated food that left them weak and susceptible to disease. This 1865 report talks about the deplorable state of food in the city of New York. Decayed and diseased foods were often sold to the working classes, which left them in a weakened physical condition.

The quality of the food sold at the corner and butchers' shops in this neighborhood deserves a more extended notice than it can receive here. A casual examination shows much of it to be unfit for human sustenance. Unwholesome meat, particularly slunk veal [flesh from the fetus of a calf, found during the slaughter of its mother], is constantly vended and consumed. Piles of pickled herrings are exposed to the air till the mass approaches a condition of putridity;

²⁸ *The British and Foreign Medico-Chirurgical Review, Quarterly Journal of Practical Medicine and Surgery*, vol. XXXV, January–April 1865, John Churchill & Sons, London, pp. 32–33.

The Not So Good Ol' Days

*and this slimy food, with wilted and decayed vegetables, sausages not above suspicion, and horrible pies, composed of stale and unripe fruits, whose digestion no human stomach can accomplish, all find ready purchasers. These **decaying animals and vegetable remains are daily entombed in the protuberant stomachs of thousands of children, whose pallid, expressionless faces and shrunk limbs are the familiar attributes of childhood in these localities.***²⁹

Deadly coal

As the Industrial Revolution progressed, cities in Britain, Europe, and America consumed vast amounts of coal. By the late 19th century, annual coal production reached a staggering 450 million metric tons in the United States and England combined. Unfortunately, the arduous nature of coal mining was accompanied by severe health risks, often resulting in tragic fatalities. Throughout the decades and across the globe, many miners, including women and children, suffered gruesome deaths due to accidents such as falling down mine shafts, mine roof collapses, mine fires, being crushed by stones or coal, being killed by mine gas or dust explosions, being trampled by wagons, cars, or locomotives, suffocating from mine gases, and drowning.^{30,31}

60 persons perished in this year falling down shafts, of whom 29 were under eighteen years of age and 13 were Children... 9 persons perished from the breaking of ropes and being drawn over the pulley, of which four were Children; that 22 persons perished in the pits from drowning; and that 88 persons perished by the explosion of

²⁹ *Report of the Council of Hygiene and Public Health of the Citizens' Association of New York*, 1865, p. 59.

³⁰ *Parliamentary Papers, Great Britain. Parliament. House of Commons Reports from Commissioners. Children's Employment (Mines)*. vol. 15, 1842, p. 136.

³¹ "Monthly Statement of Coal-Mine Fatalities in the United States," *Department of the Interior Bureau of Mines*, October 1913, p. 4.

The Not So Good Ol' Days

*carbureted hydrogen gas and from suffocation by carbonic acid gas.*³²

From 1900 to 2016, there were 104,851 recorded coal mining-related fatalities in the United States.³³ It was reported in the *Engineering and Mining Journal* in 1904 that...

FATAL ACCIDENTS IN COAL MINING — INTERNATIONAL COMPARISON. 1898-1902.

States and Countries.	Total No. Employees in 5 Years.	Total No. Killed in 5 Years.	Accident Rate per 1,000 Employees
British Columbia . . .	18,784	276	14.69
Tennessee	41,655	328	7.87
Natal	13,616	80	5.88
West Virginia	140,585	570	4.05
New South Wales. . . .	58,062	181	3.12
Alabama	69,166	213	3.08
Pennsylvania (anthr.).	722,621	2,096	2.90
Iowa.	64,936	156	2.84
Pennsylvania (bit.). . .	541,248	1,479	2.73
Nova Scotia.	32,450	80	2.47
Prussia (bit.).	1,865,802	4,948	2.33
Illinois	201,549	451	2.24
Prussia (brown coal). .	207,645	460	2.22
Kansas.	50,985	108	2.12
Victoria	4,710	10	2.12
Ohio.	160,021	330	2.06
Indiana	51,198	104	2.03
Queensland	6,268	12	1.91
Austria (brown coal) .	216,340	396	1.83(a)
Kentucky	47,444	70	1.48
Missouri.	41,220	58	1.41
United Kingdom. . . .	3,789,859	4,992	1.32
France.	793,236	975	1.23
Belgium.	649,834	734	1.13
Austria (bit.).	260,678	279	1.07(a)
New Zealand.	12,255	13	1.06
India	421,810	352	0.83
Total	10,473,967	19,151	1.83

(a) Average rate for four years. data for 1900 not being available.

Photo 1.10: Fatal Accidents in Coal Mining – International Comparison. 1898-1902 [5 years].

*...the approximate number of persons employed in coal-mining operations the world over to be 2,500,000, we have it that on the average, almost 5,000 persons are annually killed in the production of the world's coal supply.*³⁴

Not only were millions of people subjected to appalling and dangerous working conditions while extracting coal from the earth, but burning coal also severely impacted human health and the environment. Cities and towns became notoriously pol-

luted as endless smokestacks belched out dark clouds of soot and ash, making this bleak and dreary cityscape a symbol of the new modern

³² *Parliamentary Papers, Great Britain. Parliament. House of Commons. Reports from Commissioners. Children's Employment (Mines)*, vol. 15, 1842, p. 136.

³³ Coal Fatalities for 1900 Through 2016, *United States Department of Labor – Mine Safety and Health Administration*, <https://arlweb.msha.gov/stats/centurystats/coalstats.asp>

³⁴ Frederick Hoffman L., "Fatal Accidents in Coal Mining in 1903," *The Engineering and Mining Journal*, December 22, 1904, p. 990.

The Not So Good Ol' Days

industrial metropolis.³⁵ In 1880, meteorologist Rollo Russell wrote of the pollution in London:

*In winter, more than a million chimneys breathe forth simultaneously smoke, soot, sulphurous acid, vapour of water, and carbonic acid gas, and the whole town fumes like a vast crater, at the bottom of which its unhappy citizens must creep and live as best they can.*³⁶

The famous London fog was not simply a low-lying cloud of water vapor. In fact, the London fog was made up of soot, and smoke spewed into the air from the massive amount of coal being burned that stayed trapped in the atmospheric wetness of naturally occurring fogs. “A London fog is brown, reddish-yellow, or greenish, darkens more than a white fog, has a smoky or sulfurous smell... and produces, when thick, a choking sensation.”³⁷ One London visitor in the 1830s described his view of the city as a “dense canopy of smoke that spread itself over her countless streets and squares, enveloping a million and a half human visitors in murky vapour.”³⁸

In addition, the sunshine that reached London’s streets was often significantly less than in the countryside, frequently keeping the city dark and gloomy. This persistent air pollution in London resulted in a loss of 1/6 of its sunshine during the summer and half during the winter.³⁹ This undeniably exerted a substantial influence on vitamin D levels in industrial cities, yielding deleterious consequences for the population that was not fully appreciated at the time. A visitor from India wrote of her trip to London in 1882 and noted the detrimental impact of pollution on life in the city.

³⁵ William Cavert, *The Smoke of London - Energy and Environment in the Early Modern City*, 2016, Cambridge University Press, p. 5.

³⁶ Francis Albert Rollo Russell, FMS, *London Fogs*, 1880.

³⁷ Ibid, Rollo.

³⁸ James Johnson MD, *Change of Air; Or The Pursuit of Health and Recreation (through France, Switzerland, Italy, &c.)*, 1835, London, p. 1.

³⁹ “The Treatment of Smoke: A Sanitary Parallel,” *Nature*, vol. 66, no. 1722, October 30, 1902, pp. 667–670.

The Not So Good Ol' Days

*A London fog is a thick mist... London has so many mechanised wagons and factories, and in winter, every home spews smoke out of its chimneys so that on particular days the smoke becomes heavier than the air, cannot rise up and therefore settles over the city and sometimes engulfs large areas and darkens almost everything... Darkness more horrible than that at night has descended at noon, and no artificial light can really illuminate the blackness created by a fog. It is difficult to breathe; one is suffocated by tiny black, oily particles that clog the nose.*⁴⁰

In 1902, the daily smoke emitted by the 14,500 factories in London and the million household chimneys was estimated to total 7 million tons.⁴¹ When conditions were favorable for fog formation, this pollution fell back onto London. As the Clerk of Weather noted, “...the refuse which we thrust up our chimneys simply descends upon our heads and into our houses.”⁴² For decades, air pollution from the increasing use of coal plagued the inhabitants of London and other cities, causing respiratory problems and negatively impacting the health of millions of people.

*The evil effects of town air upon plant life and human lungs, also often attributed to preventable smoke, are in like manner due to this non-preventable sulphuric acid. Sixteen million tons of coal are annually used in London for heating purposes, and it has been shown by Dr. Rideal that... there is diffused in the air of the metropolis from half a million to a million tons of sulphuric acid every year... It has... **been proved that the death-rate enormously expands in foggy weather...***⁴³

...it is now over 200 years [approximately 1700] since a chronicler complained of the London fogs as ‘exceedingly

⁴⁰ Jayati Gupta, “London Through Alien Eyes,” *Literary London Interdisciplinary Studies in the Representation of London*, vol. 1 no. 1, March 2003.

⁴¹ “The Treatment of Smoke: A Sanitary Parallel,” *Nature*, vol. 66, no. 1722, October 30, 1902, p. 669.

⁴² “London Fog,” *The Illustrated Scientific News*, December 1902, p. 43.

⁴³ “SMOKE,” *The ENCYCLOPÆDIA BRITANNICA*, eleventh edition, volume XXV, 1911, pp. 275-277.

The Not So Good Ol' Days

obstructing the breath, so as one could hardly breathe.' Today London has ten times the population it had then, and there is still little or no relief.⁴⁴

In 1880, it was noted that the large amount of coal being burned each year contributed to the shortened lives of thousands of people by causing them to “*simmer in their own gravy.*”⁴⁵ During especially thick fogs, deaths would often increase, particularly in instances of respiratory diseases.

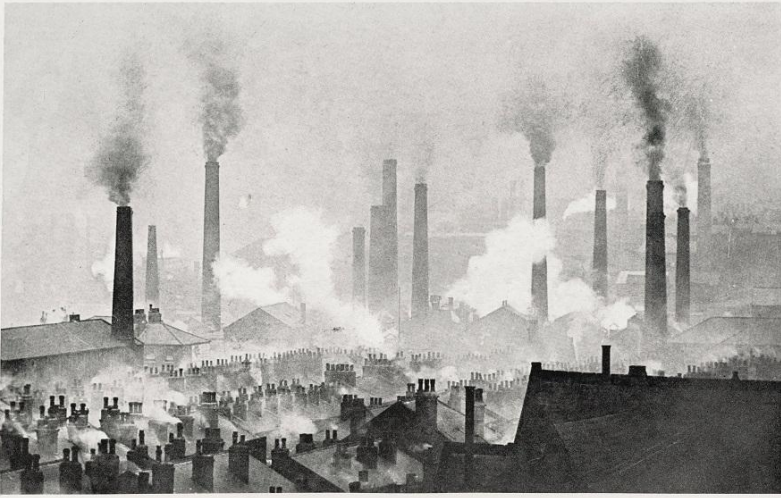


Photo 1.11: View of Leeds, Overlooking Kirkstall Road. (1925)

*The excess mortality was mainly referred to diseases of the respiratory organs, which caused 1,557 deaths last week, against 559 and 757 in the two preceding weeks, showing an excess of 1,118 upon the corrected weekly average. The fatal cases of bronchitis, which had been 531 in the previous week, rose to 1,223 last week.*⁴⁶

⁴⁴ “Smoke a Sanitary, Not Only Esthetic Nuisance,” *American Medicine*, vol. 3, no. 20, May 17, 1902, p. 800.

⁴⁵ Francis Albert Rollo Russell, FMS, *London Fogs*, 1880.

⁴⁶ “Fog Fatality in London,” *British Medical Journal*, February 14, 1880, p. 254.

The Not So Good Ol' Days

Increased deaths during these higher-than-average thick fogs would draw the attention of public officials, but this was a persistent problem, with millions of people spending most of their lives in health-destroying toxic air, often resulting in death. Between 1800 and 1900, air pollution in Great Britain may have killed people at a rate 4 to 7 times higher than worldwide.⁴⁷ One study found that in England and Wales, from 1851 to 1860, local industrial pollution significantly impacted mortality. There was an increase in infant mortality ranging from roughly 6–8% and for under-5s, ranging from 8–15%. In the most heavily polluted cities, such as Sheffield, Manchester, or Birmingham, where coal use was high, local industrial pollution increased infant and under-5 mortality.⁴⁸

*We may infer that numerous deaths occur in the course of the year from smoke-fogs, not unusually thick, producing or increasing diseases of the lungs... a large annual loss of life from the perpetual presence in the London atmosphere of smoke and soot, blocking up the air passages and irritating the mucous membrane so as to lead to consumption [tuberculosis], lowering the vital energy, depressing the system both by the impurity of the air breathed and by the deprivation of light, for these influences tell heavily on many constitutions, especially those which happen to be in a weak state of health, as those recovering from fever.*⁴⁹

Drowning in dung

As detrimental as coal pollution proved to be for exacerbating respiratory issues and infections, the putrid conditions within homes, greatly compounded by cesspits beneath them, were undoubtedly more horrifying. Cesspits collected household urine and excrement,

⁴⁷ Mark Jacobson, *Atmospheric Pollution - History, Science, and Regulation*, 2002, Cambridge University Press, p. 84.

⁴⁸ Brian Beach and W. Walker Hanlon, "Coal Smoke and Mortality in an Early Industrial Economy," *The Economic Journal*, June 8, 2017.

⁴⁹ Francis Albert Rollo Russell, FMS, *London Fogs*, 1880.

The Not So Good Ol' Days

resulting in stench that leaked through houses and were the driving force for later sanitary reforms.

This is the thing that's often forgotten: that London at the start of the 19th century, it was basically filled with these cesspools. There'd be brick chambers... they'd be maybe 6 feet deep, about 4 [feet] wide and every house would have them. They'd be ideally in the back garden away from the house, but equally in central London and more crowded areas it was more common to have a cesspool in the basement.⁵⁰

By 1890, London had around 300,000 working horses, producing 1,000 tons of dung daily. Boys aged 12 to 14 were employed to dodge

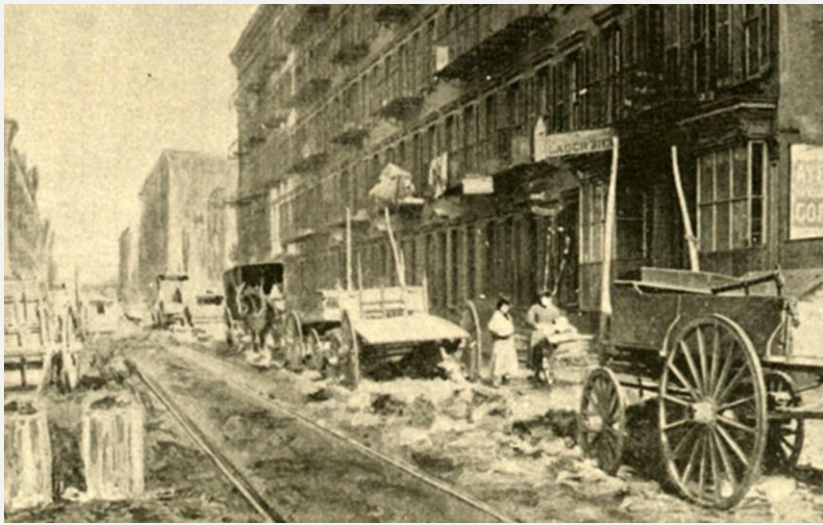


Photo 1.12: Goerck and Delancy Streets in New York City. The condition of the streets, with the masses of mud, manure, and other monstrous agglomeration of everything dangerous, unsightly, and offensive, is plainly indicated... Barrels and pails overladen with material, mingled in a foul mess of garbage and ashes, beset the sidewalks. In many cases these have been upset, and the unsavory contents emptied on the curbstone and into the gutter. (1893)

⁵⁰ ““Dirty Old London’: A History Of The Victorians’ Infamous Filth,” *NPR*, March 25, 2015, <https://www.cpr.org/2015/03/12/dirty-old-london-a-history-of-the-victorians-infamous-filth>

The Not So Good Ol' Days

traffic and immediately scoop the poop. The Thames River was thick with animal and human sewage, and street “mud” was essentially horse urine and dung.⁵¹

Manure from skirt hems and shoes was inevitably dragged into houses. Horses produced around 2 pints of urine daily and 15 to 30 pounds of manure and had a life expectancy of three years. Horses that dropped dead on the street were often left in the street to putrefy so they could be more easily sawn into pieces for removal. The manure and rot attracted massive numbers of flies, spreading typhoid fever and other diseases.⁵²

The soot in the air from coal and effluent from cesspits, rivers, and roads were poisoning people in London and American cities. This problem was one of the driving forces behind sewage systems to replace household cesspits and Henry Ford's solution of making cars for ordinary people so that horses could be removed from cities.

The glimpse we have just taken of the underside of Western culture from the 1800s to the 1900s is rarely discussed in terms of the medical issues and diseases of that notoriously sickened era. Yet those were the most important aspects of susceptibility and spread of illness.

Adults and children in these conditions lived an unthinkable existence. Their lives were often beset not only with pitiful living conditions, soot, excrement, and diseased, rotten food but also with long hours of arduous and demoralizing labor, all of which took an enormous toll on their immunity, leaving them vulnerable to various infections.

⁵¹ Ibid.

⁵² Ben Johnson, “The Great Horse Manure Crisis of 1894,” *Historic UK*, <https://www.historic-uk.com/HistoryUK/HistoryofBritain/Great-Horse-Manure-Crisis-of-1894>

SUFFER THE LITTLE CHILDREN

I have been working below three years on my father's account: he takes me down at two in the morning, and I am up at two the next afternoon. I go to bed at six at night, to be ready for work the next morning. I have to bear my burthen [burden] four traps or ladders before I get to the main road, which leads to the pit bottom. My task is four or five tubs; each tub holds 4 ½ cwt [1 cwt. or hundredweight = 112 pounds]. I fill five tubs in twenty journeys. Am very glad when my task is wrought, as it sore fatigues.

– Ellison Jack, 11-year-old girl, coal bearer, 1840s

*But the young, young children, O my brothers!
They are weeping bitterly.
They are weeping in the play-time of the others
In the country of the free.
"For oh!" say the children, "we are weary,
And we cannot run or leap.
If we cared for any meadows, it were merely
To drop in them and sleep."
They look up with their pale and sunken faces,
And their look is dread to see.*

– Elizabeth Barrett Browning (1806–1861),
"The Cry of the Children," 1842

In the Western world, many children enjoy what we have come to define as a normal childhood. They generally get up in the morning and have a reasonable breakfast, and then, during the majority of the year, attend school. In public and private schools, they are educated in math, science, languages, and other areas of study. While in school, they are fed, and all their basic needs are usually met. They often have

Suffer the Little Children

a chance to experience art, music, and physical education and to play games at recess. During the balance of the day, they may interact with their friends, play games, enjoy sports, watch television, play with their pets, or engage in an entire host of other leisure activities. At night they sleep in a relatively safe environment. In the summer months, they often enjoy long, leisurely days playing and may even take vacations with their family.

Although this life is not enjoyed by all and may not be perfect, it is far more common in the developed world than it used to be. During the 1800s and into the 1900s, life for many children in the United States and England was that of long and brutal hours of hard labor and poverty. Their lives were not filled with joy and laughter, but often with suffering and crushing misery.

From the late 1700s into the 1800s, machines frequently replaced manual labor for the production of most manufactured goods. With the large number of factories, the owners needed sources of cheap labor, which was often found in the form of children. Many machines did not need adult strength to operate, so children could be hired more inexpensively than adults. Factory work for children was abusive and demoralizing.

Children from seven years of age upward, were engaged by hundreds from London and other large cities, and set to work in the cotton spinning factories of the north. Since there were no other facilities for boarding them, "apprentice houses" were built for them, in the vicinity of the factories, where they were placed under the care of the superintendents or matrons... They were remotely situated, apart from the observation of the community, left to the burdens of unrelieved labor under the harshness of small masters or foremen. Their hours of labor were excessive. When the demands of the trade were active they were often arranged in two shifts, each shift working twelve hours, one in the day and another in the night, so that it was a common saying in the north that "their beds never got cold," one set climbing into bed as the other got out. When there was no night work the day

Suffer the Little Children

*work was the longer. They were driven at their work and often abused.*¹

The 1816 report of the Select Committee on the state of children employed in manufacturing detailed the distress that children endured. They labored long hours to the point of exhaustion. Those who lived suffered physical breakdown from the harsh conditions they endured.



Photo 2.1: Boy coal miners. (1914)

Children of all ages, down to three and four, were found in the hardest and most painful labor, while babes of six were commonly found in large numbers in many factories. Labor from twelve to thirteen and often sixteen hours a day was the rule. Children had not a moment free, save to snatch a hasty meal or sleep as best as they could. From earliest youth they worked to a point of extreme exhaustion, without open-air exercise, or any enjoyment whatever, but grew up, if they survived at all, weak, bloodless, miserable, and in many cases deformed cripples, and victims of almost every disease.²

Some children began work at the age of four. An 1843 report by John W. Parker detailed the ages of the children employed to work.

*That instances occur in which **Children are taken into the mines to work as early as four years of age, sometimes at five, and between five and six, not unfrequently between six and seven, and often from seven to eight, while from eight to nine is the ordinary***

¹ Edward P. Cheyney, *An Introduction to the Industrial and Social History of England*, 1920, Macmillan, New York, p. 233.

² William Franklin Willoughby and Mary Clare de Graffenried, *Child Labor*, March 1890, American Economic Association, Guggenheimer, Weil, & Co., Baltimore, p. 16.

Suffer the Little Children

*age at which employment in these mines commences. That a very large portion of the persons employed in carrying on the work of these mines is under thirteen years of age; and a still larger portion between thirteen and eighteen. That in several districts female Children begin to work in the mines at the same early age as the males.*³

By the mid-1800s, child labor had been recognized as a major problem. In England, a commission was appointed in 1840 to investigate.

*This lad is a pitiable specimen of a much enduring class of colliery [underground mine] boys, whose subsistence depends on their own exertions, often prematurely stimulated, either from being deprived of their fathers by death, or laboring under the curse of drunken, dissolute, and unfeeling parents, who would apathetically see their children enslave themselves, rather than contribute to their comfort by a single act of self-denial. These neglected beings turn out in the morning, taking with them a scanty bag of provisions, to be eaten in the bowels of the earth, where **they toil out their daily dole of eight or ten hours; then return to a comfortless home, taking their chance of good meal, a bad one, or none at all. For a bed they are content with an old coal-sack laid upon straw,** or occupy whatever portion they can secure of a family bed, which must suffice for three or four other inmates.*⁴

A public investigation exposed distressing situations termed by some as *mine slavery*.⁵

³ John W. Parker, *Physical and Moral Condition of the Children and Young Persons Employed in Mines and Manufactures*, William Clowes and Sons, 1843, London, p. 1.

⁴ *Ibid.*, p. 30.

⁵ *The Universalist Union*, vol. VII, August 13, 1842, p. 615.

Children began their life in the coal mines at five, six, or seven years of age. Girls and women worked like boys and men; they were less than half clothed, and worked alongside men who were stark naked. There were from twelve to fourteen working hours in the twenty-four, and these were often at night. Little girls of six or eight years of age made ten to twelve trips a day up steep ladders to the surface, carrying half a hundred weight of coal in wooden buckets on their backs at each journey. Young women appeared before the commissioners when summoned from their work, dressed merely in a pair of trousers, dripping wet from the water of the mine, and already weary with the labor of the day scarcely more than begun. A common form of labor consisted of drawing on hands and knees over the inequalities of a passageway not more than two feet or twenty-eight inches high a car or tub filled with three or four hundred weight of coal, attached by a chain and hooked to a leather band around the waist.⁶

The testimony of a young girl named El-lison Jack illustrated the hardship of her life as a mine worker. She would descend a pit ladder with a basket-like device, or creel, on her back that allowed the lumps of coal to rest on her back and shoulders. With this device, she could fill four or five tubs of coal during her day's work. Each tub holding roughly 500 pounds meant she moved between 2,000 and 2,500 pounds of coal a day.



Fig. 14.



Fig. 15.

Photo 2.2: Girl and older girl using a creel to move coal. (1842)

⁶ Edward P. Cheyney, *An Introduction to the Industrial and Social History of England*, 1920, Macmillan, New York, pp. 243–244.

Suffer the Little Children

Since each tub took her four trips, each load she carried was about 125 pounds.

Large lumps of coal are then placed on the neck, and then she commences her journey to the pit bottom, first hanging her lamp to the cloth crossing her forehead. In this girl's case she has first to travel fourteen fathom, eighty-four feet, from the wall face to the first ladder; this ladder is eighteen feet high. From this ladder she proceeds along the main road, that is probably from three feet six inches to four feet six inches high, and so on to the second ladder, which is eighteen feet high, and so to the third and fourth ladders, until she reaches the pit bottom, where she casts her load.⁷

Injuries and disease were commonplace. Many children died of diseases such as typhus, and women also had stillbirths due to the stressful conditions.⁸

Other mine jobs, although not as labor intensive, were also dull and dreary. One job for boys was to wait all day long to open and close the gates for the wooden sleds, or corves, which were used for hauling coal.

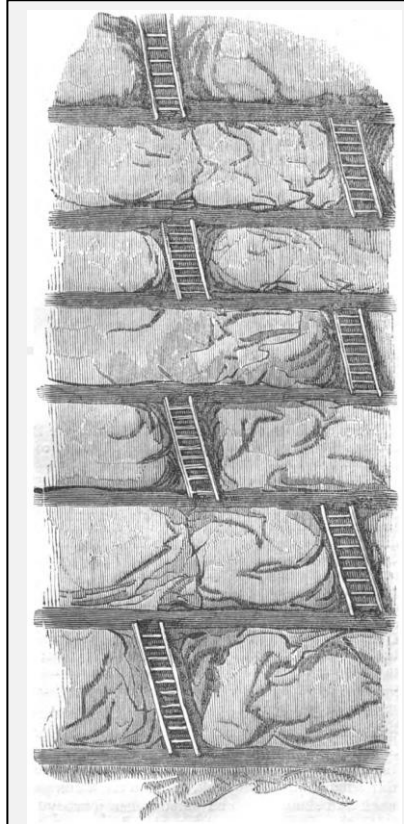


Photo 2.3: Typical passage a coal bearer traversed. (1842)

⁷ *The Universalist Union*, vol. VII, August 13, 1842, p. 615.

⁸ *Parliamentary Papers: Volume 15, Reports from Commissioners—Children Employment (Mines)*, February 3–August 12, 1842, p. 93.

Suffer the Little Children



Photo 2.4: Child pulling corve. (1842)

The trappers sit in a little hole scooped out for them in the side of the gates behind each door, where they sit with a string in their hands attached to the door, and pull it open the

*moment they hear the corves at hand; and the moment it passes they let the door fall to, which it does of its own weight... They have nothing else to do but as their office must be performed from the passing of the first to the passing of the last corve during the day, they are in the pit during the whole time it is worked, frequently above twelve hours a day. **It is a most painful thing to contemplate the dull dungeon-like life these little creatures are doomed to spend—a life, for the most part, spent in solitude, damp, and darkness.** They are allowed no light—but sometimes a good-natured collier will bestow a bit of candle upon them as a treat.⁹*

In the early 1900s, children were still being employed by the mining industry. Even though children younger than 14 were officially prohibited from working, some as young as 9 or 10 could be found employed in the mines. Due to improved machinery, boys were principally employed as coal breakers, picking



Photo 2.5: The Lonely Trapper Boy. (1914)

out slate from coal as it was dumped into the mine cars. In the breakers where coal was dried, the coal dust was so dense that, even on

⁹ *The Universalist Union*, vol. VII, August 13, 1842, p. 615.

Suffer the Little Children

bright days, light would not penetrate. Breaker boys needed to wear mine lamps on their caps to allow them to see the coal at their feet. Although safety precautions were taken, children sometimes suffered horrific deaths.

*It is true we occasionally hear of a little boy in the mine run over by a coal car, or kicked to death by a mule, or fatally injured by a piece of falling slate. And **in the coal breakers little boys are sometimes ground in large crushers that break the coal, caught in the wheels or other machinery, or buried in a stream of coal—the death suffered recently by the little boy in Pittston [Pennsylvania].***¹⁰

In the 1800s, children employed in glass manufacturing worked long hours in extremely challenging conditions. They suffered from a wide variety of physical problems.

*In the manufacture of glass... the hard labour, the irregularity of the hours, the frequent night-work, and especially the great heat of the working place (100 to 190 Fahrenheit), engender in children general debility and disease, stunted growth, and especially affections of the eye, bowel complaints, and rheumatic, and bronchial affections. **Many of the children are pale, have red eyes, often blind for weeks at a time, suffer from violent nausea, vomiting, coughs, colds, and***



Photo 2.6: Boys in the manufacturing of medicine bottles. (1914)

¹⁰ Owen R. Lovejoy, *Child Labor in the Coal Mines, Child Labor—A Menace to Industry, Education, and Good Citizenship*, Academy of Political and Social Science, 1906, p. 38.

rheumatism... The glass-blowers usually die young of debility or chest infections.¹¹

A 1906 article by Owen R. Lovejoy spoke about child labor in the manufacturing of glass. Boys worked near the blistering heat of the furnace and performed many jobs. Because glass manufacturing could continuously operate, boys were also employed to work at night. After laboring long hours in excessive heat, they were sent home early in the morning.

*It is significant that in many glass-houses one hardly finds the child of a glass-blower. One worker who spent his life in the glass-house when asked the reason replied: "I would rather send my boys straight to hell than send them by way of the glass-house." A young friend, whose character and family are well known, said recently that of the 175 boys with whom he worked in an Indiana factory two years ago there were only ten at the end of the fire who were not confirmed drinkers of intoxicants.*¹²

In the early 1900s in the state of New York, children worked in the cannery industry for endless hours. The housing supplied for these seasonal workers was inadequate and unsanitary. As many as eight people were found living in a small room. The outhouses were unspeakably filthy. There were no screens covering the openings of the windows, permitting swarms of flies to travel from the filth of the



Photo 2.7: Children snipping beans in Maryland. (1913)

¹¹ Roy Porter, *The Greatest Benefit to Mankind*, 1997, Harper Collins, New York, p. 401.

¹² Owen R. Lovejoy, *Child Labor in the Glass Industry, Child Labor—A Menace to Industry, Education, and Good Citizenship*, Academy of Political and Social Science, 1906, p. 44.

Suffer the Little Children

outhouses to the small rooms that contained exposed food. The canners blamed God for the terrible plight of the children and women.

*"It's the Lord's fault; we cannot control the ripening of the crops," that canners gave in 1912, as in previous years, as their excuse for beginning **the work of 12 year old boys at 3 A. M., for working 10 year old girls 14½ hours a day, for working women as many as 100 hours a week.***¹³

Eight-year-old girls capped cans. They placed a small tin disk that was soldered to the cover on the filled cans of fruits and vegetables, capping 40 cans a minute. A child was hard-pressed to keep up with that rate.

In other industries, the difficult and dirty working conditions, long hours, and exposure to toxins such as lead created a variety of physical disabilities in many.



Photo 2.8: At a Dangerous Capping Machine. (1913)

...women and children in lacemaking were often kept at work during the busy season till nine, ten, and even twelve o'clock at night; that the girls in dye-houses who carried wet goods on their backs into drying rooms at as high a temperature as 110, and then out on to the grass fields, were often summoned to work at four or five o'clock in the morning;

*that there were **more than 2,000 children under ten years of age at work in the Birmingham hardware industry, one-fourth of them under eight; and that weak-sight, blindness, and lead poisoning were prevalent in the potteries and other***

¹³ *The Child Labor Bulletin*, vol. 1, no. 4, February 1913, pp. 22–23.

Suffer the Little Children

industries, which were carried on under shockingly unsanitary conditions.¹⁴

An 1890 book on child labor describes the manufacture of paper boxes. Like other factory work, it involved long, endless hours of mind-numbing work.

*The ceilings were low and begrimed, the light not unfrequently inadequate. Each worker is then provided with an oil-lamp whose smoke and fumes combine with the odors of the glue-pot and neglected water-closets to make the close room more hurtful. Piles of inflammable paper and stacks of boxes await but a spark to kindle a fire that would sweep the building before the dazed inmates could rush to the dark and dangerous stairs, only to find the way barred by packing-cases. In such death-traps thousands of children labor. The lame and humpbacked choose box-making as light work permitting them to sit. Their distorted figures and pain-marked features stand out sadly in the dim light behind long tables piled grotesquely with box-shapes.*¹⁵



Photo 2.9: A child employed as a doffer. (1914)

A 1913 article in *Good Housekeeping* details the labor of children in the cotton mills.

...a majority of the workers in the cotton mills are under 16, and that the ages of them run down to 6 and 7. The girls are used as "spinners" and for the most part—walking up and down between

¹⁴ Edward P. Cheyney, *An Introduction to the Industrial and Social History of England*, 1920, Macmillan, New York, p. 276.

¹⁵ William Franklin Willoughby and Mary Clare de Graffenried. *Child Labor*, March 1890, American Economic Association, Guggenheimer, Weil, & Co., Baltimore, p. 90.

Suffer the Little Children

*the spinning frames and knotting threads that break; and the boys are employed as “doffers”— for the replacement of the empty bobbins with full ones. The hours that these children work is well nigh incredible. Either they toil from six in the morning until six at night, or from six at night until six in the morning ...**It is also the truth that the day-shift is frequently asked to work two and three nights a week, so that there are days when the child works for seventeen hours at a stretch.***¹⁶

Children could also be employed at home, doing tedious work in what was known as tenement industries. This work involved the production of clothing or other products that factories hired out to be done at home. A 1913 Massachusetts Child Labor Committee report describes the difficult working conditions and the effects on children.



Photo 2.10: Children 6, 8, and two of 12 years making hose supporters by lamplight. (1913)

*It [work] is done in close, poorly-ventilated rooms, often in dirty kitchens and in unhygienic houses... The children work long hours and often late at night by lamplight. Small children of five, seven, and nine years of age work in a bending position until nine or ten o'clock. This is bad for the eyes, causes nervous strain, interferes with the child's schooling. **The anemic, tired, nervous, over-worked children are driven until they cry out against the abuse... A girl seven years old had worked sitting in the hot sun***

¹⁶ Judge Benjamin B. Lindsey and George Creel, “Children in Bondage: The Sacrifice of Golden Boys and Girls,” *Good Housekeeping*, July 1913, pp. 17–18.

Suffer the Little Children

while she was sick with measles. The lack of care at that time was followed by her death...¹⁷

The breakdown of healthy family systems and the resultant infant neglect was a large contributor to disease in the past 200 years. Women and girls were often forced to work in order to survive. According to the 1901 English census, of the 13 million females older than 10, 4 million were working. The difficult working conditions often resulted in physical breakdown, leaving a population of children who were frequently neglected.

Mothers employed in factories are, save during the dinner hours, absent from home all day long, and the care of their infants during their absence is entrusted to young children, hired nurse-girls, sometimes not more than eight or ten years of age...¹⁸

Lack of knowledge regarding proper child care, combined with poverty, stressful working conditions, meager nutrition, improper hygiene, and poor sanitation, led to a large number of child deaths.

Few facts receive more unanimous support from those in intimate touch with this question than the ignorance and care-

*lessness of mothers in respect of infant management. Such ignorance shows itself not only in bad methods of artificial feeding, but in the exposure of the child to all sorts of injurious influences, and to uncleanly management and negligence. **Death in infancy is probably more due to such ignorances and negligence than to***



Photo 2.11: Massachusetts Mill Workers. (1914)

¹⁷ *Child Labor in Massachusetts Tenements, Annual Report of the Massachusetts Child Labor Committee*, January 1, 1913, pp. 5–6.

¹⁸ Sir George Newman, *Infant Mortality: A Continuing Social Problem*, 1906, Methuen & Co., London, p. 95.

Suffer the Little Children

*almost any other cause, as becomes evident when we remember that epidemic diarrhoea, convulsions, debility, and atrophy, which are the most common causes of death, are brought about in large measure owing to improper feeding or ill-timed weaning; bronchitis and pneumonia are due not infrequently to careless exposure; and death from measles and whooping-cough is largely caused by mismanagement of nursing.*¹⁹

Due to the extreme working conditions—long hours, revolting environments, little rest, poor nutrition—the resulting health of children was deplorable. Their weakened constitutions left them extremely susceptible to diseases of all types.

*The medical witnesses state that the general health is greatly deteriorated; that the **Children are pale, thin, delicate, feeble, stunted in growth, more than usually susceptible to certain formidable diseases, and much less able than common to resist the ordinary causes of disease.** The prevailing complaints are general weakness, often amounting to fainting, pains in the head, side, back, and loins, palpitations, sickness, vomiting, and loss of appetite, curvature of the spine, scrofula, and consumption. The female health, in particular appears to be constantly and grievously disturbed.*²⁰

*Children who began work so early in life were subjected to such long hours of labor did not grow so rapidly, nor reach their full stature, nor retain their vigor so late in life, as did the population outside of the factories.*²¹

¹⁹ Sir George Newman, *Infant Mortality: A Continuing Social Problem*, 1906, Methuen & Co., London, p. 262.

²⁰ John W. Parker, *Physical and Moral Condition of the Children and Young Persons Employed in Mines and Manufactures*, 1843, William Clowes and Sons, London, pp. 132–133.

²¹ Edward P. Cheyney, *An Introduction to the Industrial and Social History of England*, 1920, Macmillan, New York, p. 240.

Suffer the Little Children

*In regard to health, also, there is no occupation which a child can pursue all day and every day without injury... As a matter of fact there are a considerable percentage of accidents in the mills, and a high death rate from tuberculosis. But, we repeat, these incidental dangers might all be done away without affecting the fact that the mental strain involved in the noise of the mill, and the sheer muscular strain of any simple motion repeated past the point of fatigue do seriously weaken the growing child. **Even where there is no immediate traceable injury, there is always an indirect effect whereby the child is made more susceptible to infection.***²²

Children in industries were also exposed to a number of poisonous materials that impacted their health and immune systems.



Photo 2.12: Child factory workers.

*...crouching down out of sight behind bales of paper where arsenic is used; exposed to the poison of lead, mercury, phosphorus, copper, and other toxic influences; and the ills of the artificial humidity essential to the spinning of cotton, flax, wool, and silk. The difficulty is to "catch them at it," to discover them really at work, and then to prove that they are under the age required by law, for, as these little people say themselves "It is easy to fix the Board of Health certificate if you only know how." **Lead poisoning, or plumbism, causes loosening and dropping out of teeth, frightful colic, blindness, paralysis, and sometimes death in convulsions. Phosphorous ulcerates the gums, causes decay of bone, terrible disfigurements, blindness, and paralysis of the wrists, and often death. Mercury gives rise to anemia, or bloodlessness, to spongy gums, loosened teeth, and paresis [impaired movement] of***

²² *The Child Labor Bulletin*, vol.1, no. 4, February 1913, pp. 93–94.

Suffer the Little Children

the limbs. Nitric acid, used for cleaning, may cause instant death. The germs of lockjaw reside in hides, wool, and fur.²³

Into the early 1900s, many children of the working poor lived in crowded tenements with no yards. When they had free time, their playgrounds were the city streets or worse. A 1920 article in *Good Housekeeping* stated that 250,000 children died each year in the United States due to poverty.



Photo 2.13: Only a box for a house, and railroad yard for a playground. (1919)

*There is no escape from the conclusion that **the United States, the richest nation in the world, is allowing every year a quarter of a million of her own children to be killed by poverty.** All other causes come back, in the last analysis, to that one.*²⁴

The world we enjoy today is built in part on the ceaseless labors of children of the past. The conditions they worked and lived in were just as horrifying as they were for the adults of the time. Extreme working conditions, poor nutrition, and lack of sanitation and hygiene left many children in a terrible state of health. Unfortunately, many children elsewhere in the world today are subject to similar working conditions and poverty.

²³ *The American Journal of Nursing*, vol. III, no. 8, May 1903, p. 664.

²⁴ Rose Wilder Lane, "Mother No. 22,999," *Good Housekeeping*, vol. 70, March 1920, p. 112.

DISEASE—A WAY OF LIFE

Like beasts, like maniacs, the people fell on them... There is no more dreadful sight than such popular anger thirsting for blood and throttling its defenseless victims... In the Rue Vaugirard, where two men were killed... I saw one of these unfortunates when he was still breathing and the old hags were just pulling the wooden shoes from their feet and beating him on the head with them till he was dead. He was quite naked and bloody and mashed; they had torn off not only his clothes but his hair, his sex, and his nose, and one ruffian tied a rope to the feet of the corpse and dragging it through the streets, shouting constantly, "Voilà le Cholera-morbus [cholera disease]!"

– Heinrich Hein (1797–1856), 1832 Paris cholera epidemic

... the cupidity [extreme greed] of landlords had tempted them to build up narrow alleys with small wooden tenements, which, costing but little, and being let to numerous families, yield immense profits. The alley is often not more than six feet wide, paved with round stones and with very insufficient means for draining off the water. It is not uncommon in such situations to find one or two apartments in each house entirely under ground. Can we wonder if in such a state of things we find moral as well as physical disease, vice as well as sickness? Can we expect men who live thus to be sober and orderly, or women to be cleanly and domestic? In such situations, during the summer months, diarrhoea and dysentery are rife, and among children fatal.

– New York physician Benjamin McCready (1813–1892), 1837

Infectious diseases were a constant terror during the 1800s. With increasingly dense populations, wars, and abject poverty, diseases of all varieties exacted a horrendous toll. The poverty-stricken masses carried the brunt of the relentless assaults of these diseases, yet no

class was spared. Periodic epidemics and pandemics swept across the globe, wreaking havoc and killing millions, rivaling the horrors of war. Abysmal sanitation, hygiene, nutrition, and working and living conditions, combined with a sense of utter hopelessness, laid the foundation for the devastation.

Sanitation was not a new concept. In the time of the Old Testament, there were clear-cut biblical rules laid out governing the management and disposal of dangerous human waste and rubbish outside the cities and away from water sources. Greece and Rome also perfected well-regulated public health systems. During the Dark Ages, these ideas simply dropped out of the collective memory in many areas of the world.

In the United Kingdom, as a result of the Enclosures Act that pushed people off common land and the Industrial Revolution, dispossessed people suddenly massed into cities. People lived waist-deep in their own midden heaps in overcrowded hovels, drinking filthy polluted water and eating terrible food. These living conditions were the single common factor that led to rampant disease epidemics.

Dr. French noted the influences of living conditions on disease in an article published in 1888.

The depressing influences of extreme poverty, filth in all its forms, and the overcrowding of large cities, are great promoters of contagion, resulting in epidemics, plagues, and pestilences; while strict cleanliness, fresh air, pure water, and hygienic living; tend greatly to restrict its spread and prevent these results... The death-rate among infants and young children is especially influenced by the five principal acute contagious or infectious diseases—namely, measles, scarlet fever, small-pox, diphtheria, and whooping-cough.¹

The gastrointestinal tract is known to contain around 70 percent of a person's immunity. With insults to healthy digestive and respiratory

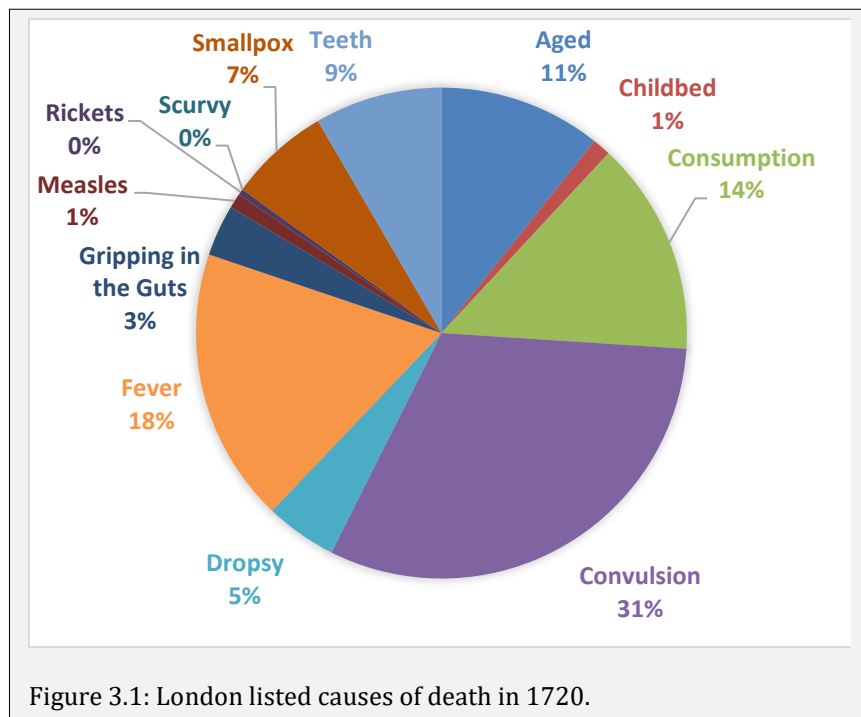
¹ J. M. French, MD, "Infant Mortality and the Environment," *Popular Science*, vol. 34, no. 10, December 1888, p. 228.

Disease—A Way of Life

systems from toxins, infections, and parasites in water and food, it is easy to see how myriad diseases were able to take hold.

A peek at life in 1700s London

National mortality statistics in England and Wales did not begin until 1838. However, the *London Bills of Mortality*² recorded causes of death within the city much earlier, including aged, childbed, consumption, convulsion, dropsy, fever, griping in the guts, measles, plague, rickets, scurvy, smallpox, and teeth. Many of these causes are shown in Graph 3.1.



While smallpox is often emphasized today, other causes of death were frequently higher than smallpox, even before the advent of smallpox inoculation. Convulsion, consumption [tuberculosis], fever, and “teeth” were often more significant reasons for death, as seen in the pie chart (Figure 3.1) for causes of death in London in 1720.

² *London Bills of Mortality*, 1647–1800.

Perhaps not surprisingly, Graph 3.2 shows that from 1728–1758, one-third of deaths were in children under 2, and another 9 percent were in children aged 2 to 5. After early childhood, which accounted for 45 percent (nearly half) of deaths, many people survived into their later years, with over 2.6 percent living into their 80s or older.

Isaac Massey's observations at Christ's Hospital observed that poor children made up many of the deaths recorded, although the deaths were recorded under some disease and not that they were the "*miserable poor*."

There ought to be no comparison between sick people, well regimented with diet and medicine, and those who have no assistance, or scarcely the necessaries of life. The miserable poor and parish children make up a great part, at least one-half of the Bills of Mortality...³

Records also show people living into their 90s and over 100. While not common, there are records of people living from 100 to 116, and one person was reported to have lived until 138. The idea that only individuals in the current era enjoy extremely long lifespans due to modern medical advancements and conveniences is a misconception. In 1853, Dr. Samuel Sheldon Fitch recorded numerous instances of individuals living decidedly longer than the present-day record holders for the oldest people.

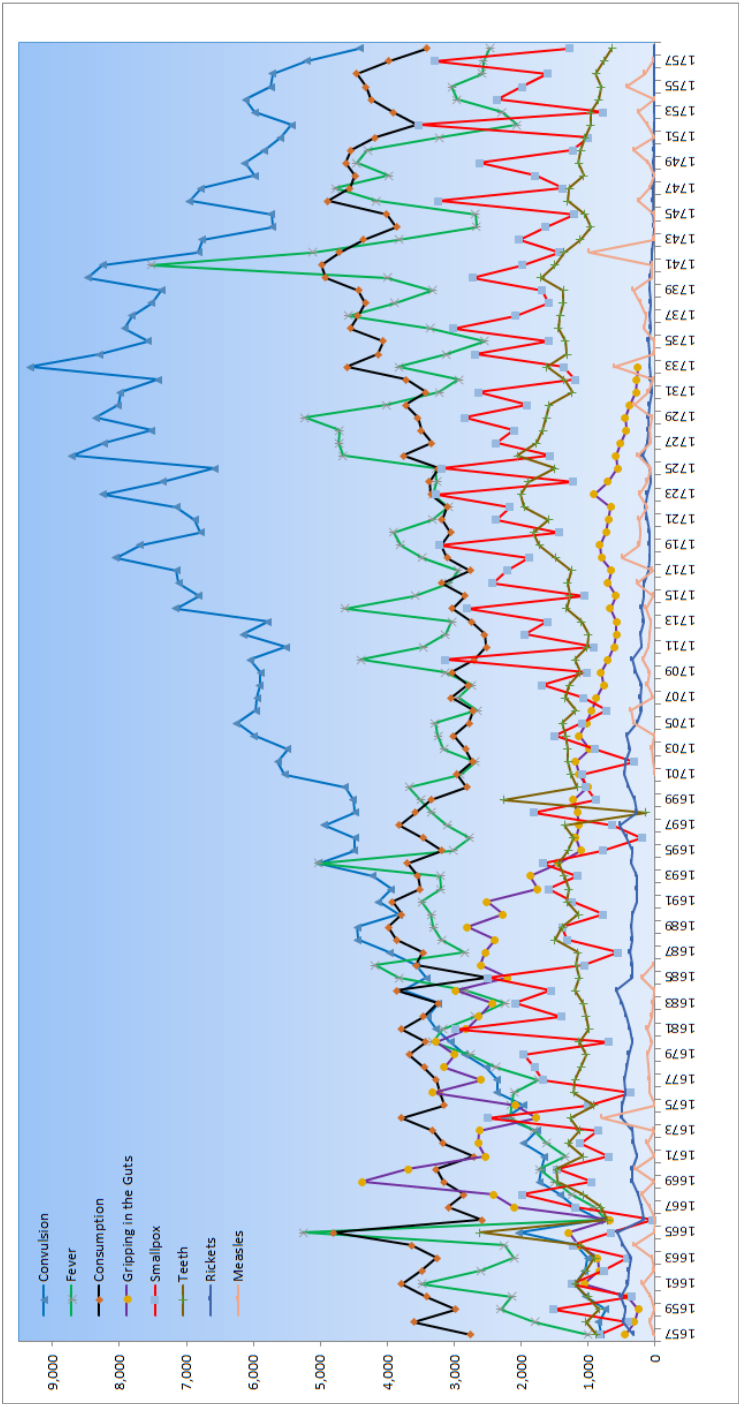
The Countess of Desmond died in England some years ago; at the age of one hundred and forty [140] years. Her age is well authenticated by official papers. Margaret Forster died in Cumberland, England, in 1771, aged one hundred and thirty-six [136] years. Flora Thompson died at Nashua, in North Carolina, in 1808, at the age of 150 years. A great number of persons attended her funeral. A

³ William White, *The Story of a Great Delusion*, 1885, London, E. W. Allen, p. 26.

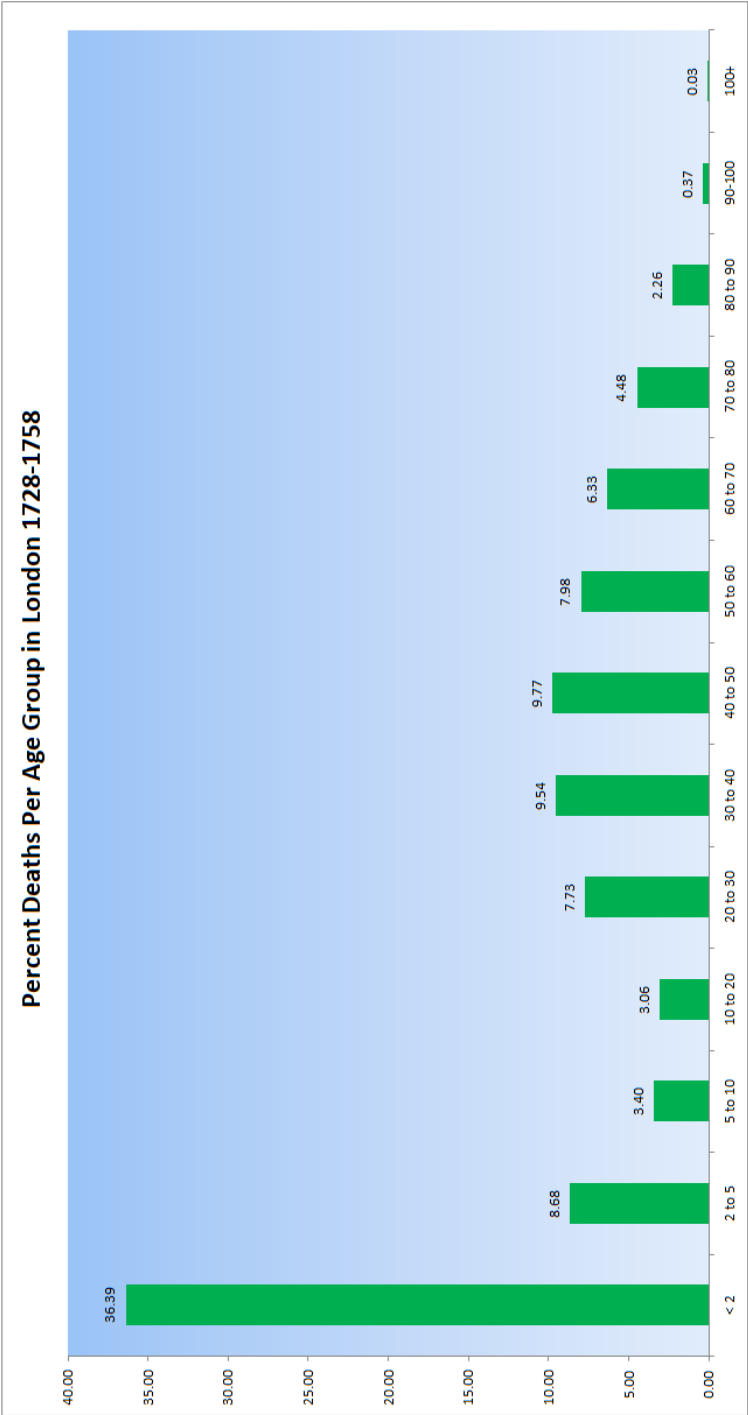
Disease—A Way of Life

*woman died at Knoxville, Tennessee, in the year 1835, aged one hundred and fifty-four [154] years.*⁴

⁴ Samuel Sheldon Fitch, AM, MD, *Six Discourses on the Functions of the Lungs; and Causes, Prevention, and Cure of Pulmonary Consumption, Asthma, and Diseases of the Heart*, 1853, New York, p. 190.



Graph 3.1: Causes of death in London 1657 to 1757.



Graph 3.2 Percent Deaths Per Age Group in London 1728 to 1758.

Typhoid fever

Typhoid fever is caused by food or water that's contaminated with *Salmonella typhi* bacteria. Symptoms of typhoid fever include fever, general ill feeling, and abdominal pain. As the disease progresses, the person experiences a high fever with severe diarrhea. Like cholera and dysentery, typhoid fever was a disease that evolved out of improper sanitation and defective civilization.⁵

*But while it is true both historically and as a fact of to-day, that typhoid fever is a disease of civilization, it ought to be clearly understood that it is only a disease of defective civilization, for it has gradually become notorious that the widespread or frequent occurrence of **typhoid fever in any community must be due, somehow, to defective sanitation; and defective sanitation means defective civilization.***⁶

Like other diseases of poor sanitation, typhoid fever killed thousands. In the late 1800s to the early 1900s, it was estimated that 40,000 to 50,000 people died from the disease in the United States every year.⁷

*From January, 1907, to October, 1911, there occurred in Russia 283,684 cases of Asiatic cholera. This included the appalling epidemic of 1910. According to a conservative estimate there occurred in the United States during the same period one million and a quarter cases of typhoid fever, or more than four cases of typhoid fever in the United States for every case of cholera in Russia. We heard a great deal of the ravages of cholera in Italy in 1910-11, yet in these two years there occurred in Italy about 16,000 cases of cholera and about 6,000 deaths and in **the United States in the same period***

⁵ H. Curschmann, MD, *Typhoid Fever and Typhus Fever*, W.B. Saunders & Company, 1902, p. 42.

⁶ George Chandler Whipple, *Typhoid Fever: Its Causation, Transmission, and Prevention*, John Wiley & Sons, London, 1908, pp. xxiii–xxiv.

⁷ *Typhoid Fever: Causation and Prevention*, Seventh Biennial Report of the Board of Health of the State of Iowa, 1893, p. 58.

we had more than a half million cases of typhoid fever and 50,000 deaths.⁸

The disease wreaked havoc on the military and was the major killer of US soldiers during the Spanish-American War. It was epidemic in the national encampments, accounting for 86.8 percent of the total deaths from disease during the war.⁹ The Civil War was also plagued by typhoid.

Although typhoid had a high mortality rate (36.9 percent) in the Civil War, diarrhea and dysentery—nicknamed the “Tennessee quickstep”—caused more disability and death among Union and Confederate soldiers than any other disease. Records from Chimborazo Hospital in Richmond, Virginia, and from Confederate army surgeons suggest that at least 90 percent of the soldiers had diarrhea, and that throughout the conflict few ever experienced a normal bowel movement. Speaking for the Union, Walt Whitman noted that the war had been “about nine hundred and ninety-nine parts diarrhea to one part glory.” As most soldiers realized early, “Good guts were more important to good soldiering than good brains.”¹⁰

Tainted food was also a source of disease epidemics. In July 1879, in a canton of Zurich, Switzerland, a large number of people came down with what was considered to be typhoid fever, referred to by some as *sausage poisoning*.

513 persons of all ages sat down to a cold collation of veal and ham, both of inferior quality. Of that number, 421 were subsequently seized with an acute febrile disease which was at the time looked upon as typhoid. Thirty-four other persons who had obtained meat from the same butcher were also attacked with similar symptoms; and subsequently, a further number of eleven of fifteen who had

⁸ *Sewage Pollution of Interstate and International Waters with Special Reference to the Spread of Typhoid Fever*, no. 83, Hygienic Laboratory, March 1912, p. 18.

⁹ Vincent J. Cirillo, *Bullets and Bacilli: The Spanish-American War and Military Medicine*, 2004, p. 33.

¹⁰ *Ibid.*

*also been supplied by the same butcher. These cases appear to have ushered an epidemic of what was described as typhoid fever. The symptoms were those of severe gastro-intestinal irritation, with high fever, delirium, stupor, congestion of the lungs, and great prostration... With reference to this epidemic, the significant remark occurs— "But great doubts have been expressed as to whether it was really typhoid fever, or a form of poisoning resembling sausage-poisoning."*¹¹

Cholera

Cholera is a disease of poor sanitation and crowding. It is a bacterial infection of the small intestine that results in copious watery diarrhea and vomiting and leads to death with agonizing cramps and dehydration. Infants, children, and adults were all its victims during pandemics that resulted in enormous numbers of sick and dead.

The increased commercial trade and travel, combined with atrocious hygienic conditions worldwide, brought forth six cholera pandemics in the 1800s. The first pandemic started in 1816, and the last ended in 1926 (Graph 3.1).

More than 15 million cholera deaths in India are estimated to have occurred between 1817 and 1860... The disease reaches Russia, causing Cholera Riots in the streets of major urban centers... In 1849, a second cholera wave occurred in Paris and London. It was the worst outbreak in London's history, claiming 14,137 lives, more than twice as many as the 1832 outbreak. The 1849 cholera outbreak in Ireland is estimated to have killed as many people as died during the Irish Famine. Cholera also followed along with the settlers heading to the California gold rush, with 6,000 to 12,000 dying in 1849. Russia was affected early in this cholera pandemic (3rd pandemic), with more than 1 million deaths... In North America, 3,500 people (5.5% of Chicago's population) died of cholera in

¹¹ Surgeon-General C. A. Gordon, "Remarks on Certain Assigned Causes of Fever," *Medical Times and Gazette*, vol. II, October 1, 1881, J & A Churchill, London, p. 409.

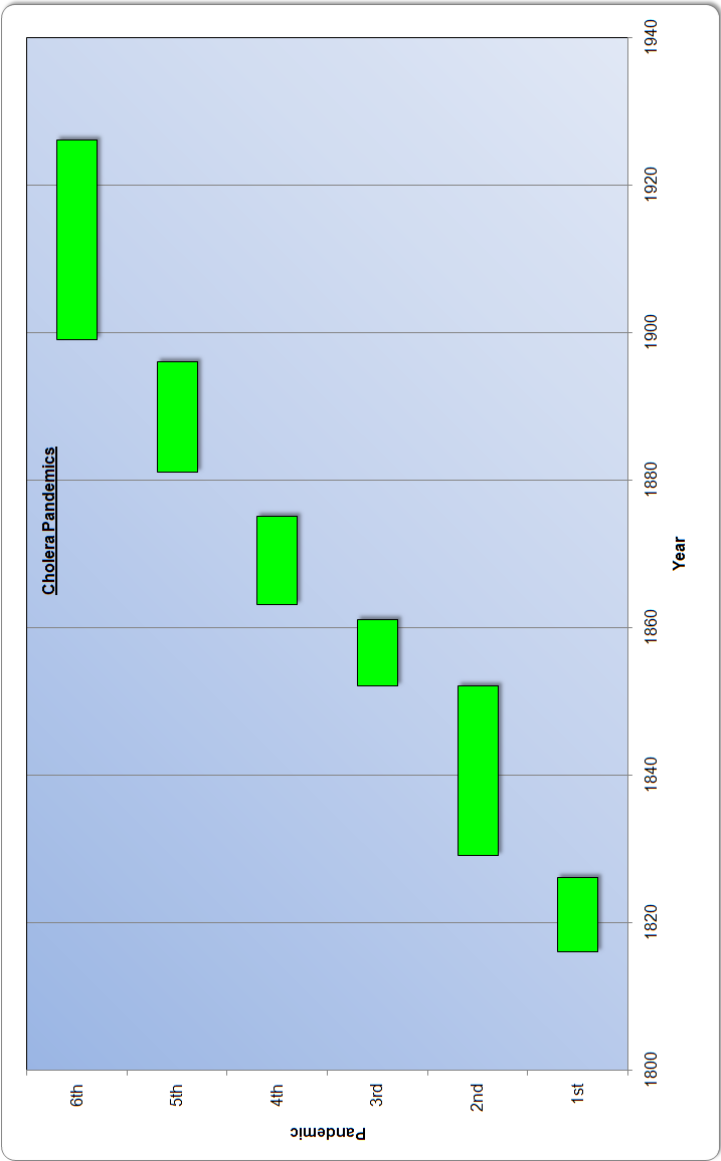
Disease—A Way of Life

*1854, with up to 150,000 Americans dying of cholera between 1832 and 1860... London's epidemic in 1852-1854 killed 10,738... By 1866, the outbreak reached North America, causing up to 50,000 deaths... The 1883-1887 epidemic claimed 250,000 lives in Europe and, in spreading, killed at least 50,000 in America, 267,890 in Russia, 120,000 in Spain, 90,000 in Japan, 60,000 in Persia, and more than 58,000 in Egypt... **The major Russian cities reported more than 500,000 cholera deaths during the first quarter of the 20th century.***¹²

*In 1832 cholera prevailed in France, and within the year caused 120,000 deaths, 7,000 of which occurred in Paris in the space of eighteen days.*¹³

¹² David L. Streiner, Douglas W. MacPherson, and Brian D. Gushulak, *PDQ Public Health*, 2010, p. 198.

¹³ Alfred Stillé, MD, *Cholera: Its Origin, History, Causation, Symptoms, Lesions, Prevention, and Treatment*, 1885, Lea Brothers & Co., Philadelphia, p. 19.



Graph 3.3: Six cholera pandemics. The first pandemic started in 1816, and the last ended in 1926.

Disease—A Way of Life

Cholera struck the United States in 1849, leaving a wide path of devastation. The disease appeared in the South in early spring and spread quickly throughout the country, causing scores of deaths in many towns and villages. In an attempt to stop the epidemic and purify the atmosphere, huge piles of wood were burned. The smoke hung low in the heavy midsummer air.

*Thousands fled panic-stricken before the scourge, while days of fasting, humiliation, and prayer were appointed in view of its probable advent... The streets were empty except for the doctors rushing from victim to victim, and the coffin makers and undertakers following closely on their heels.*¹⁴

Human and animal waste continuously emptied into the only source of water for the people. Lack of knowledge in basic hygiene and primitive or nonexistent sanitation fueled these almost unbroken pandemics of cholera during the 1800s and into the early 1900s.¹⁵ People were under siege from chemicals and toxins that left their battered immune systems at a huge disadvantage.

*...drinking water presented a growing problem. **The spill-off from the slaughterhouses and the glue factories, the chemicals of the commercial manufacturers, and all of Chicago's raw sewage had begun to contaminate the drinking water.** Chicagoans had endured the cholera epidemic of 1848, an epidemic caused by polluted water; nearby Lake Michigan was far more contaminated in the 1850s.*¹⁶

Dysentery

Dysentery is an inflammation of the intestine caused by bacteria or an ameba. It is characterized by severe diarrhea with blood and mucus in the feces. Like cholera, dysentery is spread by fecal contamination of

¹⁴ Arthur Charles Cole, *The Irrepressible Conflict 1850–1865: A History of American Life Volume VII*, 1934, Macmillan, New York, p. 183.

¹⁵ William Buckingham Canfield, MD, *Hygiene of the Sick-Room*, 1892, P. Blakiston, Son & Co., Philadelphia, pp. 87–88.

¹⁶ Jane Byrne, *My Chicago*, Northwestern University Press, Evanston, Illinois, 1992, p. 32.

food and water, usually in impoverished areas with poor sanitation. These diseases of poor sanitation resulted in a monstrous loss of life.

The Union army in the Civil War (1861-65) lost 186,216 men to disease, twice the number killed in action; nearly half were claimed by typhoid and dysentery.¹⁷

During the US Civil War, life within the prison stockades was frightful. Those who died were often buried without coffins in mass graves. Conditions for the sick prisoners were appalling, with “hospitals” supplying little comfort or any hope of help.

*The hospital itself was a group of worn-out tents, many of them leaky and some of them without sides. There were no bunks and but little straw. Hundreds of patients lay upon the bare ground. Their food differed little from that of the prisoners within the stockade though the surgeon in charge was able to obtain small quantities of flour and arrowroot. **The prevalent diseases were scurvy, diarrhea, dysentery, and hospital gangrene.***¹⁸

Typhus fever

Typhus fever is different than typhoid fever and is caused by a rickettsial bacterium most commonly transmitted by the bite of the body louse, which feeds on the blood of humans as it spreads disease. It is considered a filth disease and occurs where there is poor hygiene and sanitation. The vitality of the germs increases in direct proportion to overcrowding and inadequate ventilation.¹⁹ Typhus was another disease that killed enormous numbers of people at different times and places in history.

Like the war itself, typhus began in Serbia, with 10,000 cases as early as November 1914; within six months, deaths had leapt to

¹⁷ Roy Porter, *The Greatest Benefit to Mankind*, Harper Collins, New York, 1997, p. 399.

¹⁸ Francis Miller and Robert Lanier, *The Photographic History of the Civil War: Prisons and Hospitals*, 1911, Review of Reviews Co., New York, p. 82.

¹⁹ H. Curschmann, MD, *Typhoid Fever and Typhus Fever*, 1902, W. B. Saunders & Company, p. 499.

150,000. With the revolution of 1917 and the civil war, **typhus ran riot in Russia: between 1917 and 1921 Russia had 25 million cases with up to 3 million deaths.**²⁰

...Henry P. Davison, Chairman of the League of Red Cross Association, who declared there were 230,000 cases of typhus fever in Poland... According to information sent by Colonel E. R. Gilchrist, head of the United States Medical Unit in Poland, **95 per cent of the population has been or is now suffering with typhus.** The mortality has run from 15 to 60 per cent.²¹

Sir David Henderson, Director General of the newly created League of Red Cross Societies, with headquarters in Geneva, Switzerland, said last night that the league, at the beginning of its organization was confronted with one of the most serious scourges since the Middle Ages—the typhus epidemic in Eastern Europe... There were more than 120,000 cases in Poland alone in July, and conditions are growing worse. We are approaching the worst season for typhus now. **Typhus goes with dirt, and our chief difficulty is in keeping the people clean.** We sent soap, but then there was no coal to heat the water. We have sent fresh clothes, but we have been unable to supply enough. There is a great lack of materials, hospitals are unequipped, and there is only one doctor to every 10,000.²²

Diphtheria

Diphtheria is a term used to describe a particular type of upper-respiratory illness. The determinant of clinical diphtherial disease is not the bacteria *Corynebacterium diphtheriae*, but rather a toxigenic virus (bacteriophage) that infects some of the bacteria. The vast majority of diphtheria bacteria are actually never invaded by a bacteriophage.

²⁰ Roy Porter, *The Greatest Benefit to Mankind*, Harper Collins, New York, 1997, p. 399.

²¹ “All Poland Ravaged by Typhus Epidemic, American Medical Experts Report 95 Per Cent. of the People Victims of Disease,” *New York Times*, March 25, 1920.

²² “Typhus in Europe a World Problem, Director of Red Cross League Admits Inability to Cope with It Alone, Worst Since Middle Ages,” *New York Times*, November 11, 1919.

However, when the bacteria are invaded, there is a possibility of serious clinical disease. The virus switches on bacterial toxin genes, which lead to symptoms such as the leathery, thick parchment-like secretion that can cover the back of the throat and obstruct breathing and swallowing.

In severe cases, the toxin is distributed to distant organs by the circulatory system and can cause paralysis and congestive heart failure. In the era of slum living and poor nutrition, as with other infectious diseases, considerable numbers of people died with diphtheria.

Diphtheria cases are averaging sixty a day, according to statistics to the Department of Health. Health Commissioner Royal S. Copeland said yesterday that an epidemic stage is being approached. Since the beginning of the year there have been 2,773 cases of the disease and 274 deaths... "A death from diphtheria should be condemned just as severely as a death from typhoid fever," said the statement. "Both are entirely unnecessary and represent what is in effect a sanitary crime..."²³

An infectious disease, dreaded in childhood, but also affecting adults, is diphtheria. The number of deaths, caused by it [diphtheria] among the ten million inhabitants of the larger towns in Germany during the ten years 1882-1891 amounted to 111,021 and of every thousand deaths 45 are due to the disease. In 1892 the death-rate from diphtheria was 12,361 or 41 per 1,000.²⁴

Seldom has a community been so alarmed as are the country people along the line of Berks and Lehigh Counties, where two counties join and where diphtheria rages in such a violent epidemic form. Nothing like it has ever affected a similar stretch of country in this section with such fatal results. Many families have lost their children.

²³ "Reports 60 Cases of Diphtheria Daily, Dr. Copeland Plans Campaign Against Disease Approaching Epidemic Stage, 274 Deaths This Year," *New York Times*, February 25, 1920.

²⁴ *Hygiene and Sanitation: A Popular Manual to Hygiene*, Imperial Board of Health, Berlin, 1904, p. 199.

*An estimate made to-day of the number of funerals held places the deaths within the confines of 10 square miles at not less than 60 and probably more.*²⁵

Pertussis (Whooping Cough)

Pertussis, commonly called whooping cough, is a toxin-mediated bacterial disease that can cause uncontrollable and violent coughing, which is far worse in the undernourished. Whooping cough begins like a common cold, with hoarseness; watering eyes and nose; a short, dry cough; and fever. The fever gives way, and the short, dry cough can be followed by a whoop-sounding cough that often, though not always, characterizes this disease.

*Whooping cough is epidemic in every portion of Philadelphia, and tens of thousands of little children are suffering from the disease. It is in the homes of both rich and poor, and as soon as one child in a square is attacked all the children on the same street become affected. Pneumonia and bronchitis often follow in its train, and in severe cases which have been neglected the lungs are so weakened that the patient offers fruitful ground for the seeds of consumption [tuberculosis].*²⁶

*Significant figures concerning children's diseases were given by Dr. Royal S. Haynes... "Whooping cough," said Dr. Haynes, "kills more babies under one year of age than any other contagious disease. There are almost as many deaths from whooping cough as from typhoid." He gave startling statistics showing the "harmless" diseases. The deaths in New York in 1910 from measles were 785; scarlet fever, 953; whooping cough, 461; diphtheria, 1,715; and smallpox only 5... In the same year the dreaded typhoid caused only 558 deaths.*²⁷

²⁵ "Ravages by Diphtheria, A Large Number of Deaths in Berks and Lehigh Counties," *New York Times*, January 5, 1889.

²⁶ "Whooping Cough in Philadelphia," *New York Times*, July 24, 1893.

²⁷ "Beware of Whooping Cough, Kills More Babies Than Any Other Disease, Says Dr. Haynes," *New York Times*, February 16, 1912.

Scarlet fever

Scarlet fever is another toxin-mediated bacterial disease. The bacteria involved are *Streptococcus pyogenes*, also known as group A strep. The disease got its name from the red rash that appears on the skin, mostly on the chest and abdomen, which can then spread to the entire body. In susceptible individuals, symptoms are caused by toxins that the bacteria produce as a result of a specific bacteriophage (virus) that can integrate into the streptococcal genome, instructing the bacteria to produce the toxin.

In some people, serious complications such as heart and kidney disease can arise. These complications are actually the result of an autoimmune reaction from the antibody produced in response to the infection. Antibodies are thought to be good, but in reality, they can cause problems whether induced by a vaccine or an infection.

The idea that antibiotics have eliminated the disease is a fallacy. Scarlet fever still exists, yet the mortality is nothing like it used to be and declined long before antibiotics. In fact, antibiotics actually seem to increase the toxin release from the bacteria.²⁸ In the 1800s and early 1900s, when people were undernourished and sickly, scarlet fever resulted in a great many deaths.

During the fifteen years 1847-1861 inclusive, the deaths from scarlatina and diphtheria in England and Wales amounted to 262,429, and in London alone to 38,890. In other words, one out of every twenty-three deaths occurring in London was due to scarlatina... The reader whose own family has been visited by the fell destroyer, can figure to himself the vast amount of human misery which these figures imply. Although not uncommonly the disease runs such a mild course that medical treatment is almost

²⁸ M. Tanaka, T. Hasegawa, A. Okamoto, K. Torii, and M. Ohta, "Effect of Antibiotics on Group A Streptococcus Exoprotein Production Analyzed by Two-Dimensional Gel Electrophoresis," *Antimicrobial Agents and Chemotherapy*, vol. 49, no. 1, January 2005, pp. 88–96.

Disease—A Way of Life

*unnecessary, it is, on the other hand, but too true, that very many cases are amenable to no treatment whatever.*²⁹

*Hempstead, Long Island, Nov. 20, 1884—Scarlet fever is raging in Smithville South and vicinity to such an extent that the schools have been closed on that account. Three deaths from the disease have occurred...*³⁰

*Canandaigua, N.Y., April 29, 1884—There have been 16 deaths from scarlet fever in this village within eight days. The Board of Health has issued an order prohibiting public funerals and commending the adoption of other sanitary regulations as the epidemic continues.*³¹

Measles

Unlike the diseases discussed so far, measles is a *viral* infection. Initial symptoms include runny nose, hacking cough, high fever, and aches and pains. Measles is characterized by small red, irregularly shaped spots with white centers that appear on the skin. Like other diseases, measles epidemics resulted in many deaths.

*The startling mortality among children from the little-regarded ailment of measles was indicated to-day by a statement issued by the State Department of Health, showing that in 1906 there were 1,463 deaths from it, 1,240 being of children under 5 years of age. In December alone 2,807 cases of the disease were reported, and a search of the records shows that it kills 2½ times more children than does scarlet fever.*³²

Thousands of natives of Herschel Island are along the Arctic coast are dying of measles... They are dying off like rabbits, and there seems to be nothing to check the death rate. The march of

²⁹ “Scarlatina Epidemics,” *British Medical Journal*, September 12, 1863, pp. 285–286.

³⁰ “Scarlet Fever on Long Island,” *New York Times*, November 21, 1884.

³¹ “A Scarlet Fever Epidemic,” *New York Times*, April 30, 1884.

³² “Measles Kills 1,463, And 1,240 Were Children Under 5 Years—Pennsylvania’s 1906 Record,” *New York Times*, January 19, 1908.

*civilization has increased the death rate from Nome north. Two years ago the devastation began, and it has continued since. **When the natives began to wear civilized man's clothing, and drink white man's whisky, then began their decline. Pneumonia, rheumatism, grip, and every conceivable malady made their appearance among them and spread along the coast with appalling results.***³³

Yellow fever

Yellow fever is an acute viral disease transmitted by infected mosquitoes. In 1855 yellow fever devastated the towns of Norfolk, Portsmouth, Gosport, Virginia, and the surrounding areas. The plague was unrelenting, killing thousands and leaving cities with the highest mortality rates nearly deserted.

...the main business street of the city was utterly silent. Not a store was open; only two druggists' shops gave evidence of life. Thorougfares lately vocal with the bustle of Trade, are now silent as midnight, their stillness broken only by the footfalls of nurses hurrying to the apothecary for medicines. A very few weeks have sufficed to turn a population of a least Twenty Thousand, lately residing in Norfolk and its suburbs, scarcely Three Thousand remains... A common spectacle in the streets is a cart laden with coffins, which are deposited at some convenient street-corner, and removed hence by the undertakers as occasion demands. Three or four of these coffins often stand together. The dead are immediately taken out of the houses and placed upon the sidewalks: a strip or parchment inscribed with the name, age and date of the decease of the victim, being nailed upon the lid of each coffin... The deaths here have been recently numbered fifty, sixty, seventy—aye, very nearly eighty per day in our remnant of a population of about six thousand, at most, seven thousand! The rich, the poor—old and young, white and colored, all have been indiscriminately leveled down by the disease which now holds fearful sway in our once happy city,

³³ "Thousands Die from Measles—The Disease Reported to Be Carrying Off Arctic Coast Natives at Rapid Rate," *New York Times*, November 4, 1902.

Disease—A Way of Life

*throughout whose streets, avenues and squares there reign a silence and a desolation that are sickening and oppressive beyond description.*³⁴

The article in the *New York Times* describes a scene of swarming insects covering coffins, which reads more like a modern-day horror novel than a news report.

*Soon after the attack, the skin of the white patient takes on a yellowish tinge, similar to that of a lemon or orange. Black patients undergo a similar metamorphosis—their hue changes to bronze. In all cases, the progress of the fever is very rapid and very often fatal... Since the fatal epidemic has prevailed in our city, a most singular looking fly has made its appearance... its body is about the size of the common fly, of a yellowish color... They fly together in swarms, and may be seen in large numbers on the fig trees—but their great point of attraction seems to be the coffins in which repose the ill-fated victims of "Yellow Jack." We took a stroll out to that Golgotha of burial grounds, Potters Field, yesterday, and was intensely horrified at the seeing many of the coffins that lay on the ground, scattered around, awaiting internment, literally black with these loathsome little insects, that squirmed themselves upon one another so thick as to exclude the coffin entirely from sight.*³⁵

Cities in the southern United States were accustomed to frequent epidemics and were sometimes stricken with multiple illnesses at the same time, causing widespread panic.

*Memphis in 1873 was attacked from three quarters at once—by yellow fever, smallpox and cholera. The people fled in a panic, leaving half the houses vacant.*³⁶

³⁴ "Yellow Fever—Fearful Progress of the Disease at Norfolk," *New York Times*, September 11, 1855.

³⁵ "Yellow Fever—Fearful Progress of the Disease at Norfolk," *New York Times*, September 11, 1855.

³⁶ Allan Nevins, *The Emergence of Modern America 1865–1878: A History of American Life Volume VIII*, 1927, Macmillan, New York, p. 323.

Consumption

Many other diseases plagued the people of the 1800s and the early 1900s. Tuberculosis is a bacterial infection that affects the lungs. It was once known as “consumption” because it wasted away, or consumed, its victims.

One of the most potent factors in the production of consumption, and especially in tenements, is overcrowding and consequent foulness of the air. “The respiration of impure air,” says one great authority on tuberculosis, “directly debilitates the vital powers, enfeebles the nervous system, depresses the appetite, deranges the secretions, and leads to the retention of effete matters in the blood.”³⁷

Together, pneumonia and tuberculosis were by far the biggest killers of the time.

*...tuberculosis and pneumonia are in the lead, causing, respectively, death-rates of 1.16 and 1.02 per 1,000 living, with deaths by violence, heart disease, and carcinoma in the next places... **Consumption and pneumonia are far in the lead, causing together about one-fifth of the total deaths.**³⁸*

*The bare statements that no less than 700,000 men and women of working age in this country are afflicted by a preventable and curable disease and more than 92,000 of them die annually from the disease, sounds startling. This is the case, and tuberculosis is the disease. Yet the 92,000 or more workers who die from tuberculosis are only 70 per cent of the total death toll from this disease. **During the past year 132,000 persons of all ages died from tuberculosis in the United States.**³⁹*

³⁷ Arthur R. Guerard, MD, *The Relation of Tuberculosis to the Tenement House Problem*, 1903, Macmillan, New York, p. 462.

³⁸ *Publications of the American Statistical Association*, vol. 9, nos. 65–72, 1904–1905, pp. 260, 261.

³⁹ “Increasing Output by Preventing Tuberculosis,” *The American Contractor*, October 29, 1921, p. 30.

Disease—A Way of Life

Although these infectious diseases are often considered as separate illnesses, they could strike together or shortly after each other.

*Diphtheria, when epidemic, also frequently complicates measles. Much of the mortality from measles in this city, since the year 1858, was due to this cause.*⁴⁰

*At the Eurana Schwab Home near Huguenot, S. I., at first known as St. Joseph's-by-the-Sea, an epidemic of measles with scarlet fever and pneumonia, has existed among the 300 young children, during which twenty have died of more than 150 who have been affected... "The children that come to us, you should remember, are the unwelcome children of the world," said she [Sister Teresa]. "They do not get proper care. They are always weak and frail when we get them. It is not strange that when disease breaks out, 20 out of 150 should perish."*⁴¹

...one of the most serious combinations is that of measles with diphtheria. I cannot escape the impression that the organism attacked by measles offers less resistance to the intoxication and infection from diphtheria... when measles follows diphtheria with an almost simultaneous infection, both diseases may influence each other in a very ominous manner. A strong boy aged seven years, in good circumstances, taken ill upon February 18th, from diphtheria, which rapidly assumed dimensions in the pharynx. On February 20th he received 600 antitoxin units, and on February 21st, after I visited him for the first time, he at once received 1,500 more... Upon March 2d an eruption of measles appeared, at once severe apathy and high graded asthenia [loss of strength] occurred; gallop rhythm... During the night, from March 8th to 9th, death occurred. In this case

⁴⁰ J. Lewis Smith, MD, *A Treatise on the Diseases of Infancy and Childhood*, 1886, Lea Brothers & Co., Philadelphia, p. 193.

⁴¹ "Many City Waifs Die in St. Joseph's Home, Scarlet Fever, Measles, and Pneumonia Affect 143 of the 300 Inmates, Twenty Fail to Recover," *New York Times*, July 6, 1911.

*the periods of infection with the contagium of measles and diphtheria were close together.*⁴²

Puerperal fever

One of the ugliest, most tragic, and most avoidable chapters in the history of medicine is that of puerperal fever. Puerperal fever is the name given to a deadly infection that affected many mothers in the immediate post-partum period. Severe pain, pelvic abscesses, sepsis, high fever, and agonizing death were brought about by an ascending infection introduced by the contaminated hands of doctors and unsterile medical instruments. There is no single type of microorganism responsible, though the most common bacteria isolated after the germ theory was developed was *Beta haemolytic streptococcus*, Lancefield Group A.

In the United States, Europe, New Zealand, Sweden, and wherever conventional midwifery was abandoned and taken over by the new male midwives known as obstetricians and medical students, puerperal fever followed.

Man-midwifery was an uncertain but increasingly fashionable and sometimes quite lucrative area of practice for physicians; it may, for this reason, have been a field in which ideas about theory and practice were particularly strongly contested. Midwifery, formerly the preserve of women, was receiving increasing attention from medical men—both physicians and surgeons—during the eighteenth century. Prominent within this area of practice were the surgeons, for whom midwifery was seen as a natural extension of their activities. Surgeons had traditionally been called in to difficult births by midwives, usually when there was a need to extract an already dead foetus from the womb in order to save a mother's life. During the eighteenth century, surgeons were increasingly finding ways to extend their practice into the area of normal childbirth. Men-midwives, although recognized by society as holding

⁴² J. C. Wilson, MD, *Infectious Disease*, 1911, D. Appleton and Company, New York, pp. 338–339.

*respectable positions and possessing expertise, found their status limited by the “hands-on” nature of their work. Nevertheless, within broader social terms, man-midwifery could be seen as a field of financial and career opportunity. These ambiguities and uncertainties within the status of men-midwives may have contributed to the intensity and competitiveness of the debates which can be found in their writings.*⁴³

Puerperal fever, also known as childbed fever, was a disease mediated by doctor arrogance. Dr. Oliver Wendell Holmes Sr. of the United States and Dr. Ignaz Semmelweis of Austria were prominent, long-suffering advocates for women, who tried to get the medical profession to wash their hands and practice more like the traditional midwives did. Both were ignored and even professionally attacked for their views. After years of mental anguish, watching women die needlessly, they left the field of medicine in disgust. Dr. Holmes became a writer. In 1865 Dr. Semmelweis was deceived into entering an insane asylum, and when he tried to escape, he was severely beaten by guards. A gangrenous wound to his hand, probably caused by the beating, led to his untimely death two weeks later.

The reason it is important to never forget the history of puerperal fever is because the massive loss of maternal life impacted husbands, surviving infants, older surviving children, the family unit, society... and the statistics on life expectancy. Yet we rarely hear the words “puerperal fever” mentioned or discussed.

The epidemic of women and babies dying is documented from records as early as 1746, where more than 50 percent of mothers who gave birth in a Paris hospital died.⁴⁴ However, the best and most comprehensive writing on the problem came from Dr. Ignaz Semmelweis in his book, *Etiology, Concept, and Prophylaxis of Childbed Fever*. After

⁴³ Christine Hallett, PhD, “The Attempt to Understand Puerperal Fever in the Eighteenth and Early Nineteenth Centuries: The Influence of Inflammation Theory,” *Medical History*, vol. 49, no. 1, January 1, 2005, pp. 1–28.

⁴⁴ Christine Hallett, PhD, “The Attempt to Understand Puerperal Fever in the Eighteenth and Early Nineteenth Centuries: The Influence of Inflammation Theory,” *Medical History*, vol. 49, no. 1, January 1, 2005, pp. 1–28.

noting that the mothers who were tended by medical doctors had more than three times the rate of death than those who were tended by midwives, and that those who were not internally examined lived, he suspected a contagious agent. Doctors often went from touching infected corpses in the cadaver dissection lab, to the maternity ward, where they examined women and delivered babies without hand-washing.

Dr. Semmelweis directed the doctors of his hospital to use a chlorinated lime solution on their hands prior to touching women. When doctors and medical students complied, the maternal mortality rate went from a high of 32 percent down to zero. Using a similar antiseptic technique, Dr. Breisky of Prague reported in 1882 that he delivered 1,100 women in succession without a single death.⁴⁵

Dr. Semmelweis held several sequential staff positions, and wherever his hygiene method was followed, maternal mortality rates dropped. But most of his contemporaries ignored such outrageous and offensive “nonsense.”

Doctors were insulted at the suggestion that their hands were dirty⁴⁶, and many had the arrogance to continue to ignore factual evidence showing that they were the cause of maternal suffering and death up until the 1940s, when antibiotics were invented.

After the invention of antibiotics, puerperal fever dropped significantly, but Semmelweis’ and Breisky’s records proved that doctors could have stopped almost all the puerperal fever deaths from occurring in the 1700s if they had only washed their hands and their instruments and stopped using unnecessarily invasive birthing techniques.

Another example, from Britain, was the widespread use of chloroform and forceps by general practitioners in uncomplicated deliveries between 1870 and the 1940s. This was described by one

⁴⁵ Frederick C. Irving, MD, “Oliver Wendell Holmes and Puerperal Fever,” *New England Journal of Medicine*, vol. 229, no. 4, July 22, 1943, pp. 133–137.

⁴⁶ Richard W. Wertz and Dorothy C. Wertz, *Lying-In: A History of Childbirth in America*, 1989, Yale University Press, p. 122.

*observer as a tendency a “little short of murder” and accounted for many unnecessary deaths.*⁴⁷

Considering that one-fifth of the population consisted of women of childbearing age and that a higher than 30 percent maternal mortality rate was not uncommon, the impact on society, life expectancy statistics, and the infectious disease rate (infants whose mothers died around childbirth had a four times higher risk of dying, most commonly from infections) was enormous. Yet vaccine enthusiasts never mention this tragedy in their assessment of history and infectious disease. Instead, vaccines are lauded as the great gift to humanity when, in fact, **had doctors simply washed their hands, they would not have transmitted bacteria into women, and would have prevented countless millions of deaths and raised the life expectancy curve markedly.**

The end result of puerperal fever was millions of motherless children relegated to die, or to live a life of malnutrition and disease, often forced to work in mines, factories, and sweatshops. Puerperal fever fueled a social bonfire that left enormous damage in its path. If those infants had mothers to breastfeed them and love them and the older siblings had a mother at home to tend to their needs, the disease and misery of the 1700s to 1900s would have been far less prominent. Doctors today believe that vaccines would have reduced those diseases, while they ignore the fact that their own predecessors created one of the situations which resulted in high disease rates and low life expectancy.

⁴⁷ Irvine Loudon, “Maternal Mortality in the Past and Its Relevance to Developing Countries Today,” *American Journal of Clinical Nutrition*, vol. 72, suppl. 1, July 2000, pp. 241S–246S.

Preventable medical error is well documented all throughout the world and is the third leading cause of death in the United States (225,000 deaths per year*), with similar numbers wherever the same medical paradigms are implemented.

Yet every time an unvaccinated person enters their office, zealously pro-vaccine doctors arrogantly overlook the truth that a person's risk of dying or being maimed from accepted medical practice they offer, is far, far higher than any possible death or maiming from a supposedly vaccine-preventable disease.

*Barbara Starfield, MD, MPH, "Is US Health Really the Best in the World?" *Journal of the American Medical Association*, vol. 284, no. 4, July 26, 2000, pp. 483–485.

There are numerous reputable sources that clearly demonstrate how improved living conditions, more nutritious food, better obstetric care, by washing hands and sterilizing instruments to prevent infection spread, and other non-vaccine elements were responsible for the decline in infectious disease death rates. Despite this clear evidence, today's vaccine proponents continuously and falsely claim that vaccines are the principal reason for the increase in life expectancy we enjoy today.

In the pages that follow, you will be able to decide for yourself what makes more sense. Was it the vaccines? Or were there other factors that corresponded with the timing of the decline in death rates? If so, are *they* to

thank for our longer life expectancy? If the answer is that it was not the vaccines, should the World Health Organization (WHO) be working in a different direction today, in poor countries that mirror the conditions of our past?

ABOUT THE AUTHORS

Roman Bystrianyk co-authored *Dissolving Illusions: Disease, Vaccines, and the Forgotten History* with Suzanne Humphries, MD. He also co-authored a book with Kathryn Schmutter on the critical environmental issues of our planet—*Moving Back From Midnight: Working Together to Save Our Planet*. Roman's lifelong curiosity, a thirst for knowledge, truth, justice, and the betterment of all humanity and the world drives him to explore and address issues that others have largely forgotten or ignored.

Dr. Suzanne Humphries earned her medical degree in 1993 from Temple University in Philadelphia, Pennsylvania, and then became board certified in internal medicine and nephrology. Her career encompassed teaching medical students, residents, and graduate students, and included an assistant professorship at the clinical campus of Robert Wood Johnson Medical School in Camden, New Jersey, as well as 10 years in private practice affiliated with a large teaching hospital in Maine.

After resigning from a lucrative but soul-eroding job in 2011, she spent years researching vaccination and infant immunity and bringing her findings to the public in the form of the book *Dissolving Illusions* and her autobiography *Rising From The Dead*. She has delivered many public lectures spanning from Scandinavia, Finland, Australia, New Zealand, UK, and the USA.