
Hard Rock
POWER PLANT

THE POSTINDUSTRIAL LANDSCAPE

A few years ago I had an epiphany in a parking lot. I was visiting a railroad yard where freight cars are sorted according to their destinations and assembled into trains. It was a big place, a hub of the national rail network, and when I drove through the gate, I wasn't surprised to find a parking lot with space for 200 cars. But the lot was empty except for a dozen cars huddled near the entrance to the main building. The superintendent who was showing me around soon explained. At one time, the yard employed a large number of brakemen, who rode along on each of the freight cars to control their speed during the sorting process. But the role of the brakemen has been taken over by mechanical "retarders" installed in the track and operated by computer control. In the old days there was also a large room filled with clerks, who handled the paperwork that accompanied every freight car on its journey across the country. But the routing of cars is now accomplished by electronic communication from one computer to another, and so the sorting yard is paperless and clerkless. The room where the clerks had their desks is as empty as the parking lot.

What struck me that morning was just how lonely a place the industrial landscape has become. It's not just railroad freight yards; I found the same haunting depopulation almost everywhere I looked. On the docks of a cargo port, gangs of longshoremen used to swarm over a ship to load or unload it; now most of the work is done by one artful crane operator, perched high overhead, lifting 60,000-pound containers at the rate of two a minute. Where miners used to toil underground, drilling and blasting, the earth is now ripped open by gargantuan shovels and draglines; these machines, too, are controlled by one worker in a high glass booth. Telephone switching centers, once filled with the voices of hundreds of operators, are silent, dark, and deserted. On the high plains of Kansas, a solitary farmer in a tractor plows and plants a thousand acres of land. At an oil refinery, the rows of tall distilling towers and chemical reactors give the place the look of a city of skyscrapers, but it is a vacant city,

An unwritten rule of urban development says: Always celebrate what's no longer there. In the Inner Harbor area of Baltimore, what's no longer there is a neighborhood of wharves, warehouses, and heavy industry. One end of the harbor is dominated by the brick building in the photograph on the opposite page. In case the carefully preserved smokestacks on the roof are not a sufficient clue, the owners have put up a helpful sign identifying the building's former function: Power Plant. The other sign, the guitar attached to one of the smokestacks, advertises the new function: Hard Rock Café.

with no one on the streets; everything is watched over by a few engineers and technicians inside a windowless control room.

Fifty years ago, "automation" was a matter of considerable public interest, a subject for academic white papers, newspaper editorials, and congressional hearings. The prospect of replacing human labor with machines seemed both attractive and forbidding at the same time. According to one faction, automation would liberate us all from drudgery, giving us the time and economic freedom to cultivate higher callings; we would be a society of poets and scholars at leisure. The other side asked: If our jobs are taken by sleepless machines, how shall we live? At the time when these competing visions of the future were being debated, most people probably believed neither of them. The idea that automation might either displace or liberate some large fraction of the work force was one of those fantasies that would always remain just beyond the horizon, like the nuclear-powered flying automobile. Whether it was a threat or a promise, automation was for the future, not the present. But now automation is here, even though the word itself is seldom spoken anymore. Machines have insinuated themselves into our lives in ways that the futurists of the 1950s could not have anticipated, and as a result whole categories of jobs have all but disappeared. Elevator operators, typesetters, and airplane navigators have followed milkmaids and lamplighters into oblivion.

The social and economic consequences of these developments are not yet fully understood. So far, automation has not made us a nation of poets and scholars. So far, armies of the dispossessed and unemployed are not roaming the streets. I would not attempt to predict how the important questions of work, livelihood, and income

Where the Homestead mill of United States Steel once stood on the banks of the Monongahela River in Pittsburgh, a dozen brick smokestacks were left as ornaments to the shopping mall that now occupies the site.

In Akron, Ohio, the storage silos of the Quaker Oats grain elevator are converted into novelty hotel rooms.

distribution will ultimately be settled. But I do feel I can say something about the effect of all these changes on public perceptions of the industrial landscape.

Now that so few of us spend our daily working lives in agriculture, manufacturing, and tending the industrial infrastructure, those occupations have begun to seem more exotic and specialized, and the locales where they are practiced are more alien and mysterious. In a sense, that's what makes a book like this one possible. When most of us were out there getting our hands dirty in the industrial landscape—mining coal, making steel, growing crops, loading ships—a field guide to that landscape was hardly needed. We were producers as well as consumers of industrial goods, and so we knew something about where the raw materials of life came from. Now, we spend our working days in offices, and we never see the inside of a mine, a mill, a factory, a power plant. The facilities that support our way of life have become invisible. Your home is probably connected to an electric-power substation, a telephone switching office, a water filtration plant, a sewage treatment plant, and a natural-gas distribution depot. Have you ever been inside any of those facilities? Do you know where they are in your community or what they look like, even from the outside?

Having lost contact with industry on a day-to-day basis, one common response is to romanticize or sentimentalize what we have left behind. We don't want to tear down the old water-powered mills along New England's rivers, where generations of factory workers mass-produced shoes and textiles; instead we turn them into restaurants or shops where we buy expensive craft goods, made by hand. The brickfront warehouses and factories of urban industrial districts become artists' lofts or condominium apart-

In Bethlehem, Pennsylvania, a row of blast furnaces has stood idle since 1995. Part of the site may become a National Museum of Industrial History.

ments. A steel mill in Duisburg, Germany, has been converted into a "landscape park," where children play among the ruins of blast furnaces. As the photographs that accompany this essay attest, there are many other projects for turning industrial artifacts into something else—something more approachable and friendly.

But the kinder-and-gentler treatment seems to work only for bygone industries. An old mill with a waterwheel is charming; a modern power plant is merely menacing. When it comes to industrial operations still running today, the effect of our alienation and unfamiliarity is to make the industrial infrastructure seem all the more sinister. At a refinery or a petrochemicals plant, we don't know what goes on behind the chain-link fence or what comes out of the smokestacks, and therefore we suspect the worst. At a hog farm or a poultry farm, we can't see inside the sheds where the animals are kept, and we imagine horrors of inhumanity. The operators of these facilities, feeling besieged by a hostile and uncomprehending public, respond by closing

the gates and building the fences higher. Their secrecy, naturally, tends to confirm public suspicion that they must have something to hide. It is a spiral of distrust and animosity.

This estrangement from industrial enterprise is not going to be reversed anytime soon. Our children and grandchildren will live in a world where nearly everyone works in an office or a classroom or a retail outlet or some other sort of service establishment; only a tiny minority of workers will be needed to keep factories, mills, mines, and farms running. Already, most of us work more with "bits," the fundamental units of information, than with atoms, the units of matter. Manufacturing tangible, ponderable objects is now secondary to the creation and management of "intellectual property"—words, numbers, data, images, accounts, programs—information in all its manifestations.

There is something of a paradox here. On the one hand, people today deal with machines on a much more frequent and intimate basis than earlier generations did. We pump our own gas; we get cash from the ATM instead of from a bank teller; we check out our own groceries at the supermarket and our own books at the library; we make our own airline reservations over the Internet instead of consulting a travel agent. But most of us know less and less about how all these machines work. We know how to use them, but not how to build or fix them. As for the more remote machinery—the turbines, pumps, generators, transformers, switches, amplifiers, transmitters, and all the rest of the apparatus that keeps an industrial economy humming—all that is quite out of sight. The technological infrastructure is someone else's responsibility; we just want the lights and the phones to work when we need them.

Is this situation something to be worried over? After all, most of us will never need to know how to run a nuclear power plant or how to operate a strip-mining dragline. Yet there is something sad about a society in which large numbers of people don't understand the basic substrate of their own world. In the case of the natural world, everyone ought to have at least a rudimentary grasp of the laws of physics and those of biology, such as Darwin's principle of evolution by natural selection. The same imperative applies to the world of technology. Without a sense of how materials and energy flow through an industrial economy, you miss something basic about the world you live in.

And cutting people off from the industrial infrastructure has practical consequences, too. Sooner or later, decisions about the direction of important technologies have to be made by a democratic process. People who have never seen a power plant, who know nothing of how it works, who have never met anyone who works there, are poorly equipped to judge the relative merits of nuclear and coal-fired technologies, or to seek alternatives that might allow us to dispense with both. To make good decisions about such issues, citizens need to get better acquainted with the technological underpinnings of their own communities. To allow that to happen, those who own and operate the various elements of the infrastructure will have to open up the gates and invite the people in.