

## The Industrialization of Niagara Falls

Of all the natural wonders of the United States, it was Niagara Falls which fascinated Americans most. Celebrated in gift books and guides on American scenery, the power of the falls had no equal in the U.S. or Europe. Tourists flocked to the sublime natural wonder. Niagara Falls became an icon of national pride, with the geology of the falls becoming somewhat of a national passion. During the first half of the nineteenth century, the science of geology was one of the few arenas in which the United States surpassed its European peers. Guidebooks provided visitors with precise information about the mineralogical formations visible from the staircase which led visitors to the base of the falls. American citizens spoke with great pride and authority on Niagara's rocky erosions and sedimentary shifting. Many Americans, especially followers of **Transcendentalism**, saw this natural wonder as evidence of a divine power on earth.

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*"I have gazed on nature –  
here and abroad, I have  
wandered o'er the briny  
deep; Of all thy works,  
Almighty God, This is the  
greatest, this is the chief."  
– Henry D. O'Reilly*

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Artist George Inness became completely smitten with the natural wonder of the falls when he first visited in 1881. Determined to take the "impression of the falls down right away," but



[George Inness at Niagara Falls](#), ca. 1884, Archives of American Art

having arrived without painting materials, Inness rushed to the nearby Buffalo, New York studio of an old friend to acquire supplies. At the same time Inness was creating a series of paintings based on Niagara Falls, the location was undergoing a radical energy transformation brought on by the continued developments of the Industrial Revolution. The Niagara Falls Power Company and numerous partners were working to harness the power of the falls to bring the first **hydro-electric power**

plant to Niagara. Yet, as physical changes brought on by industrial development and shifts in ideas about nature and preservation began to change, so too did the manner in which the falls were viewed and depicted by artists.

## Industrialization

Since the beginning of the nineteenth century, landowners and entrepreneurs had been busy developing flashy amusements, hotels, and facilities for tourists, as well as constructing large mills and factories – all of which encroached upon the riverbanks of the Falls. In Inness' *Niagara*, the billowing smokestack in the background of the painting belongs to a paper mill constructed in the middle of the Niagara River on Bath Island (now Green Island). One traveler to Bath Island in 1831 reported that Bath Island contained “a large paper mill, as well as other mills. There is also a house where the weary traveler may find most comfortable refreshment and dinner.” The impending construction of a large distillery on the adjacent Goat Island became a major point of contention between industrialists and preservationists. In 1872, *Picturesque America* opined that the increased industrialization of the area made Niagara resemble “a superb diamond set in lead. . . . The stone is perfect, but the setting is lamentably vile and destitute of beauty.”

Many agreed that one of the greatest affronts to Niagara's natural beauty was electric lighting, first powered in 1879. In a series of letters to newspapers, collectively published in 1882 as *The Conditions of Niagara Falls and the Measures Needed to Preserve Them*, author J.B. Harrison likened the illumination to “a poor circus with a cheap celebration on the Fourth of July. No description can give to those who have not seen it an adequate notion of the abominable effect of the colored electric lights when directed upon the Falls. It is debasing, vulgarizing, and horrible in the extreme. . . . It is evident that neither the people who make this exhibition nor those who enjoy it would have any rooted objection against the actual defilement of these crystal waters, as their taste is actually so perverted that they have no joy in their purity or beauty.”

Entrepreneurs proposed numerous schemes to harness the “foam and fury” of the falls. By the 1880s, the Niagara Falls Power Company and their numerous partners worked out the technological systems necessary to harness the power of the falls for the generation and transmission of electricity on a magnitude that had never been attempted. The project required not only the complete rethinking of earlier generations of turbines and motors but also the invention of a host of new generators, transformers, and transmitters that didn't yet exist. One of the visionaries of the project was **Nikola Tesla**, who said that Niagara contained enough power to “light every lamp, drive every railroad, propel every ship, heat every store, and produce every article manufactured by machinery in the United States.” The mammoth hydro-electric power plant at Niagara Falls opened in 1895. In his speech at the opening ceremony, Tesla underscored the significance of this achievement:

*We have many a monument of past ages; we have the palaces and pyramids, the temples of the Greek and the cathedrals of Christendom. In them is exemplified the power of men, the greatness of nations, the love of art and religious devotion. But the monument at Niagara has something of its own, more in accord with our present thoughts and tendencies. It is a monument worthy of our scientific age, a true monument of enlightenment and of peace. It signifies the subjugation of natural forces to the service of man, the discountinuanance of barbarous methods, the relieving of millions from want and suffering.*

## **Preservation and Conservation**

The last quarter of the nineteenth century saw an increased effort to reclaim the natural beauty of Niagara Falls due to the area's heightened industrialization. American preservationists insisted that the cataract was a national treasure that belonged to the whole country and was worthy of safeguarding for future generations. The campaign to preserve the falls' beauty and banish the factories and tourist traps that had marred the surrounding landscape was led by artist **Frederic E. Church** and landscape architect **Frederick Law Olmsted**. Church proposed that the State of New York establish a public park at the falls with free public access, protecting the area from incursions of sideshows, souvenir shops, and factories. Olmsted argued that the natural wonder of Niagara Falls had been turned into a series of commodities for the consumption of the tourist, writing in 1879:

*The aim to make money by the showman's methods; the idea that Niagara is a spectacular and sensational exhibition, of which roper-walking, diving, brass bands, fireworks and various "side-shows" are appropriate accompaniments, is so presented to the visitor that he is forced to yield to it, and see and feel little else than that prescribed to him. . . . Visitors are so much more constrained to be guided and instructed, to be led and stopped, to be "put through," and so little left to natural and healthy individual intuitions.*

The design for the public park designed by Olmsted and fellow landscape architect **Calvert Vaux** was picturesque: winding walking paths close to the water, places for sitting and standing, and carriage roads that were set back from the water's edge. All man-made structures, such as restrooms, were to be as unobtrusive as possible and hidden behind screens of trees. Olmsted's preservationist philosophy was outlined in his 1868 report on the Yosemite, a philosophy that extended to his work on Niagara: "The first point to be kept in mind then is the preservation and maintenance as exactly as is possible of the natural scenery; the restriction, that is to say, within the narrowest limits consistent with the necessary accommodation of visitors, of all

artificial constructions . . . which would unnecessarily obscure, distort or detract from the dignity of the scenery.”

As a result of Olmsted’s arguments, out-going New York governor Lucius Robinson pledged his support in an 1879 statement to the New York State Legislature: “It is well known, and a matter of universal complaint, that the most favorable points of observation around the falls are appropriated for purposes of private profit, while the shores swarm with sharpers, hucksters and peddlers, who perpetually harass all visitors.” After a long campaign of petitions, newspaper articles, and editorials, the proposal was signed into law in 1883 by then-governor **Grover Cleveland**. Two years later on July 15, 1885, the Niagara State Reservation officially opened to the public, becoming the first state park established in the United States.

The campaign to change the face of Niagara Falls occurred as George Inness was in the midst of painting his various Niagara works. His inclusion of the billowing smokestack of the Bath Island paper mill seems to suggest this change.

Scholars have debated its inclusion, some arguing that it is Inness commenting on the environmental

implications of industrialization, while others believing that Inness simply painted what he observed. Inness would certainly have been aware of the very public ongoing struggle between those in favor of commercialization and those favoring preservation, a fight which played out almost daily in the newspapers. Given our knowledge as twenty-first century viewers of the damaging effects of pollution on the environment, it is easy to see how we could presume Inness was commenting on the increased industrialization of the Falls. Yet, we do not have any record from the artist himself on his position and how that may have affected his compositions.

Inness did take pen to paper describing the purpose of an artwork, which may shed light into his mindset: “A work of art does not appeal to the intellect. It does not appeal to the moral sense. Its aim is not to instruct, not to edify, but to awaken an emotion. That emotion may be one of love, of pity, of veneration, of hate, of pleasure, or of pain; but it must be a single emotion, if the work has unity, as every such work should have, and the true beauty of the work consists in the beauty of the sentiment or emotion which it inspires.” At the very least,



[Niagara Falls](#), 1885, George Inness, Smithsonian American Art Museum

the smokestack reminds the viewer of the increasing industrialization of the United States as it neared the end of the nineteenth century.

## Glossary

**Calvert Vaux:** (1824-1895) British-American architect and landscape designer. Along with Frederick law Olmsted, he is best known for his work on New York City's Central Park.

**Frederic E. Church:** (1826-1900) American landscape painter.

**Frederick Law Olmsted:** (1822-1903) American landscape architect. He is most well-known for designing New York City's Central Park.

**Grover Cleveland:** (1837-1908) 22<sup>nd</sup> and 24<sup>th</sup> President of the United States, previously governor of New York.

**hydro-electric power:** or hydroelectricity; generating electricity by conversion of the energy of running water.

**Nikola Tesla:** (1856-1943) Serbian-American inventor, physicist, engineer. A one-time pupil of Thomas Edison. Tesla is best-known for his contribution to the alternating-current (AC) electrical system, still widely used today.

**Transcendentalism:** a philosophical movement in which writers in the 1820s and 1830s believed that the most important reality is one that is sensed and intuitive, rather than what is scientific knowledge. In the context of nature, transcendentalism suggests that this reality can be understood by studying and immersing oneself in nature.