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Introduction

“The Universe does not afford its parallel.”

—PRIEST AND MISSIONARY FATHER LOUIS HENNEPIN,
ONE OF THE FIRST WHITE MEN TO SEE NIAGARA
FALLS (LATER PUBLISHED IN 1698)

I am nineteen and holding down the tour desk in an upscale Niagara Falls hotel. My job is to sell Niagara Falls.

It’s not as easy as it sounds.

Two groups of foreign visitors buzz around my counter. They’re leafing through pamphlets and asking questions while weighing the cost of a guided van tour to see the falls. “Will we get wet?” (Yes.) “How far are the falls?” (Less than a mile.) “Can we walk there?” (Not advisable.) Most important, “How much is the tour?” (Not cheap.)

The Indian family of five seems interested; the German family of four does not. My fingers are crossed. I know from experience that it’s best to give my spiel, answer questions, and then sit tight and not pressure them.

Suddenly, the Germans—all of whom are impossibly tall—commit. That decision prompts the other family to plunk down a Mastercard as well. I silently let out a sigh of relief. I work mainly on commission, and fall tuition is due in a few weeks. I need tourists like these to come back again and again.

Selling tours has become something of a tradition in my family. My mom and dad, in addition to their respective careers as real estate agent and special education teacher, both work for the same tour company. We’re all good at it, and we all enjoy it. Aside from the much-needed money, I get to meet people

from all over the globe, and for a brief moment I'm able to escape the smallness of this place.

I want to see everything and do everything . . . be anywhere but Niagara Falls in 1988. For now, I work my various jobs, study hard, and bide my time.

I'm still at my desk when the tour excursion returns five hours later. The German father has a small souvenir bag tucked under his arm. I smile and ask how they enjoyed the sights. They hesitate but then ask me in near-perfect English the next two questions that I have learned to expect: "What happened to this city? Why does it smell so bad?"

Honestly, I do not know what to say.

I am too steeped in the culture of this place to have any real perspective. The factories, the smog, those are constants in my life. I am used to breathing very shallowly while walking around town because sometimes the smell is *that* bad. After today's questions, though, I am beginning to wonder why tourists from all over the world seem surprised when they explore our city. Shocked, even. Is what's happening here not normal? Is it worse than anywhere else?

I mull over the answers all the way home as I hold my breath driving down Buffalo Avenue, past Chemical Road. Every time I take this pothole-ridden route, where smoke drifts across the landscape, I kick myself for not taking the parallel-running Robert Moses Parkway; there, at least, the breezes off the adjacent Niagara River clear the air a bit.

For as long as I can remember, I have experienced acrid odors, clouds of pollution, decaying buildings, and a lingering sense of disappointment in this place. These encounters make it hard to sell the city as a world-class tourist draw. Niagara Falls—in my mind, at least—is first and foremost a chemical factory town, which just happens to harbor a world-renowned natural wonder. As I pass between massive factory complexes, one after another, I begin to look at the Falls with the eyes of an outsider. A thick miasma of pollution and despair shrouds this city. Something *is* very wrong here.

But how, why, it became this way, I couldn't tell you.

Now, four decades later, I can. Now I have some answers. Now I know.

It seems like *everybody* knows *something* about Niagara Falls. Most people know the best-selling version. After all, Niagara Falls is an iconic American city. A destination location. The spectacular cascades—often called the eighth

wonder of the natural world—are eagerly visited by more than twenty *million* people per year. Long before the Statue of Liberty was erected in New York Harbor, “the falls of Niagara” were the pride of America.

Others know the Falls from popular culture, whether seeing it in the movies (*Bruce Almighty*, *Superman II*) or on television (*Futurama*, *The Office*). For the uninitiated, and there aren’t many, their first exposure to Niagara Falls may have come compliments of Nik Wallenda, who held millions spellbound as he tightrope-walked across the mighty cataracts in the summer of 2012.

The daredevils, the stunts, the wonder, the power. Niagara’s got plenty of fantastic tales to tell.

Being born and raised here, and even putting myself through college selling tours of this place, I was intimately familiar with all those accounts. Those stupendous cataracts, and the city that bears their name, have shaped me, instilling a deep and enduring love of the natural world.

But that’s not Niagara’s whole story. Not even close.

Visitors who venture even a short distance away from the scenic tourist areas are immediately struck by the marked state of decay. Main Street, only blocks from the storied falls, is lined with empty storefronts. Aside from the Seneca Niagara Resort & Casino, parts of downtown look like a virtual ghost town. In the surrounding neighborhoods, homes are boarded up—some with people still living in them, others abandoned. Broken windows and graffiti are black eyes on once-tidy residential streets.

Not every block looks this way, of course, but far too many do.

Just upriver, dismantled factories and crumbling smokestacks mar great stretches of the Niagara riverscape. Their properties are unkempt, overgrown, dingy. The last natural areas—those not preserved as a state park, school, or a residence—have been scarred, scraped, or contoured into massive mounds covering up toxic waste. The odors are strong; the desolation is palpable.

I started asking myself the same questions the tourists were asking, especially *What happened here?* I watched the city decline as I grew into adulthood. When I went away to law school, each trip home revealed more degradation, more destitution. More store closings—and not just the beloved locally owned ones that once dominated the town. More people leaving.

Niagara Falls may have been considered a “tourist town” by outsiders, but those who lived here knew that manufacturing—primarily chemical manufacturing—was its lifeblood.

By the 2000s, layoffs and factory closures had taken a monumental toll. Unemployment averaged 10.5 percent in the 1990s, almost twice the state and national averages.¹

The city's comprehensive plan for the future gloomily noted in 2009:

Today, many urban neighborhoods are in decay, large areas of the city's industrial corridors are abandoned, and many residents, community and business leaders have lost their sense of pride in their city. In fact, many former residents have chosen to move out of Niagara Falls. Many visitors are disappointed and clearly unimpressed by the quality of the urban environment and the tourism offering that is not what they would expect adjacent to a world-class natural heritage destination such as the Falls. Tourists prefer to visit Niagara Falls, Ontario than remain in Niagara Falls, New York for more than a couple of hours.²

I noticed another distressing trend: I began to prematurely lose family members and acquaintances to illness, especially cancer. The conversations at my early high school reunions often centered on who was no longer with us or what devastating disease someone or another was battling. That only increased with each milestone year. Toxic talk became all too normal, like discussing one's plans for lunch or the evening's entertainment.

In between my regular visits, I would catch news stories about the alarming health data coming out of Niagara County. The numbers were staggering, but the public and agency reaction was minimal, if not nonexistent. It didn't make sense.

Then it was my turn. At thirty-two, I was diagnosed with a cancer that was unusual for my age. Four years later, I learned that my beloved father had a different, but extremely rare, cancer.

I needed to know what was happening. There had to be a connection between the destruction I witnessed in the Falls and the diseases afflicting me and my friends and family. At first, I suspected the usual things that pollute industrial cities. It couldn't have been good to breathe in the harsh smells that had plagued our city for so long. The clouds of smoke billowing across the horizon were no doubt problematic. The growing landfill mounds always gave me pause. That our city was dying was not exactly highly classified information.

But as my father's illness rapidly progressed, we learned something that prompted me to dive deeper. His cancer was said to have been caused by exposure to either radioactive material or dioxin, one of the most lethal substances on this planet.

I was confused. *Where could he have possibly endured such exposure?*

I started rooting around dusty government repositories and boxes of forgotten documents. It was not easy; many documents were stored in repositories on the other side of the state. Some were moved there from Buffalo in the middle of my research. Often, important pages were missing from a collection. I also studied the updated health statistics for Niagara County, and, when those didn't make sense, I dove into the numbers behind those summaries. And then I started asking more detailed questions. Now I was on a mission.

Ultimately, the search for answers turned into twenty-three years of research, fifteen years of environmental litigation, and more than two thousand interviews with neighbors, residents, classmates, sewage plant workers, laborers, city employees, and family members. If they were willing to talk, and I was permitted to talk with them, I was more than happy to listen.

Document by document, conversation by conversation, a sinister picture began to emerge. I knew that my hometown had been shaped by the kingpins of an exceptionally dirty industry, but the full story was exponentially larger and more menacing than I could ever have imagined.

Ironically, it all began with the natural might of the falls. Starting in the mid-1700s, budding industrialists attempted at various points—and with varying degrees of success—to harness those thundering waters to generate hydropower. Because of its unlimited potential, Niagara was preordained to electrify the world. And it did so, in spades.

The Electrical Age gave rise to the Chemical Age, when Niagara Falls became the birthplace of the commercial electrochemical/chlor-alkali industry. Using electricity to isolate chemicals, manufacturers created products never before seen in nature. Some of the resulting chemical corporations grew into major conglomerations. Those corporate behemoths—led by the wealthiest and most recognizable capitalists in industry—plundered Niagara's resources and indiscriminately laid waste to its environs. Names such as Hooker, Hammer, Acheson, du Pont, and countless others wrung what they could from the city and its people, before moving on to the next vulnerable town. Their astronomical profits were earned on our backs.

These captains of commerce drove their chemists to invent new and more powerful poisons. Pesticides, plastics, and solvents were only the beginning. They were also covertly working on the atomic bomb and experimenting with nuclear weapons.

The production of all those chemicals and the refining of uranium created not only toxic workplaces but also incredibly toxic wastes and, in some cases, radioactive waste. *Millions of tons* of toxic wastes, in fact.

That waste had to go somewhere. With little to no guidance or study, the corporate managers trafficked it. They buried it. Burned it. And dumped it all over this city. They temporarily “rented” land from farmers; they searched for empty lots, drilled deep wells, repurposed power canals, and sought out creeks. They used the treasured Niagara River as a toilet to flush untold amounts of liquid and solid toxic waste.

The sewer system was a particular favorite. Referring to one street’s contaminated storm line, the chief chemist for the city’s water department once remarked, “There is not enough water here, in Buffalo, or Michigan to flush out that sewer.”³

The chemical “visionaries” blighted Niagara’s natural beauty, all in the name of progress—and, of course, outsized profits.

Our leaders and agency representatives were largely complicit. They showed leniency in the form of “business-friendly” policies. They accepted help from corporations in setting exposure standards with artificially high limits, knowing all the while that polluters always act in their own interest. Nobody leading this city, county, or state wanted to shut down the moneymaking machine, so they gave the chemical companies a pass. The corporate executives went about their handiwork while offering little to no protection for their workers, much less the people and other living things near their factories and dump sites. Much of their waste contained persistent toxic chemicals and endocrine disruptors known to bioaccumulate in the fat deposits of fish, animals, and people. Of particular concern was the alarming output of “hot,” or radioactive, waste. The sites concealing that material will be contaminated for millennia.

It’s these long-term effects on people and the natural world that keep me up at night. The Falls’ residents continue to be plagued by every major health problem and social ill imaginable, and often at rates that far exceed state and national averages. There’s too much cancer and chronic illness. Too many mental health challenges. Too much violent crime. While there are complicating factors, *all* of these ills are now tied to exposure to chemicals or chemical compounds such as dioxin. That exposure affects our children and our children’s children. As in all such cases, the poor and marginalized bear the brunt of the injury.

The corporate titans never warned their factory workers, many of whom were immigrants, about the dangers of the poisons they were working around or tracking home to their unsuspecting families. My great-grandfather, like many other Italian immigrants, came to the Falls in search of a better life. He spent forty-four years toiling in stifling, chlorine-heavy furnace rooms or dusty

silica bins. My grandfather topped that, putting in forty-six years. My father was next in line. That was the way it went for many of Niagara's families; those coveted, well-paying factory jobs were seen as a sort of birthright.

Now I knew why my father, grandfather, and so many others had to contend with terrible cancers or premature illness. They never had a chance.

Nor did the rest of us. Predictably, over time, the buried or dumped hazardous waste began to leak, leach, and migrate. It moved through fractures and vertical fissures in the bedrock. It flowed into creeks, basements, rivers, a Great Lake, and, by extension, communal drinking water supplies. It tainted fish and wildlife and humans equally and indiscriminately.

Before long, we were all living, working, or playing in the midst of it. Many of Niagara Falls' visitors have a vague familiarity with Love Canal because of its status as the nation's very first environmental disaster, but Love Canal is merely one of at least *eighty-nine* Superfund or hazardous waste sites in this fourteen-square-land-mile city. Love Canal is not even Niagara Falls' largest or most dangerous environmental disaster.

As these contamination catastrophes came to light, agency officials directed virtually all of their attention to the construction of around-the-clock hydraulic pumping and treatment operations. They were attempting to either extricate or barricade those poisons. While cleanup is necessary, those officials rarely broadened their focus to the nearby people and pets who were in harm's way. No meaningful warnings were given. Homes were not tested. The long-term health impacts on living organisms were ignored. And equally wrong: They neglected to alert the world that those tenuous barricades *all* leak or eventually fail—facts they'd figured out pretty quickly.

Officials have told us that, on average, every Niagara Falls resident lives within a *half mile* of a hazardous waste site. I learned that *every* place I lived as a child and young adult was in the crosshairs of a leaking hazardous waste site. My first home was at the intersection of more than a dozen.

The high-level harm and scheming continue to this day. Current remediation plans are inadequate, relying on aging caps and liners to contain the mess. Even as you read this, toxic chemicals are escaping their confines and migrating into the Niagara River and Lake Ontario and beyond.

The kicker is that the chemical kingpins knew the dangers. They knew them well, and they knew them well before they became public knowledge in the 1970s. Internal documents dating back decades establish their knowledge of the toxicity of their products, their concerns about migration, and their worries about liability, knowledge that was kept well concealed.

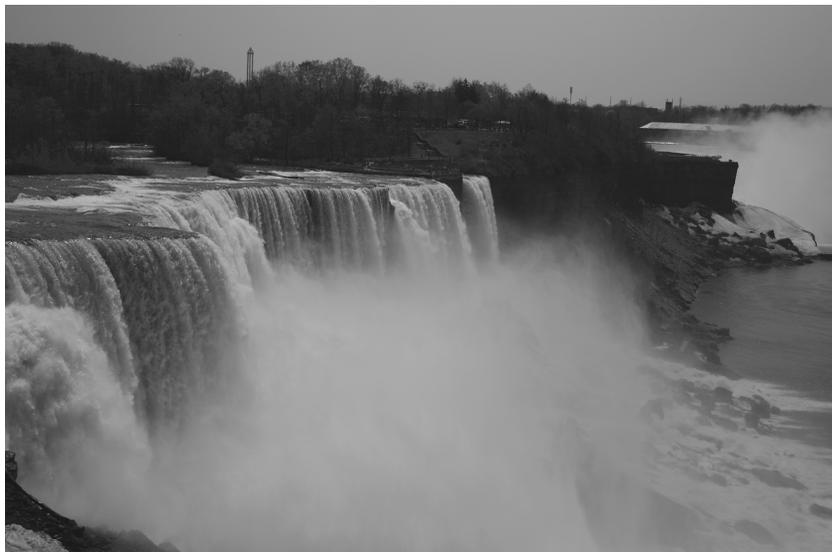


FIGURE 0-1. What rightfully deserves to be the focus of any discussion about Niagara Falls, New York: the American Falls, circa 2015 (the Horseshoe Falls is partially visible in the background, top right). Pollution subsequently stole its thunder. Credit: Mario Passero.

That's not surprising, given that the vast majority of the more than eighty-six thousand chemicals registered with the federal government were never comprehensively assessed for health and safety. Manufacturers kept much of the knowledge they *did* possess close to the vest.

The implications go far beyond my hometown. Niagara's story is being repeated in pockets throughout the world, especially China, Mexico, and India, where major chemical and chlor-alkali producers have shifted their focus to avoid regulations and dodge accountability. Meanwhile, one in six Americans live within three miles of a toxic waste site that is so dangerous it has been proposed or approved for cleanup under the Superfund program of the US Environmental Protection Agency.⁴

Niagara is far from alone. There are other Rust Belt cities. There are other cities where corruption and governmental incompetence run rampant. But in terms of scope, the number of people affected, the number of polluters and poisons, the methods of exposure, and the expanse of time, Niagara Falls—as Louis Hennepin noted in the opening quote—has few parallels.

Now I know what happened here.

Others need to know, too. Residents deserve answers about why they are so sick and why the city is in such bad shape. The rest of the world should understand the consequences of putting corporate profits ahead of people's health. We all must do a better job of testing these substances, monitoring their effects, and disposing of them safely. We may collectively need to answer tough questions: Is it time to radically shift our thinking about pesticides and our food supply?

It is my hope that medical researchers and scientists will be drawn here to examine the profound and enduring impacts of toxic exposure on the human body and mind as well as on the natural world. That is just the start to long-delayed justice and accountability.

Only through a comprehensive plan of action—and systemic shake-ups—can we begin to reverse decades of harm.

For more than two centuries, chemical behemoths have gotten away with what they have done to Niagara Falls. But this history and its current reverberations can no longer be ignored. Our bodies and the land bear witness. Our families are riddled with holes where parents and siblings should be. For me, this is not just personal. It is a universal story.

It's time for a new legacy for Niagara Falls.

Let this story be a start.

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