

Module 01: Can Humans Control the Natural World? Urban Landscapes and Perceptions of Nature

Context

Industrialization and Urbanization

Europe in the nineteenth century was characterized by two important processes that reshaped the social fabric of the continent:

- *Industrialization* marked the shift in production from agriculture to industries, such as mining, transportation, commercial goods, chemicals, and electricity;
- *Urbanization* describes the migration of the population from the countryside and small villages into towns and increasingly larger cities.

This section outlines key elements of the two processes, thus providing the background knowledge necessary to interpret the materials in the Evidence section.

Urban Migration

Industrialization and urbanization became self-perpetuating processes. As more economic production was located in urban areas, more people followed in search of employment. As urban populations increased, economic resources flowed to the cities, where cheap labor was available and a necessary infrastructure developing. Statistics showing the shift in production from agriculture to industry and the shift in population from rural to urban environments illustrate the changes brought on by industrialization and urbanization. By 1850, industrial production in England employed three-quarters of the adult male population. Industrialization, however, was an uneven process. In most European countries throughout the nineteenth century, the majority of the adult population continued to work in agriculture. But the two processes of industrialization and urbanization continued to reshape European society. Between 1805 and 1911, the proportion of the French population living in cities increased from 25% to 44%; in Germany during the same period, urban population increased from 30% to 60%.

Population Growth

Cities grew as they became sites of industrial production, centers for banking and other financial networks, the intersections of continental trade routes, and access

points for global empires. The growth in the urban population was initially caused by migration from the surrounding countryside into the cities as individuals and families came in search of jobs. Further growth of the urban population was the result of natural increase, as the birth rate in cities increased as well. The population of the city of London grew from less than two million in 1840 to more than four million by 1890, and then increased again to seven million by 1914. Other European cities experienced similar or even more rapid periods of growth. Berlin, the capital of the new German empire, grew from less than one-half million in 1866 to two million by 1914. In Russia, where industrialization began later than in Western Europe, the number of cities with populations greater than 100,000 increased from just three in 1863 to more than fifteen in 1903. In heavily industrialized regions, such as the coal mining districts along the French and German borders, cities grew so quickly that they formed a kind of extended "megalopolis" connecting multiple centers of production. As illustrated by the maps in the Evidence section, the number of European cities with populations above one million doubled — from four in 1870 to nine in 1914.

Migration and Population Growth by Class

Urbanization transformed living conditions for all social groups, from the wealthiest "elite" to the poorest members of the "masses." As the center of economic power shifted from agriculture to industry, the established elites transferred their base of power from rural estates to the growing cities. The rising elite of factory owners, bankers, and merchants built their own powerful networks in urban centers, even as they emulated the styles and tastes of their aristocratic peers. The number of middle-class managers, professionals, and traders expanded to administer the new industrial economy and the urban community. The most dramatic population increases occurred among the industrial workers, domestic servants, and other poorer social classes. Millions of working people left villages to work in factories, in the service occupations essential to an increasingly complex economy, and in the homes of middle- and upper-class urban residents.

The Suburbs

The lower classes often lived in so-called "slums," often characterized by poor sanitation, cramped quarters, and dilapidated housing. In nineteenth-century Paris, an estimated 30,000 laborers lived in communal lodging, often eight or ten sharing a room, as the population growth far outstripped the development of housing for the lower classes. Working-class districts, which were called "suburbs" throughout Europe, often extended away from cities along the railway lines that

brought raw materials to factories and carried away finished products. For residents of the wealthy and middle-class districts, the homes of the so-called "outcasts" became symbols of crime, poverty, despair, and danger. The suburbs thus represented a dangerous zone between the more "civilized" city centers and the idealized "countryside" that lay beyond the city limits. Urban growth became a clear indication of the changing relationship between humans and nature, as the expanding population challenged the traditional lines separating urban and natural worlds.

City Improvements

Over time, many European governments recognized the need to make improvements in the living and working conditions of their urban populations. Working-class community leaders and, more significantly, middle-class reformers, whose zeal for improving the "slums" was motivated also by fear of the "lower orders," pressured municipal governments to implement changes, such as the development of sewer systems, housing codes to ensure a minimal level of housing safety, gas and, later, electric lighting along main streets, and mass transportation to facilitate the movement of workers to and from factories. The spread of cultural facilities, including theaters and opera houses, as well as urban parks provided amusements for the expanding populations of the cities. Even with these changes, however, the countryside remained a desirable destination as well as an imagined alternative to the urban world that was home to an increasing proportion of the population.

Nature and the City: Everyday Experience and Public Perceptions

Historian and cultural critic Raymond Williams states that there is "an inverse proportion" between "the importance of the working rural economy and the cultural importance of rural ideas." In other words, the more prominent and influential the reality of urbanization and industrialization, the more powerful became the ideal of rural life and community. Nature thus acquired a mythical significance in the world view of many Europeans. As the excerpt from the poem by William Wordsworth suggests, elements of the natural world, such as mountains, meadows, the ocean, and the sky, were assigned great moral and spiritual value as symbols of purity and beauty. But as industrialization and urbanization shaped the conditions in which increasing numbers of Europeans lived, the natural world became more removed from the daily lives of most people. The upper class preserved elements of nature in their gardens and parks, but they

had to travel increasing distances to experience directly the natural elements described by Wordsworth.

Nature and the Lower Classes

For the lower classes, traces of nature remained a presence in the cities in the form of livestock, such as chickens, goats, and cattle, which provided essential food supplies. Yet livestock worsened the conditions of the urban slums, as animal waste joined with human waste in the cesspools fed by the refuse of the entire city. How such Europeans thought about nature, and particularly the animals in their midst, proves useful to exploring the broader relationship between humans and their history. While the relationship can be quantified in some measure, it is better explored through the symbolic use of animals in the visual imagery of the era. As the last three cartoons in the Evidence section illustrate, the intersection of natural and urban worlds could serve as an object of humor. The city family in their garden, the ignorant urbanite in the livestock pen, and the wise farmer in the market were common symbols of how the residents of the urban world attempted, often with limited success, to control the natural world.

Nature in Literature

While many literary figures looked to the natural world for their ideals of beauty and truth, others used nature to criticize the worst features of the urban landscape. Charles Dickens and Elizabeth Gaskell, two prominent English novelists, invoked nature to criticize the attitudes and structures of urban society, including the assumption that the natural world could be controlled in the pursuit of profit. Other texts, such as the travel account by Alexis de Tocqueville, used descriptions of polluted land, air, and water to underscore their criticism of the unintended and uncontrolled effects of rapid industrialization and urbanization. The imagery of nature thus provided a way to make sense of experiences, which makes these materials useful sources for exploring the historical question of how industrialization and urbanization shaped perceptions of human control of the natural world.

The Advent of the Automobile

The changing relationship between humans and the natural world is also illustrated by cartoons poking fun at the ways automobiles displaced horses as the main means of transportation. Throughout the industrial revolution, each new advance in transportation shaped subsequent developments in technology, production, and

distribution. The development of railways in the mid-nineteenth century, for example, not only allowed for more rapid movement of larger quantities of raw materials and finished products, but also stimulated demand for new kinds of industrial production, such as steam engines, steel tracks, and coal fuel. In the same manner, the invention of the internal combustion engine in the 1880s and the subsequent development of the automobile industry meant that the increasing use of cars and trucks for transportation led to dramatic changes in both large-scale economic terms and personal experiences and actions. The mass production of the automobile led directly to the development of the petroleum, rubber, aluminum, and glass industries. The number of paved roads expanded considerably, and new opportunities for both business and leisure travel developed in tandem with the increasing number of automobiles on the road. The development of the European automobile industry, like that of the United States, involved changes in production techniques, such as standardized assembly lines, as well as the development of a mass market.

The Automobile and the Horse

Yet the spread of motor vehicle transportation also brought changes in the relationship between humans and the natural world. Roads tore through fields and woods, gasoline engines left trails of smog, and the raw materials for cars had to be transported to the emerging networks of factories and workshops. At the most immediate level, however, the car was a challenge to the horse, the preferred means of transportation (especially for the upper classes) for centuries. The very name of the first automobiles — horseless carriages — symbolized this shift in attitudes and relations. Responding to pressure from the aristocratic elite, who recognized the threat posed by the new form of transportation, the British government passed laws restricting the speed of automobiles to two miles per hour and requiring every vehicle to be accompanied by three people carrying red flags as a warning to others. During the first decades of the twentieth century, as the car industry was just beginning, the rivalry between automobile and horse seemed relatively balanced, as the long-established techniques and tools of equestrian transportation seemed more reliable and efficient than unproven and inconsistent automobiles. As illustrated by the final set of cartoons in the Evidence section, the tension between the automobile and the horse provides a different perspective on the larger question of whether urbanization and industrialization in fact provided humans with the means to control the natural world.