

Authors:

Langdon Winner

Title:

Do Artifacts Have Politics?

Peripheral Information:

Week 10 Reading 01

Contributor:

Alagappan Swaminathan

SUMMARY: Do Artifacts Have Politics?

Arguments that affect technologies are discussed. Examples of artifacts that have had a great deal of influence on the social aspect of living due to political ideologies and racist tendencies. The role of authoritarianism and democratism on artifacts is discussed. The ways in which artifacts can contain political properties are also expressed, and a conclusion is given by discussing technologies that are inherently political. Two varieties of interpretation have been expressed in great detail throughout the paper- In the first instance, we noticed ways in which specific features in the design or arrangement of a device or system could provide a convenient means of establishing patterns of power and authority in a given setting. In the second instance, we examined ways in which the intractable properties of certain kinds of technology are strongly, perhaps unavoidably, linked to particular institutionalized patterns of power and authority.

Key terms

- Power and Authority.
- Authoritarianism and Democratism
- Moses's low bridges
- McCormick's molding machines
- Mechanical tomato harvester
- Arguments to the effect that technologies
- Atom bomb
- Moral claims of practical necessity
- Two varieties of interpretation

Page 1-5

Technical things have political qualities and can embody specific forms of power and authority. Lewis Mumford gave a classic statement arguing that "from late neolithic times in the Near East, right down to our own day, two technologies have recurrently existed side by side: one authoritarian, the other democratic, the first system-centered, immensely powerful, but inherently unstable, the other man-centered, relatively weak, but resourceful and durable." The factory system, automobile, telephone, radio, television, the space program, and of course nuclear power itself have all at one time or another been described as democratizing, liberating forces.

It is no surprise to learn that technical systems of various kinds are deeply interwoven in the conditions of modern politics. The physical arrangements of industrial production, warfare, communications, and the like have fundamentally changed the exercise of power and the experience of citizenship.

What matters is not the technology itself, but the social or economic system in which it is embedded. This maxim, which in a number of variations is the central premise of a theory that can be called the social determinants of technology, has obvious wisdom. It serves as a needed corrective to those who focus uncritically on such things as "the computer and its social impacts" but who fail to look behind technical things to notice the social circumstances of their development, deployment, and use. This view provides an antidote to naive technological determinism? the idea that technology develops as the sole result of an internal dynamic, and then, unmediated by any other influence, molds society to fit its patterns.

Once one has done the detective work necessary to reveal the social origins, power-holders behind a particular instance of technological change, one will have explained everything of importance. This conclusion offers comfort to social scientists. The theory of technological politics draws attention to the momentum of large-scale socio-technical systems, to the response of modern societies to certain technological imperatives, and to the all too common signs of the adaptation of human ends to technical means. In so doing it offers a novel framework of interpretation and explanation for some of the more puzzling patterns that have taken shape in and around the growth of the modern material culture. One strength of this point of view is that it takes technical artifacts seriously. Rather than insist that we immediately reduce everything to the interplay of social forces, it suggests that we pay attention to the characteristics of technical objects and the meaning of those characteristics.

Two ways in which artifacts can contain political properties:

First are instances in which the invention, design, or arrangement of a specific technical device or system becomes a way of settling an issue in a particular community. Seen in the proper light, examples of this kind are fairly straightforward and easily understood. Second are cases of what can be called inherently political technologies, man-made systems that require, or to be strongly compatible with, particular kinds of political relationships.

Page 5-10

Technical Arrangements as Forms of Order:

Two hundred or so low-hanging overpasses on Long Island were deliberately designed to achieve a particular social effect. Robert Moses, the master-builder of roads, parks, bridges, and other public works from the 1920s to the 1970s in New York, had these overpasses built to specifications that would discourage the presence of buses on his parkways. According to evidence provided by Robert A. Caro in his biography of Moses, the reasons reflect Moses's social-class bias and racial prejudice. Many of his monumental structures of concrete and steel embody a systematic social inequality, a way of engineering relationships among people that, after a time, become just another part of the landscape.

Baron Haussmann's broad Parisian thoroughfares, engineered at Louis Napoleon's direction to prevent any recurrence of street fighting of the kind that took place during

the revolution of 1848. Or one can visit any number of grotesque concrete buildings and huge plazas constructed on American university campuses during the late 1960s and early 1970s to defuse student demonstrations. Technological change expresses a panoply of human motives.

Cyrus McCormick's reaper manufacturing plant in Chicago in the middle 1880s, made use of pneumatic molding machines, employed unskilled labor to dissolve the skilled labor union.

Mechanical tomato harvester created by the University of California in the 1940s made use of a new variety of tomatoes that are hardier, sturdier, and less tasty. Studies in California indicate that the machine reduces costs by approximately five to seven dollars per ton as compared to hand-harvesting. The machine cost 50000\$ and over time led to the loss of 32000 jobs in the tomato industry in the 1970s. Over many decades agricultural research and development in American land-grant colleges and universities has tended to favor the interests of large agribusiness concerns. It is in the face of such subtly ingrained patterns that opponents of innovations like the tomato harvester are made to seem "antitechnology" or "anti-progress." For the harvester is not merely the symbol of a social order that rewards some while punishing others; it is in a true sense an embodiment of that order.

Consciously or not, deliberately or inadvertently, societies choose structures for technologies that influence how people are going to work, communicate, travel, consume, and so forth over a very long time. In the processes by which structuring decisions are made, different people are differently situated and possess unequal degrees of power as well as unequal levels of awareness. By far the greatest latitude of choice exists the very first time a particular instrument, system, or technique is introduced. The issues that divide or unite people in society are settled not only in the institutions and practices of politics but also, and less obviously, in tangible arrangements of steel and concrete, wires and transistors, nuts and bolts.

Pages 10-17

Inherently Political Technologies:

Authoritarianism is predominant in ships and because large sailing vessels by their very nature need to be steered with a firm hand, sailors must yield to their captain's commands; no reasonable person would believe that ships can be run democratically according to Republic, a book by Plato.

Arguments to the effect that technologies are in some sense inherently political have been advanced in a wide variety of contexts. One version claims that the adoption of a given technical system actually requires the creation and maintenance of a particular set of social conditions as the operating environment of that system. Engels's position is of this kind. A similar view is offered by a contemporary writer who holds that "if you accept nuclear power plants, you also accept a techno-scientific-industrial military elite. Without these people in charge, you could not have nuclear power."

A second, somewhat weaker, version of the argument holds that a given kind of technology is strongly compatible with, but does not strictly require, social and political relationships of a particular stripe. Many advocates of solar energy now hold that technologies of that variety are more compatible with a democratic, egalitarian society than energy systems based on coal, oil, and nuclear power; at the same time, they do not maintain that anything about solar energy requires democracy.

Within both versions of the argument, there is a further distinction to be made between conditions that are **internal** to the workings of a given technical system and those that are **external** to it. Engels's thesis concerns internal social relations said to be required within cotton factories and railways, for example; what such relationships mean for the condition of society at large is for him a separate question. In contrast, the solar advocate's belief that solar technologies are compatible with democracy pertains to the way they complement aspects of society removed from the organization of those technologies as such.

If we examine social patterns that comprise the environments of technical systems, we find certain devices and systems almost invariably linked to specific ways of organizing power and authority. The **atom bomb** is an inherently political artifact. As long as it exists at all, its lethal properties demand that it be controlled by a centralized, rigidly hierarchical chain of command closed to all influences that might make its workings unpredictable. The internal social system of the bomb must be authoritarian; there is no other way. The state of affairs stands as a practical necessity independent of any larger political system in which the bomb is embedded, independent of the kind of regime or character of its rulers. Indeed, democratic states must try to find ways to ensure that the social structures and mentality that characterize the management of nuclear weapons do not "spin off" or "spillover" into the polity as a whole.

The notion is that it is good for sailors to participate in the command of a ship or that workers have a right to be involved in making and administering decisions in a factory. It is characteristic of societies based on large, complex technological systems, however, that moral reasons other than those of practical necessity appear increasingly obsolete, "idealistic," and irrelevant. Whatever claims one may wish to make on behalf of liberty, justice, or equality can be immediately neutralized when confronted with arguments to the effect: "Fine, but that's no way to run a railroad"

One attempt to salvage the autonomy of politics from the bind of practical necessity involves the notion that conditions of human association found in the internal workings of technological systems can easily be kept separate from the polity as a whole. Americans have long rested content in the belief that arrangements of power and authority inside industrial corporations, public utilities, and the like have little bearing on public institutions, practices, and ideas at large. "Democracy stops at the factory gates" was taken as a fact of life that had nothing to do with the practice of political freedom.

Russell W. Ayres's study of the legal ramifications of plutonium recycling concludes: "With the passage of time and the increase in the quantity of plutonium in existence will come pressure to eliminate the traditional checks the courts and legislatures place on the activities of the executive and to develop a powerful central authority better able to enforce strict safeguards." He avers that "once a quantity of plutonium had been stolen, the case for literally turning the country upside down to get it back would be overwhelming." In Ayres's words, "Once recycling begins and the risks of plutonium theft become real rather than hypothetical, the case for governmental infringement of protected rights will seem compelling."

Two varieties of interpretations have been outlined in this paper. In the first instance, we noticed ways in which specific features in the design or arrangement of a device or system could provide a convenient means of establishing patterns of power and authority in a given setting. Technologies of this kind have a range of flexibility in the dimensions of their material form. It is precisely because they are flexible that their consequences for society must be understood with reference to the social actors able to influence which designs and arrangements are chosen.

In the second instance, we examined ways in which the intractable properties of certain kinds of technology are strongly, perhaps unavoidably, linked to particular institutionalized patterns of power and authority. Here, the initial choice about whether or not to adopt something is decisive in regard to its consequences. There are no alternative physical designs or arrangements that would make a significant difference; there are, furthermore, no genuine possibilities for creative intervention by different social systems- capitalist or socialist- that could change the intractability of the entity or significantly alter the quality of its political effects.

The author believes that we ought to attend more closely to technical objects themselves is not to say that we can ignore the contexts in which those objects are situated. A ship at sea may well require, as Plato and Engels insisted, a single captain and obedient crew. But a ship out of service, parked at the dock, needs only a caretaker. To understand which technologies and which contexts are important to us, and why, is an enterprise that must involve both the study of specific technical systems and their history as well as a thorough grasp of the concepts and controversies of political theory.

