

## Book Review

### *American Technological Sublime*

David E. Nye

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David Nye is an observer of social, cultural, and technological grandeur. His is the broad view, the large scale. He is a specialist on America, but, since he recognizes America's roots in other cultures and lands, much of his discourse focuses on European (and, to a much lesser extent, Roman) influences. He has a sense of historical trends, both gradual and stochastic. His real talent, however, is his ability to weave those fabrics into a quilt that warms readers' understanding while shimmering with a beauty of its own.

Nye tackles a tough subject. He's looking for things that are "sublime," things which inspire awe, a sense of grandeur, things that give us a conscious or subconscious realization of our negligible size, our fragility, our mortality.

Mankind has always recognized the sublime in nature, from grand canyons to the thunder of storms to thundering waterfalls. These, in fact, are the basis of much of the world's spiritual searching, the seeking for understanding of the power that creates such overwhelming, such terrifying splendor. If Nye discussed only this, the book would have been interesting, and, in fact, philosophers and theologians throughout history have studied and commented on the sublime in nature.

Nye goes farther. He looks at how man has challenged nature itself by building objects not only of geologic scale but also those that overcome less visible but equally powerful barriers. We are awed not only by bridges that leap wide rivers, but also by lights that defeat night itself, by transportation tools that challenge the fundamental forces of time and gravity. Nye describes how humans, singly and in groups, confront the very boundaries of what we know, the beyond that is the realm only of myth and religion. We build structures, monuments not only to show what we have achieved but also to put the gods themselves on notice that we puny mammals can push hard against our traces.

This smacks of arrogance. It's a trait that exists in many man-made marvels throughout history, everywhere that people have lived, from the pyramids in Egypt to the Great Wall of China. But it's a trait that seems to have its most tenacious grip in America, where we populated an "empty" land, conquering wilderness and elements. The morals of the destruction of the culture and the population of the less technological natives, and the environmental plundering of plains and forest notwithstanding, the American character is a tribute to human energy and initiative. And Nye, therefore, has lots to fill his book.

Some of his examples are obvious: bridges, skyscrapers, world fairs, the Statue of Liberty. Some are of such magnitude that I would have missed them in my first list: the atomic bomb and space travel (he discusses, as a not-surprising example, the Apollo XI moon landing). Others still are so pervasive that their magnitude is almost invisible; they are not only sublime, but subtle. Nye talks about the impacts of the railroad in the 19th century and electricity in the 20th, and of the factory which is as much of a sublime concept as it is a set of physical structures. He ranges even further into the conceptual sublime by talking, in his last chapter, about "The Consumer Sublime," about the awe-inspiring power of a Disney theme park, the Las Vegas strip, and the tourist traffic in the Grand Canyon. Yes, the artifacts themselves are magnificent, but even more of a wonder is the ebb and flow of humanity, creating not only massive crowds but also economic forces of glacial strength.

Nye can't, of course, cover all the magnificent technological accomplishments of the past 300 years. One of the most impressive achievements, the telegraph, is mentioned only briefly. Nye points out, for example, that the driving of the golden spike that linked the nation with a belt of steel was "heard" in "real time" by telegraph throughout the country. Another achievement, the advent of photography, is not discussed explicitly but sits in the book for readers to see themselves. For example, I marveled at the images of the golden-spike ceremony at Promontory Point, Utah, giving me a sort of time machine, a glimpse of the railroad workers and the background crowds 126 years ago.

In spite of all Nye accomplishes, however, I find this book curiously dated. His definitions of sublime, his historical and philosophical references ignore what has dazzled me in the 35+ years of my work life. In a way, the American technological sublime in recent years has been a reverse of scale. I am impressed not only with the colossal, but with the minute, not only with the visible but the virtual.

For example, I remember walking through a computer at Aberdeen Proving Grounds in 1959, awed by its size and complexity and power. Today, I carry more capability in my pocket in an HP100 LX palmtop, and the personal computer on my desk dwarfs that old machine in all aspects but sheer size. I am awed by the Internet, and its offspring prodigy, the worldwide web, both of which are functions of incredible serendipitous combinations of software and computers, networks and sociology.

I still marvel at the raw power of a locomotive, even those with diesel power instead of the smoky chug of steam engines. And I'm equally in awe of the physical size of a Boeing 747, but what is truly sublime is the fact that the speed of travel allows me to flash across time zones and continents, creating both the pain and opportunity of jet lag and culture shock.

I wonder at the Salk and Sabin vaccines, at MRIs, at the promise of genetic engineering. If the past 30 years have been an era of electronic splendor, I suspect that the next few decades will bring even greater miracles in biology and medicine.

There's a technological sublime that displays itself in economic terms. Huge amounts of capital are invested for and by millions of middle class Americans, in mutual funds and pension funds, giving people access to long term prosperity in ways unimaginable 50 years ago, all of which appear only as book entries in (logically) giant computer databases.

These are wondrous artifacts of the mind, artifacts that are different in kind as well as scope from what has gone before. I have this picture of aliens coming to a dead Earth, millions of years from now. They look at the Golden Gate Bridge and are instantly impressed. They see the Empire State Building, the railroad tracks, the highways, and know immediately of our human victories in our struggles with nature's bonds. Then they stumble upon my palmtop, batteries long dead, magnetic memory long faded, and wonder why anyone would assemble this strange pile of plastic, sand, and metal.

Why indeed? The accomplishments themselves are awesome, but the most powerful impact, one containing both the splendor and fear of the sublime, is the increasing rate of change itself.

Nye well describes the broad view for the fading industrial age. What, however, will be the sublime for the information age? Who will write its philosophy? What will be the sublime for times in which we humans feel adrift in seas of technological bounty? Where will we find spiritual havens in the halls of idols of promise?

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