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The Rust Belt's Sunshine Factory

On January 17, 1984, the Republic Steel corporation announced that it would permanently close the Buffalo, New York, steel plant that it had shuttered two years earlier. [1] Republic's "Riverbend" factory had employed over two thousand Buffalonians who made steel bars for the country's automotive and railroad businesses. Just a few months earlier, Bethlehem Steel announced that it, too, was shutting down its operations nearby in Lackawanna. That factory had once been one of the largest steel plants in the world, employing over twenty-two thousand workers. [2] Heavy manufacturing was collapsing all over the region. People started calling it the Rust Belt. [3]

New York's newly elected Democratic governor Mario Cuomo saw Buffalo's plight. Rust Belt counties across the region lost roughly 350,000 jobs in the steel industry, on top of 500,000 jobs in the auto industry in the years between 1977 and 1987. [4] Reagan's morning-in-America optimism about the health of the American economy appeared to ignore the struggle of these thousands.⁵ In a 1984 rebuke to President Ronald Reagan's "shining city upon a hill" speech, Governor Cuomo reminded the president that industrial cities in his state were beginning to lose their shine: "There is despair, Mr. President, in the faces you don't see, in the places you don't visit in your shining city." [6] Buffalo's mayor James Griffin publicly appealed to businesses through newspapers and in speeches, pleading with them to return to Western New York, hoping to relieve some of the despair and the strain of sudden mass unemployment in the region. Even after the company made it clear that the plant would not reopen, he still hoped some business would purchase the factory, according to the United Press. [7] No business came. While unemployment would eventually fall again in the region, this was no sign of growth, according to one study of the period: "the adjustment took place entirely through out-migration of people rather than in-migration of jobs or a change in labor force participation." [8] In other words, unemployment fell not because work was returning to the Rust Belt but because workers were leaving it. For thirty years, seven months, and seven days after Republic Steel's announcement, the Riverbend plant remained idle.

Then on September 24, 2014, machinery began moving again at the old steel plant. That day, contractors from the Buffalo firm LP Ciminelli broke ground on the former Republic Steel brownfield site to begin building a new factory under the watchful eye of Mario Cuomo's son and successor, Governor

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[1] "Republic Steel Corp.," United Press International, January 17, 1984, [link](#).

[2] Meyer Brian, "Steel Plant Is Showing Signs of Life in Lackawanna," the *Buffalo News*, February 26, 2014, [link](#).

[3] For a history of the Rust Belt, see Steven High, *Industrial Sunset: The Making of North America's Rust Belt, 1969–1984* (Toronto: University of Toronto Press, 2003). *Belt Magazine* also offers nuanced articles from and on the region.

[4] James Feyrer, Bruce Sacerdote, and Ariel Dora Stern, "Did the Rust Belt Become Shiny? A Study of Cities and Counties That Lost Steel and Auto Jobs in the 1980s," in *Brookings-Wharton Papers on Urban Affairs* (2007): 41, [link](#).

[5] You can view the famously optimistic Reagan-Bush campaign ad here: "Top 10 Campaign Ads: Morning in America," *Time* magazine, [link](#).

[6] The speech is available on C-SPAN's website. "Mario Cuomo 1984 Democratic National Convention Keynote Speech," C-SPAN, July 16, 1984, [link](#).

[7] United Press International, "Republic Steel."

[8] Feyrer, Sacerdote, and Stern, "Did the Rust Belt Become Shiny?," [link](#).



Top: East elevation of LTV Steel, formerly Republic Steel, Buffalo, New York. Courtesy of Library of Congress, Prints & Photographs Division, HAER NY,15-BUF,38-1.

Bottom: The finishing department of Republic Steel, 1943, Buffalo, New York. Photograph by Marjory Collins. Courtesy of Library of Congress, Prints & Photographs Division, LC-USW3-025816-D.

Andrew Cuomo. [9] The structure would become a solar panel factory for a startup known as Silevo, which had just been acquired by one of the country's biggest solar firms, SolarCity, chaired by Elon Musk, the founder of Tesla and SpaceX.

While digging, workers stumbled upon a time capsule of industrial artifacts from the Republic Steel era. When the factory closed in 1984, it had become its own landfill: bulldozers plowed rubble, tools, equipment, and anything else on the site into the basements of the factory. They covered the remains with dirt. In 2014, builders encountered these chambers of Rust Belt rubble. They found vehicles and steel ingots, lumps of pure metal that were still awaiting processing from 1984. [10] After workers cleared the chambers, a

[9] Ben Willis, "SolarCity Breaks Ground on 1GW Silevo Fab in New York," *PV Tech*, September 24, 2014, [link](#).

[10] Patrick Sisson, "A Gigafactory Is Rising in Buffalo, and It May Change the Solar Energy Industry," *Curbed*, April 1, 2016, [link](#).

new steel structure began to rise over the ruins. Three years and several mergers and acquisitions later, Tesla's "Gigafactory 2" was complete.

The Gigafactory has since become a PR Brownfield site in its own right, a tale of corruption, investigations, and prosecutions reaching nearly to the top of New York State's administration. Neither the architects, EYP of Albany, nor the contractors, LP Ciminelli of Buffalo, feature the project on their websites. Governor Cuomo tends to avoid the topic. Amid this silence from the project's instigators, a new narrative is emerging, one quietly supported by Tesla's money. A rediscovery of Nikola Tesla's role in the city's history has merged with enthusiasm for the factory. In a worrying confluence of historical preservation and corporate advertising, Buffalo has caught Tesla fever.

In spite of its meaningful site, Gigafactory 2 engages little with the architectural fabric of the city. The Gigafactory sits along the meandering Buffalo River on the South Side of the City. Much of the land along this part of the river is still undeveloped city property. The rest is dotted with signs of Buffalo's former industrial glory. From outside the factory, one can see heavy freight rail, much of it idle, alongside the grain elevators that made Buffalo rich as they stored grain from all over the Midwest to be distributed to the East Coast. A General Mills factory is still churning out Cheerios further down the river. Its honey-nut scent spreads over this side of town in the early morning. Some of the grain elevators are now filled with entertainment complexes geared toward younger, newer residents of the city. Most sit empty. Some of Buffalo's historic neighborhoods are also within sight, like the First Ward, a collection of small, squat houses and factories, once home to Buffalo's thriving immigrant worker communities. The Gigafactory, a sprawling 1.2-million-square-foot building clad in bright white with huge glass walls in the style of Silicon Valley headquarters, has little in common with any of them.

The factory's lack of engagement with the rest of Buffalo isn't for lack of interlocutors. Buffalo has a rich architectural heritage. Its city hall and the old central terminal were two of the finest examples of Art Deco architecture in the country. A young Eero Saarinen displayed his talent along with his father's on the acclaimed Kleinhans Music Hall. Louis Sullivan erected one of the earliest examples of a skyscraper in the late nineteenth century when he designed the city's famed Guaranty Building. Frederick Law Olmsted's meandering parks connected the city and created an integrated urban fabric.

The Gigafactory sits apart from this fabric. Several stories high yet still appearing flat relative to its immense breadth and width, the building's form would resemble a warehouse, were it not for its shiny white exterior, resembling the gleaming Jony Ive designs of the last decade. Its façade on South Park Avenue proudly announces in company font to a coffee-and-doughnut chain across the street that this building is owned by "TESLA." This façade is lined with a collection of squat rectangles made of tinted glass, broken up by long white vertical mullions. Four glass towers project with increasing depth from the front. The rightmost one flanks a small overhang in one corner that suggests an entrance. A narrow strip of grass (more often mud or snow in Buffalo) lines the front, followed by hundreds of parking spaces. Most of the cars parked are not electric.

One appropriate reference for the designers of the Gigafactory would have been Frank Lloyd Wright's Larkin Administration Building, one of



Top: Looking south at the Gigafactory 2 from the Buffalo River, Buffalo, New York. © Tesla.
 Bottom: Tesla employees at the Gigafactory 2 manufacturing solar panels, Buffalo, New York. © Tesla.

the most famous corporate structures ever built. Though it no longer stands, the Larkin building revolutionized corporate administration and office design. Wright pushed central infrastructure to the outside, clearing up an airy central administrative area surrounded by meticulously planned offices and amenities that streamlined the Larkin Company’s workflow. You can still feel its influence in many corporate buildings today. But Gigafactory 2 has nothing to say to Wright’s efficiency. It has nothing to say to Olmsted’s landscaped parks, either, or to the city hall, or to Saarinen and Sullivan. It’s not the employees’ rusty pickup trucks in the parking lot that are out of place at Tesla’s factory; it’s the building itself.

Though it may simply be the most glaring among many in this incongruity, the factory’s aggressive banality helpfully elicits a fundamental question: what is a building like this doing in Buffalo? Even the simplest answer creates confusion. Gigafactory 2 is supposed to manufacture solar panels and jobs. It is supposed to be the Buffalo sunshine factory. But why the Rust Belt and not, say, the Sun Belt? After all, Gigafactory 1, the factory’s predecessor, stands at the Tahoe Reno Industrial Center in Nevada. In Buffalo, Tesla isn’t even putting the factory’s solar panels on its own roof. Buffalo, the company has said, gets too much snow and too little sun. [11]

So what is it? Spokespeople for Tesla have claimed that the company’s choice had to do with the low cost of energy due to the hydroelectric

[11] Sisson, “A Gigafactory Is Rising in Buffalo, and It May Change the Solar Energy Industry,” [link](#).

power produced by turbines at Niagara Falls. [12] While this may incentivize the production of a renewable energy technology, can it really be enough to draw Tesla to Buffalo or indeed to the United States, where labor costs far surpass those of competing economies like China's? If this is the case, why aren't other manufacturers returning to Buffalo? More fundamentally, if the turbines at the Falls have been turning uninterrupted for over a hundred years, why did the wheels of commerce grind to a halt in the first place?

The real explanation for Tesla's presence in Buffalo lies in massive tax breaks and incentive structures that the state of New York has given the Gigafactory under Governor Cuomo's leadership. A revitalization program known as the "Buffalo Billion" has provided hundreds of millions of dollars to stimulate Western New York's economy. Like Cuomo's basket of tax breaks and subsidies that reportedly—at least initially—lured Amazon to Long Island City, this money is the real reason Tesla has located its factory in Buffalo. The Gigafactory alone received \$750 million in incentives from the state. [13] It wasn't the power of the Niagara River that brought Tesla to Buffalo; it was the rushing streams of cash that Cuomo had directed to the city.

Floods of money tend to create swamps, and tales of corruption have surrounded the Gigafactory in recent years. The Southern District of New York—which is once again in the news for its investigations of Donald Trump's inaugural committee finances—started filing charges in late 2016 related to bid-rigging, wire fraud, conspiracy, and bribery on a grand scale. [14] LPCiminelli, the contractor on the factory, was investigated for possible campaign-finance violations; its CEO gave lavishly to the governor just before scoring the contract to build the factory with the Buffalo Billion money. [15] Several of Cuomo's associates have been found guilty as charged. While the investigations have not alleged wrongdoing on the governor's part, relentless coverage of the scandal by the conservative *New York Post* have hardly helped his approval ratings, which recently dropped to their lowest levels in eight years. [16] It is little wonder, therefore, that spokespeople for Tesla prefer to talk about cheap electricity prices.

And in this context, the city's recent rediscovery of its history with the man who built the turbines at the Falls can't help but be viewed with suspicion. In the late 1880s and early 1890s, Nikola Tesla and Thomas Edison feuded over the future of the American electricity grid. Tesla and his friend George Westinghouse promoted Alternating Current (AC) while Edison and his companies hawked Direct Current (DC). Attempting to discredit his rivals' invention, Edison publicly electrocuted animals with AC power. Amid this gruesome "War of the Currents," Westinghouse managed to secure a bid to use AC power to harness electricity from Niagara Falls. [17]

This newfound source of power inspired utopians to dream about the future at Niagara Falls. Perhaps the most elaborate of these dreams was that of the razor magnate King Camp Gillette. [18] Gillette wanted a giant city called "Metropolis" to house the entirety of the United States. He imagined that one giant corporation, the United Company, would run the city's affairs, bringing order and productivity to what he felt was the chaotic world of the late nineteenth century. This imagined Metropolis would be clean and futuristic, made of steel, white tile, and glass, and powered entirely by the cheap renewable energy of Niagara Falls. Though never built, the Metropolis presaged many of Buffalo's

[12] Diane Cardwell, "SolarCity Is Acquiring a Start-Up, Silevo, to Build Panels," the *New York Times*, June 17, 2014, [link](#).

[13] Austin Carr and Brian Eckhouse, "Did Elon Musk Forget About Buffalo?" *Bloomberg Businessweek*, November 20, 2018, [link](#).

[14] Vivian Yee, "Ex-Advisers to Gov. Andrew M. Cuomo Are Indicted in Federal Bribery Case," the *New York Times*, November 22, 2016, [link](#).

[15] Jesse McKinley and Vivian Yee, "\$1 Billion Went to Buffalo. Cuomo Donors Benefited," the *New York Times*, May 24, 2016, [link](#).

[16] Jesse McKinley, "Cuomo's Approval Rating Drops to Lowest Level in 8 Years as Governor," the *New York Times*, February 11, 2019, [link](#).

[17] Gilbert King, "Edison vs. Westinghouse: A Shocking Rivalry," *Smithsonian* magazine, October 11, 2011, [link](#).

[18] Christian Ruhl, "A Utopia at Niagara Falls," *Belt Magazine*, September 26, 2018, [link](#).

modernist architectural treasures. In Gillette's strange corporate dream, we can perhaps also find echoes of Musk's Gigafactory.

Since Tesla Inc.'s arrival in the region, Tesla mania has taken hold of Buffalo and Niagara Falls. As last year's release of the movie *The Current War* about the Tesla-Edison feud shows, this fanaticism isn't limited to Western New York. [19] Nonetheless, it has a peculiar grip on the region. Members of the community are calling for a new statue of Nikola Tesla downtown. [20] The city also designated fourteen blocks of Niagara Street as a "Tesla Heritage Corridor."²¹ A festival called "Tesla Fest: Electric Circus" marketed itself as a "Tesla-themed extravaganza." [22] Another of the city's landmarks is slated to turn into a Tesla amusement park.

"Terminal A" at 2280 Niagara Street was a crucial site in the history of Tesla's Alternating Current. It helped to transmit power from Niagara Falls to the famous Pan American Exposition of 1901, where the anarchist Leon Czolgosz shot President McKinley. A local businessman proposed to turn the building into "an interactive museum complex including a Tesla-themed brewery and beer garden restaurant." [23] Tesla's Gigafactory 2, incongruous with Western New York's built environment, could work with this rediscovered enthusiasm for all things "Tesla." It is beginning to fit in.

While laudable, this enthusiasm is hardly generated from the grassroots. Elon Musk has been astroturfing heavily, supporting projects that mention the name "Tesla" with money and perks. For the Long Island restoration project of a "Tesla Science Center," Musk gave a million dollars and a promise of Tesla "supercharging" ports at the site. [24] Those organizing the Tesla-themed preservation efforts in Buffalo are reportedly hoping for similar deals. [25] By giving money to the Tesla name and putting Tesla charging stations in front of a Tesla museum, Elon Musk is combining charity and product placement, creating a profitable confusion between history and his brand. Though corporate sponsorship is common, we still expect museums to be spaces of education. Yet when tourists visit the museum to learn about Nikola Tesla, they will unwittingly find corporate advertising. "Corporations are people" takes on new meaning when the boundaries between Tesla the historical figure and Tesla the corporation are so blurred. Tesla is collapsing into Tesla Inc.

This conflation is part of a larger trend toward corporate involvement in cultural heritage. Companies have been sponsoring exhibitions of their work in museums across the world. The Denver Post rightly described the Cartier

[19] "The Current War (2017)," IMDb, accessed March 10, 2019, [link](#).

[20] Maki Becker, "Coming to Downtown Buffalo: A Testament to Inventor Nikola Tesla," the *Buffalo News*, December 31, 2018, [link](#).

[21] Mark Sommer, "Niagara Street Gets 'Tesla Heritage Corridor' Designation," the *Buffalo News*, July 20, 2017, [link](#).

[22] Buffalo Rising, "Tesla Fever Strikes Again—Tesla Fest: Electric Circus," *Buffalo Rising*, September 7, 2017, [link](#).

[23] Holly Metz Doyle, "Tesla City," *Buffalo Rising*, December 17, 2015, [link](#).

[24] Tanya Lewis, "Elon Musk Donates \$1 Million to New Tesla Museum," *Scientific American*, July 10, 2014, [link](#).

[25] Michelle Kearns, "Three Plans for Tesla Museums Emerge," the *Buffalo News*, December 6, 2015, [link](#).



"Tesla meets Tesla." Tesla Science Center at Wardenclyffe event featuring Tesla cars, October 2014, Long Island, New York. Courtesy of the Croatian New Yorker Club.

show at the Denver Art Museum as “the kind of commercial money can’t buy.”

[26] Banks have always supported the arts, but recently some financial institutions have begun bankrolling entire exhibitions, such as the Bronx Museum’s “Collected Visions: Modern and Contemporary Works from the JPMorgan Chase Art Collection.” [27] Some of these exhibitions raise questions about sponsors distorting the truth to their advantage. In the UK, Shell Oil made specific recommendations to the Science Museum about its climate science exhibit.²⁸ Similarly, the weapons manufacturer Boeing sponsored the Afghanistan exhibition at the Imperial War Museum. [29]

Unfortunately, as public support for cultural institutions has dwindled, corporate sponsorship has become a necessary tool for museums to survive. Moreover, corruption and questionable cultural practices aside, Tesla did succeed in bringing manufacturing jobs back to the Rust Belt. Currently, there are about eight hundred employees at the giant factory. [30] Tesla has promised to employ nearly 1,500 workers by 2020, though this would not replace the many thousands lost in the steel industry in the 1980s. [31] Whether Gigafactory 2 can actually achieve these goals remains to be seen. In January, the company announced layoffs of 7 percent of the Gigafactory 2 workforce in Buffalo. [32] In the meantime, Tesla has been planning a third Gigafactory in a less surprising location: Shanghai. [33]

[26] Ray Mark Rinaldi, “‘Cartier’ at the Denver Art Museum: A Shiny Show with Shrewd Branding,” *Denver Post*, November 14, 2014, [link](#).

[27] Robin Pogrebin, “And Now, an Exhibition from Our Sponsor,” the *New York Times*, August 21, 2009, [link](#).

[28] Katie Collins, “What Museums Sacrifice When They Take Corporate Cash,” *Wired*, June 1, 2015, [link](#).

[29] Amanda Mason, “Exhibition in Focus: War Story, Imperial War Museum, London,” the *Telegraph*, November 4, 2011, [link](#).

[30] “Tesla Gigafactory 2,” Tesla Inc., accessed March 13, 2019, [link](#).

[31] David Robinson, “Tesla Plans to Cut 7 Percent of Its Jobs,” the *Buffalo News*, January 18, 2019, [link](#).

[32] Robinson, “Tesla Plans to Cut 7 Percent of Its Jobs,” [link](#).

[33] Maria Armental, “Tesla Reaches Deal with Lenders in China,” the *Wall Street Journal*, March 11, 2019, [link](#).