L3 Do Artifacts Have Politics?

# Langdon Winner, “Do Artifacts Have Politics?”

We’re going to spend today working through the Langdon Winner reading, “Do Artifacts Have Politics?”

* Classic article from the 1980s
* Winner is a professor of Science and Technology Studies (STS) and an influential figure in the development of the field
* STS = interdisciplinary field devoted to “the study of how society, politics, and culture affect [scientific research](https://en.wikipedia.org/wiki/Scientific_research) and technological [innovation](https://en.wikipedia.org/wiki/Innovation), and how these, in turn, affect [society](https://en.wikipedia.org/wiki/Society), [politics](https://en.wikipedia.org/wiki/Politics) and [culture](https://en.wikipedia.org/wiki/Culture) (Wikipedia, which seems about right)

# Winner’s question

## The question in the title

The question the article is trying to answer is given in the title: “Do Artifacts Have Politics?”

* The first order of business is to try to get clear on what question is being asked
* To do that, we’ll need to consider what an artifact is, and what politics are supposed to be in the relevant sense

### What are artifacts?

**Artifacts** = human-made objects that were intentionally created by someone

Winner has in mind **technological artifacts** = artifacts made to be used for some **purpose** or **function**

* **Examples:** hammers, bridges, laptops
* **Algorithms** are also a kind of artifact, though they are *mathematical* objects rather than *physical* objects
  + For example, it makes sense to think of a particular sorting algorithm as a kind of artifact—a human-made object that was intentionally created to be used for some purpose
* In any case, the physical systems that **implement**algorithms, such as **Facebook’s servers**, are definitely artifacts, and the algorithms they run largely determine how they behave and what effects they have

Definition is supposed to **exclude**:

* Things that are not intentionally created by a person (footsteps)
* Byproducts / waste products of intentionally created objects (scrap wood left over after making a guitar)
* (Maybe) works of art that are not intended by the author to serve a purpose

Note notion of a **function** is used in other contexts, e.g. biology

* E.g., function of heart is to supply oxygen/nutrients to the body + remove waste products by pumping blood through the circulatory system
* Heart is not an artifact, because not designed by a human

### What are politics?

**Politics** = “arrangements of power and authority in human associations as well as the activities that take place within those arrangements” (Winner)

* For example, the US democratic system would count as an example of politics by this definition, as would any decisions made using the mechanisms of that system
* This is a pretty loose definition, but don’t worry about that too much

What does it mean to say that an **artifact** has politics?

### What does it mean to say that an artifact “has politics?”

A claim that Winner takes to be obvious: “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.”

**Q: What is he talking about? Examples?**

* The atomic bomb has profoundly changed how wars are fought—security researchers believe that it has strongly disincentivized major armed conflicts like the World Wars of the past, but also incentivized smaller-scale conflicts, because there is less risk that they will escalate into major ones
* Television radically changed how politics works.
  + Previously: radio/newspapers—attractiveness and charisma of the candidate far less important to electoral success.
  + Television changed all that
  + Example: famous 1960 debate between Kennedy and Nixon
    - Nixon had been in the hospital very recently, and refused the offer of makeup
    - As a result, he sweated profusely and looked unwell
    - Kennedy meanwhile accepted the offer of makeup and looked fantastic
    - Commentators argued that this helped Kennedy to win the election by a narrow margin

So, the **claim** that Winner takes to be **obvious** and **uncontroversial**: technology has a major impact on politics

Winner is interested in a more controversial claim, that artifacts somehow “have politics” *in themselves*:

”But to go beyond this obvious fact and to argue that certain technologies *in themselves* have political properties seems, at first glance, completely mistaken. We all know that people have politics, not things. … Blaming the hardware appears even more foolish than blaming the victims when it comes to judging conditions of public life” (122).

On this line of thought, artifacts are political only in the **superficial** **sense** that **people** can use them to achieve their political purposes, whatever those might be

* But considered in themselves, artifacts are politically neutral
* They might play a role in settling political issues, such as who has access to wealth and power, but only in virtue of the way they are **used**, not in virtue of their **natures**

Winner’s goal in the article is to argue that artifacts can have politics in a **deeper sense**: they can, simply in virtue of the way they are designed, have important effects on how political questions get settled by a society.

Further, he thinks that once political questions are settled by the artifacts we have created, they will tend to stay settled that way for a very long time. Here’s a quote from the article:

“By far the greatest latitude of choice exists the very first time a particular instrument, system or technique is introduced … since choices tend to become strongly fixed in material equipment, economic investment, and social habit” (p. 127).

That was a bit abstract, but we’ll consider multiple examples

Winner considers two ways in which artifacts might be said to have political implications by their very nature:

1. **Technical Arrangements as Forms of Order** = “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” (123)
2. **“Inherently Political Technologies”** = “man-made systems that appear to require, or to be strongly compatible with, particular kinds of political relationships”

We’ll spend the rest of the lecture talking about what he means by these two things in more detail

# Technical arrangements as forms of order

Technical Arrangements as Forms of Order = “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” (123)

## Robert Moses’ Parkways

Show photo

Robert Moses—public official working in New York in the mid-20th century

* Among other things, he was responsible for overseeing **urban planning in New York**
* Many of his projects were subsequently accused of being **racist**
  + For example, according to Wikipedia he “bulldozed primarily Black and Latino homes to make way for parks, [and] chose the middle of minority neighborhoods as the location for highways”

Winner focuses on one of Moses’ projects in particular, which was to build a series of overpass bridges on the parkways in Long Island

* A parkway is what it sounds like—it’s a road through a park that is used to provide access to park facilities

**Q: According to Winner, what political issue was settled by the bridges that Moses had built over Long Island’s parkways?**

* Answer: the bridges were too low to accommodate buses, which were the primary means of park access for poor black and Puerto Rican residents
* According to a biography by Robert Caro’s biography of Moses, Moses did this deliberately to ensure that members of these groups would have limited access to the parks **in perpetuity**

## Disability accomodations in the built environment

Show photo

**Q: what is this a photo of? What political issue is being settled?**

* It’s a photo of stairs that have a built-in ramp for people in wheelchairs and other people who find ascending stairs difficult
* The political issue being settled: who should have easy access to public buildings?

Winner quote on slide: “The organized movement of handicapped people in the United States during the 1970s pointed out the countless ways in which machines, instruments, and structures of common use – buses, buildings, sidewalks, plumbing fixtures, and so forth – made it impossible for many handicapped persons to move about freely, a condition that systematically excluded them from public life. It is safe to say that designs unsuited for the handicapped arose more from long-standing neglect than from anyone’s active inattention.” (125)

So, prior to the 1970s, people with various physical disabilities were excluded from: libraries, university buildings, government offices, public gathering places

* This had the net result of making it difficult for them to participate in public life and enjoy public services
* This was even more of a restriction before the advent of the internet
  + These days you can do many things remotely, like access library books, that you had to do in person previously

Worth noting that many public buildings are still not fully accessible, despite years of advocacy

* Show photo
* Example: a $41.5 million public library built in Long Island City in 2019 has many features that are not accessible for people with physical disabilities, and has only one elevator despite being five stories tall

## The mechanical tomato harvester

“The machine is able to harvest tomatoes in a single pass through a row, cutting the plants from the ground, shaking the fruit loose, and in the newest models sorting the tomatoes electronically into large plastic gondolas that hold up to twenty-five tons of produce headed for canning” (126)

**Q: What political issue was settled by the development and deployment of the mechanical tomato harvester?**

“By their very size and cost … the machines are compatible only with a highly concentrated form of tomato growing”

* Number of tomato growers declined from 4,000 in early 1960s to 600 in 1973 – but with more tomatoes produced
* By late 1970s, 32,000 jobs in the tomato industry eliminated “as a direct consequence of mechanization”
* Benefits to very large growers came at “sacrifice to other rural agricultural communities”

**Political issue:** how should profits from tomato industry in the United States be distributed?

## How design choices affect political outcomes

The example of the mechanical tomato harvester also illustrates two different ways in which a new technology can affect political outcomes

Winner:

“By far the greatest latitude of choice exists the very first time a particular instrument, system or technique is introduced … since choices tend to become strongly fixed in material equipment, economic investment, and social habit” (127)

“A second range of choices, equally critical in many instances, has to do with specific features in the design or arrangement of a technical system after the decision to go ahead with it has already been made”

Two kinds of choices by designers of technology here:

1. Decision to develop technology or not – decision to build large machines that can harvest many tomatoes at once
2. More specific choices about the “design or arrangement” of the system that is built – decision to include electronic sorters on the tomato harvesters

## Three kinds of examples

Summing up, we’ve seen three different kinds of examples of what Winner calls “technologies as forms of order” = cases in which a technology has the effect of settling a political question for a community

1. Foreseen political effect, with political intention (parkway bridges)
2. Unforseen political effect, without political intention (lack of disability accommodations in public buildings)
3. Foreseen political effect, without political intention (mechanical tomato harvesters)

Winner summarizes the point as follows (quote on slide):

“The issues that divide or unite people in society are settled not only in the institutes and practices of politics proper, but also, and less obviously, in tangible arrangements of steal and concrete, wires and transistors, nuts and bolts.” (p. 128)

**Q: Do the points Winner makes about physical artifacts apply to algorithms as well? Why or why not?**

# Inherently political technologies

So far, we’ve talked about the first way in which artifacts can “have politics” according to Winner, technologies as “forms of order” or ways of settling political questions

Winner also discusses a second way in which artifacts can “have politics”: some technologies can be “inherently political”

* Winner described inherently political technologies as “man-made systems that appear to require, or to be strongly compatible with, particular kinds of political relationships”
* Not immediately clear from the article what this is supposed to mean, exactly

Winner discusses two kinds of cases of “inherently political technologies”:

1. Cases in which a technology *requires* particular kinds of political relationships
2. Cases in which a technology *is strongly compatible with* certain kinds of political relationships

## Technology requires particular kinds of political relationships

**Basic idea:** given the nature of the system, certain kinds of power relationships *must* be in place, because otherwise disaster will result

Plato’s example: ships

* Trireme – Greek ship from Plato’s time
* Wikipedia: The total complement (*plērōma*) of the ship was about 200.[[35][36]](https://en.wikipedia.org/wiki/Trireme) These were divided into the 170 rowers (*eretai*), who provided the ship's motive power, the deck crew headed by the trierarch and a marine detachment.”
* Plato thought that the only way you could possibly run such a ship is along authoritarian lines—“no reasonable person believes that ships can be run democratically” (as Winner puts it)

Winner’s example: the atomic bomb

* “As long as [the atom bomb] exists, 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” (p. 131)
* The internal social system of the bomb **must be** authoritarian; there is no other way. (p. 131)
* Worry: might spread to other parts of the society!

## Technology is STRONGLY COMPATIBLE WITH particular kinds of political relationships

Basic idea: given the nature of the technology, certain kinds of political relationships will naturally tend to result

George Bush thought that the internet was an example: he thought that the internet is an inherently democratizing force

### George W. Bush on the democratizing power of the internet

George W. Bush:

“But I think if we turn our back on China and isolate China things will get worse. Imagine if the Internet took hold in China. Imagine how freedom would spread. Our greatest export to the world has been, is and always will be the incredible freedom we understand in America.”

That isn’t how things turned out—but Bush was presumably talking about an **uncensored** internet

# Activity

Recall Winner’s three kinds of examples of technologies as “forms of order”—cases where the implementation of a new technology has the effect of settling a political issue in some community

## Three kinds of examples

1. Foreseen political effect, with political intention (parkway bridges)
2. Unforseen political effect, without political intention (lack of disability accommodations in public buildings)
3. Foreseen political effect, without political intention (mechanical tomato harvesters)

### Activity

**In groups, identify a novel example in each category**

# next time

Amodei et al., “Concrete Problems in AI Safety”

# Student questions

What is technological determinism?

**Technological determinism** is a [reductionist](https://en.wikipedia.org/wiki/Reductionism) [theory](https://en.wikipedia.org/wiki/Theory) that assumes that a society's [technology](https://en.wikipedia.org/wiki/Technology) progresses by following its own internal logic of efficiency, while [determining](https://en.wikipedia.org/wiki/Determinism) the development of the [social structure](https://en.wikipedia.org/wiki/Social_structure) and [cultural values](https://en.wikipedia.org/wiki/Cultural_values), therefore technological progress is fundamentally an anti-democratic force.[[1]](https://en.wikipedia.org/wiki/Technological_determinism#cite_note-1) The term is believed to have originated from [Thorstein Veblen](https://en.wikipedia.org/wiki/Thorstein_Veblen) (1857–1929), an American sociologist and economist.