

F. The Environmental Impact of Industrialization

1. Upton Sinclair Describes the Chicago Stockyards (1906)

In The Jungle, one of the most provocative novels ever written about social conditions in the United States, the muckraking writer Upton Sinclair penned a devastating description of Chicago's meatpacking industry at the opening of the twentieth century. In the passage below, the novel's protagonist, Lithuanian immigrant Jurgis Rudkus, first encounters Chicago. The city's landscape and its very atmosphere have been transformed by the huge slaughterhouse complex around the city's sprawling, fetid stockyards. What were the most noxious environmental effects of the meatpacking industry? Why did the city of Chicago tolerate them? How did the particular technologies of the era contribute to this environmental catastrophe?

A full hour before the party [Rudkus and his traveling companions] reached the city they had begun to note the perplexing changes in the atmosphere. It grew darker all the time, and upon the earth the grass seemed to grow less green. Every minute, as the train sped on, the colours of things became dingier; the fields were grown parched and yellow, the landscape hideous and bare. And along with the thickening smoke they began to notice another circumstance, a strange, pungent odour. They were not sure that it was unpleasant, this odour; some might have called it sickening, but their taste in odours was not developed, and they were only sure that it was curious. Now, sitting in the trolley car, they realized that they were on their way to the home of it—that they had travelled all the way from Lithuania to it. It was now no longer something far off and faint, that you caught in whiffs; you could literally taste it, as well as smell it—you could take hold of it, almost, and examine it at your leisure. They were divided in their opinions about it. It was an elemental odour, raw and crude; it was rich, almost rancid, sensual and strong. There were some who drank it in as if it were an intoxicant; there were others who put their handkerchiefs to their faces. The new emigrants were still tasting it, lost in wonder, when suddenly the car came to a halt, and the door was flung open, and a voice shouted—"Stockyards!"

They were left standing upon the corner, staring; down a side street there were two rows of brick houses, and between them a vista: half a dozen chimneys, tall as the tallest of buildings, touching the very sky, and leaping from them half a dozen columns of smoke, thick, oily, and black as night. It might have come from the centre of the world, this smoke, where the fires of the ages still smoulder. It came as if self-imperilled, driving all before it, a perpetual explosion. It was inexhaustible; one stared, waiting to see it stop, but still the great streams rolled out. They spread in vast clouds overhead, writhing, curling; then, uniting in one giant river, they streamed away down the sky, stretching a black pall as far as the eye could reach.

Then the party became aware of another strange thing. This, too, like the odour, was a thing elemental; it was a sound—a sound made up of ten thousand little sounds. You scarcely noticed it at first—it sunk into your consciousness, a vague

disturbance, a trouble. It was like the murmuring of the bees in the spring, the whispering of the forest; it suggested endless activity, the rumblings of a world in motion. It was only by an effort that one could realize that it was made by animals, that it was the distant lowing of ten thousand cattle, the distant grunting of ten thousand swine. . . .

There were two hundred and fifty miles of track within the yards, their guide went on to tell them. They brought about ten thousand head of cattle every day, and as many hogs, and half as many sheep—which meant some eight or ten million live creatures turned into food every year. One stood and watched, and little by little caught the drift of the tide, as it set in the direction of the packing houses. There were groups of cattle being driven to the chutes, which were roadways about fifteen feet wide, raised high above the pens. In these chutes the stream of animals was continuous; it was quite uncanny to watch them, pressing on to their fate, all unsuspecting—a very river of death. . . .

2. An Engineer Describes Smoke Pollution (1911)

Herbert Wilson, chief engineer for the U.S. Geological Survey, undertook a comprehensive survey of air quality in major American cities in the first years of the twentieth century. In the following report, he describes the effects of smoke pollution, mostly from coal-burning furnaces. What are the worst kinds of damage inflicted by burning coal? What would it have been like to live in a city perpetually enshrouded by coal smoke and dust? What problems associated with burning fossil fuels persist today?

The smoke nuisance is one of the greatest dangers of modern times, insidiously attacking the health of the individual, lowering his vitality, increasing the death rate, and causing untold loss and injury to property. The damage which this evil inflicts can hardly be estimated in money; it is equally impossible to estimate the amount of suffering, disease and death and the general effect of lowered vitality caused by this nuisance. . . .

The Smoke Committee of Cleveland, discussing the losses occasioned by smoke, reported:

There are approximately 400 retail dry goods stores in Cleveland doing business of from \$10,000 to \$3,000,000 or \$4,000,000 a year. The owners of some of these stores estimate, and the same estimate is given in other cities, that on all white goods a clear loss of 10 per cent must be figured. Taking the single items of underwear, shirt waists, linens and white dress goods for the eleven department stores, the proprietors conservatively estimate their combined loss at \$25,000. . . .

But a greater cost than all of these must be considered in the loss to the 100,000 homes in Cleveland. The constant need of cleaning walls, ceilings, windows, carpets, rugs and draperies, for redecorating and renewing, can be realized only by the house owner or housekeeper. To this should be added the increased laundry bills for household linen, the dry cleaning for clothing, and the great additional wear resulting from this constant renovation, necessitating frequent renewal. Consider also the permanent injury to books, pictures and similar articles. Though impossible of computation, it will be seen that the total of these items aggregates millions of dollars.

The City Forester of St. Louis declared that more than 4 per cent of the city trees are killed every year by smoke. In that city it has been found impossible to grow evergreen conifers, except the dwarf juniper and the Austrian pine. Only the hardiest of roses grow in that city. The trees which suffer the greatest injury are the oaks, hickories and conifers, and these are especially ideal park trees and far more valuable for beauty and permanence than the softer wooded varieties. . . .

Turning now to the losses in fuel combustion: our present method of burning coal with smoke is costing the people of this country, unnecessarily, \$90,000,000. It is estimated that 8 per cent of the coal used in the production of power, light and heat, or in all about 20,000,000 tons of coal, are going up the chimneys each year in smoke.

The prime source of the pollution of the atmosphere is smoke. The death rate is higher in the city than in the country, and the larger the city the higher the death rate. . . .

It must be understood that smoke, aside from the looks and tangible shapes in which it presents itself, is one of the most poisonous gases polluting the very air we breathe. So apparent is this fact that physicians in our larger cities state their ability to tell at a moment's glance at the lungs in a post-mortem examination whether the man has lived more than thirty days in such a city or not. In the former case their examination proves that the blood, instead of showing red, is black as soot can make it.

Medical men the world over are unanimous in the declaration that the breathing of coal smoke predisposes the lungs to tuberculosis and even more violent lung trouble, such as pneumonia, as well as to many other acute diseases. We know that lung diseases are more prevalent in smoky cities; that the death rate of children due to diseases of the respiratory organs is especially great in coal and iron districts; that tuberculosis is more rapidly fatal in smoky regions.

In addition to all the above, there is the psychological effect of smoke. The city enveloped in a sooty fog is a gloomy city and the children reared therein are in danger of growing up with too much toleration for dirt and too little of that full enthusiasm for the beautiful and clean things of life which sunlight and God's blue sky encourage about as well as anything else in this world.

Thought Provokers

1. Which of the so-called railroad abuses of the post-Civil War period are the easiest to justify? the hardest? In view of the fact that railway rates were becoming progressively lower when the Interstate Commerce Act was passed in 1887, why should the public have complained?
2. Comment critically on the advantages and disadvantages of the monopolistic trust from the standpoint of the consumer. Was the attempted distinction between "good" and

3. To what extent was Carnegie selfish in his gospel of wealth? Is it better to have large private benefactions or to have the government tax wealth and engage in benefactions itself? Why is it difficult to give away large sums of money intelligently?
4. Why was the South, which has many natural resources and is being rapidly industrialized today, so slow to be industrialized after the Civil War?
5. What features of working-class life must have been most troubling to laborers in the late nineteenth century? How is industrial labor different today?
6. Is organized labor today tending toward the Gompers or the Powderly approach? Explain. Why does the United States not have a labor party?
7. Why did nineteenth-century Americans tolerate the environmental ravages of rampant industrialization?