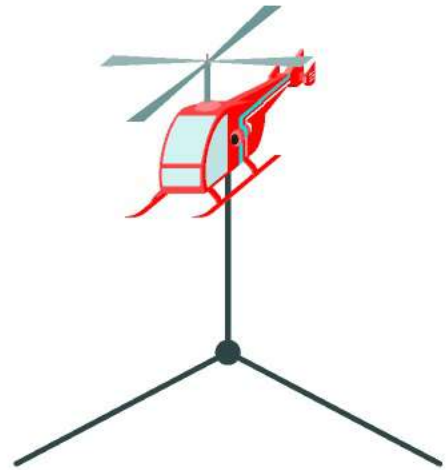
SciencesPo

23 January 2024



A Politics of Things

Thomas Tari

Science and Society

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A Politics of Things

Thomas Tari

Science and Society

Which relations between techniques and societies?

2.1 // Stakes of a social study of techniques

2.2 // From social impact to technological determinism

2.3 // The social construction of technology: a non-linear model

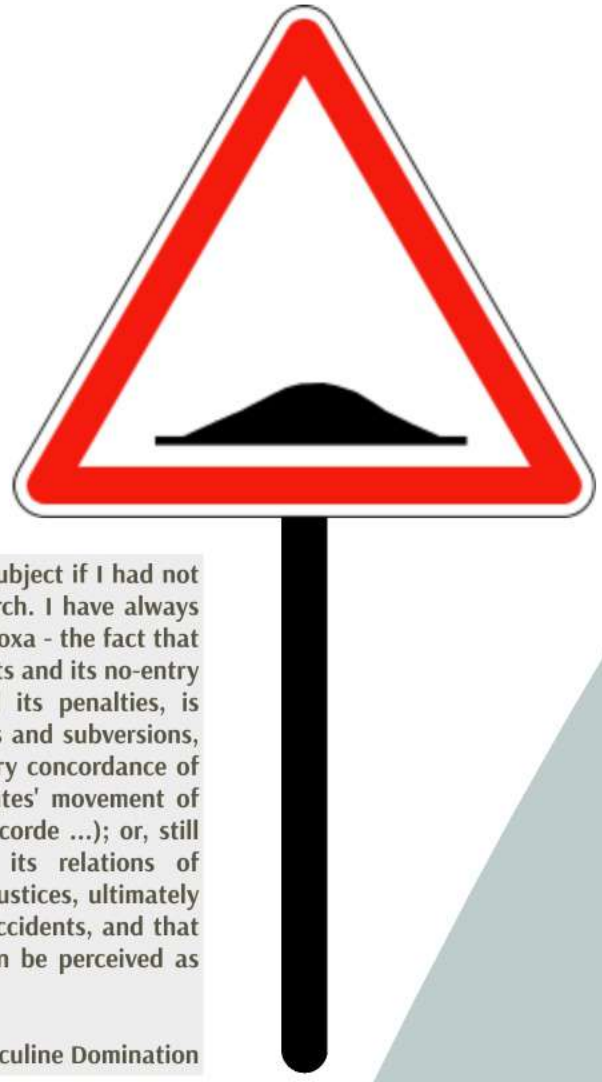
2.4 // Beyond the technique/society dichotomy: a symmetrical anthropology

Technical objects are black boxes

Let us first clarify what this intellectualist rationalization, created by science and by scientifically oriented technology, means practically.

Does it mean that we, today, for instance, everyone sitting in this hall, have a greater knowledge of the conditions of life under which we exist than has an American Indian or a Hottentot? Hardly. Unless he is a physicist, one who rides on the streetcar has no idea how the car happened to get into motion. And he does not need to know. He is satisfied that he may 'count' on the behavior of the streetcar, and he orients his conduct according to this expectation; but he knows nothing about what it takes to produce such a car so that it can move. The savage knows incomparably more about his tools.

Max Weber, Science as a Vocation



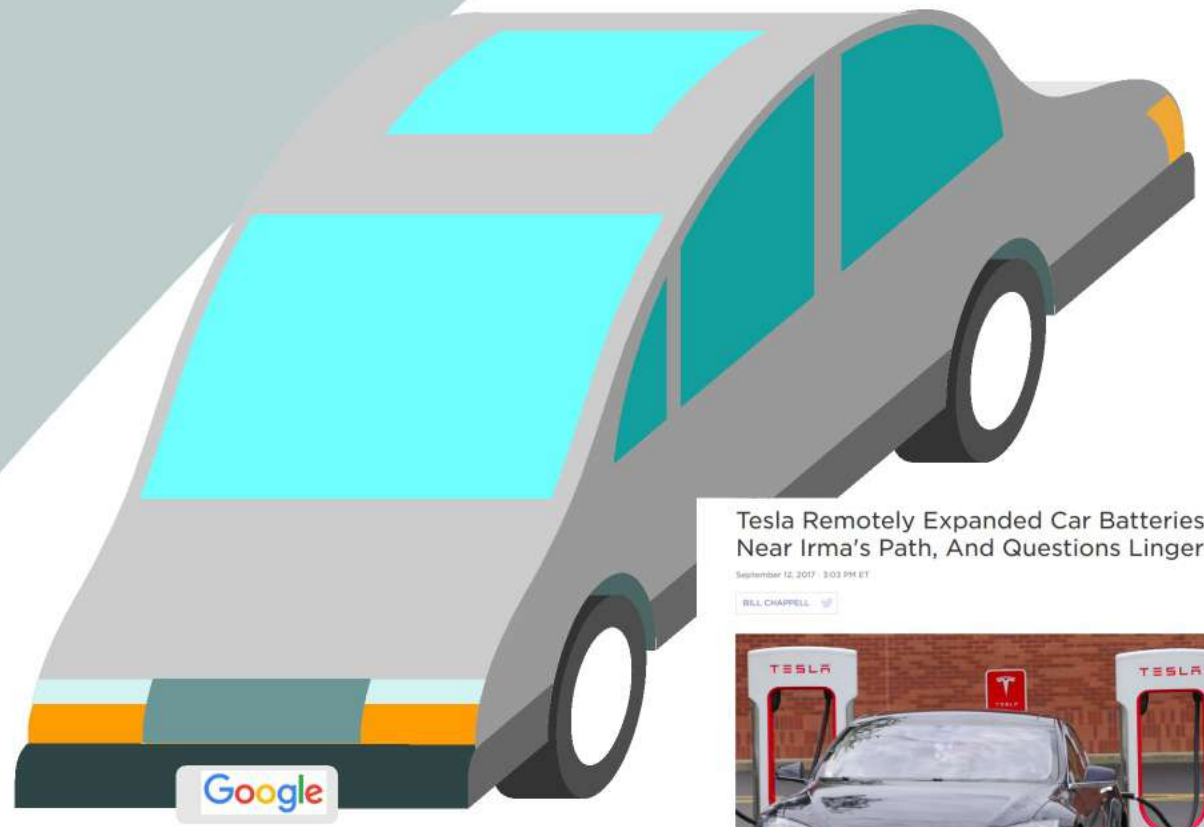
are not neutral

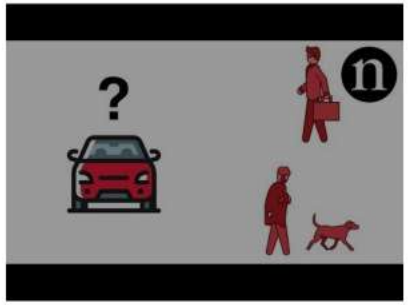
I would probably not have embarked on such a difficult subject if I had not been compelled to do so by the whole logic of my research. I have always been astonished by what might be called the paradox of doxa - the fact that the order of the world as we find it, with its one-way streets and its no-entry signs, whether literal or figurative, its obligations and its penalties, is broadly respected; that there are not more transgressions and subversions, contraventions and 'follies' (just think of the extraordinary concordance of thousands of dispositions - or wills implied in five minutes' movement of traffic around the Place de la Bastille or Place de la Concorde ...); or, still more surprisingly, that the established order, with its relations of domination, its rights and prerogatives, privileges and injustices, ultimately perpetuates itself so easily, apart from a few historical accidents, and that the most intolerable conditions of existence can so often be perceived as acceptable and even natural.

Pierre Bourdieu, Masculine Domination

2.1 //

Incidents and controversies open black boxes





Tesla Remotely Expanded Car Batteries Near Irma's Path, And Questions Linger

September 12, 2017 · 3:03 PM ET

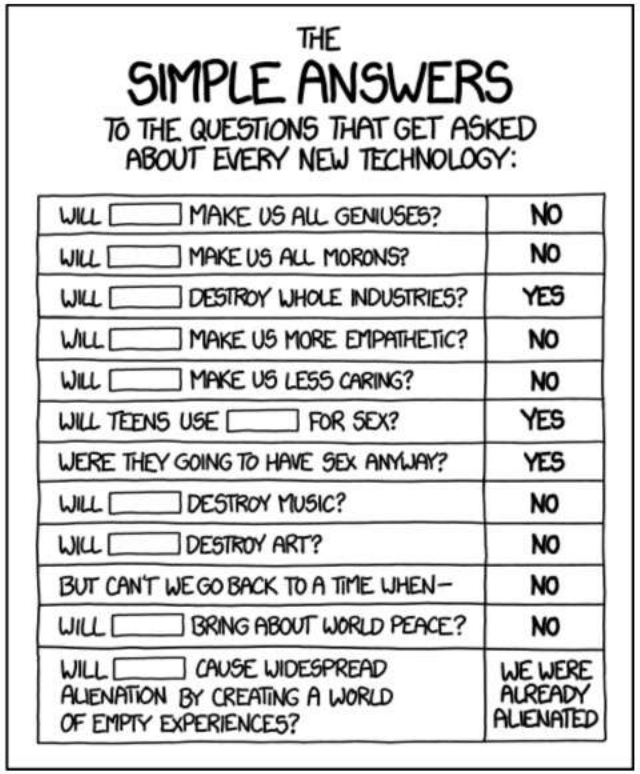
BILL CHAPPELL

Tesla car owners who were in Hurricane Irma's path recently got a temporary battery upgrade during the massive evacuation.
Chuck Burton/AP

Tesla owners who were in Hurricane Irma's path in the Southeast recently got an unexpected boost to help them, after the carmaker remotely upgraded vehicle batteries to their highest capacity.

The boost gave customers' cars an extra 30 to 40 miles, but it's also temporary: The batteries will lose their extra juice this weekend.

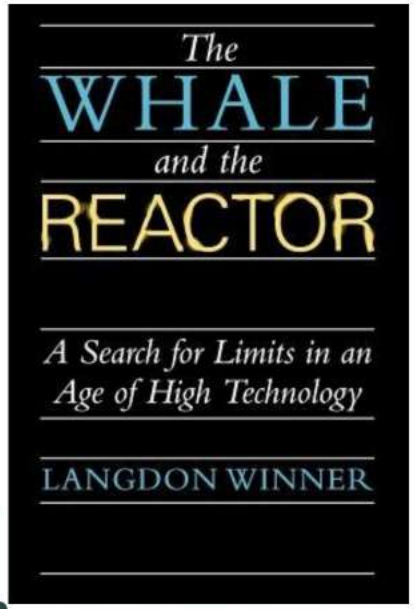
The move came at the request of a customer who was worried about traffic and the range between charging stations during a massive evacuation that saw millions of Americans leave

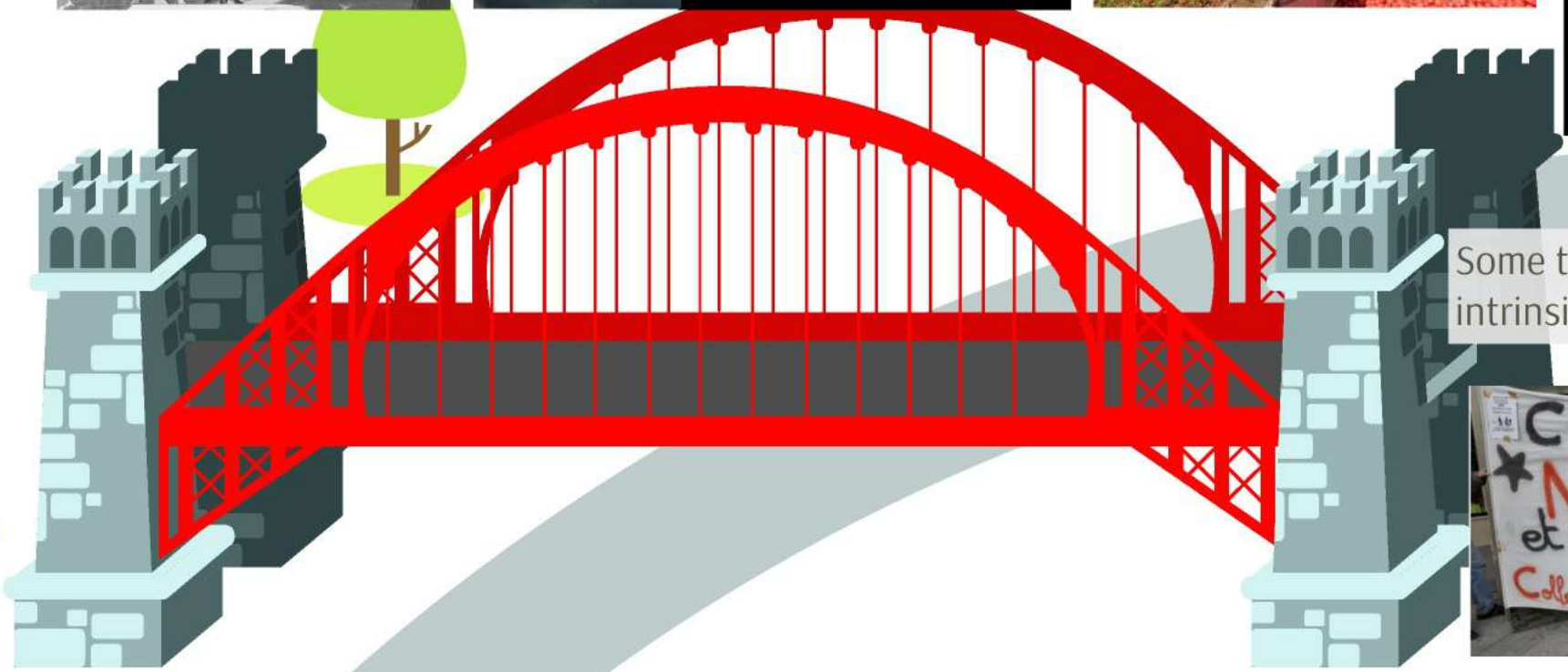


from xkcd.com

2.2 // From social impact to technological determinism

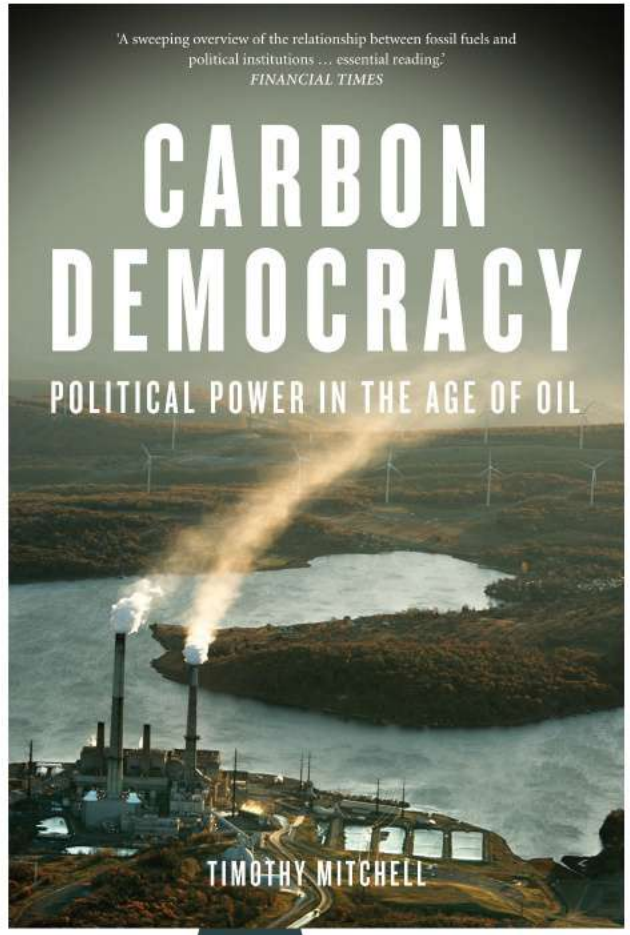
"Artifacts have politics": in their *design*



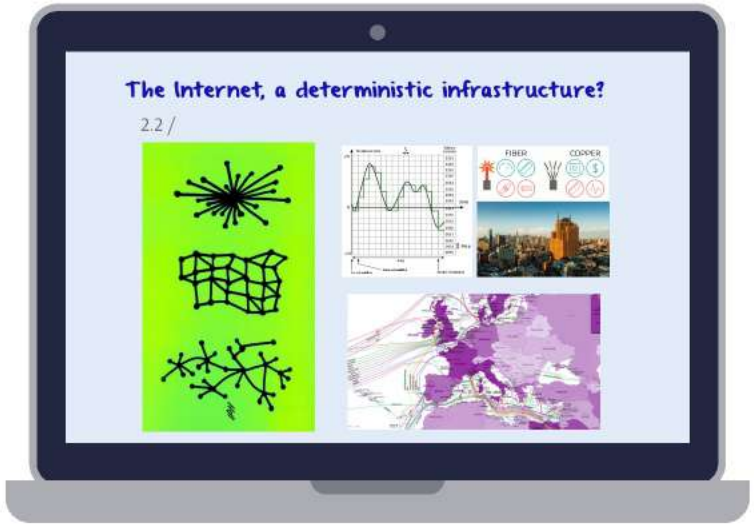


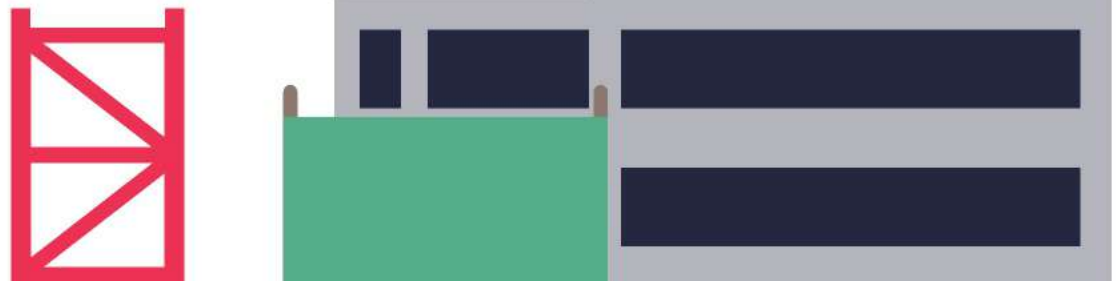
Some technologies are intrinsically politic

Technological determinism



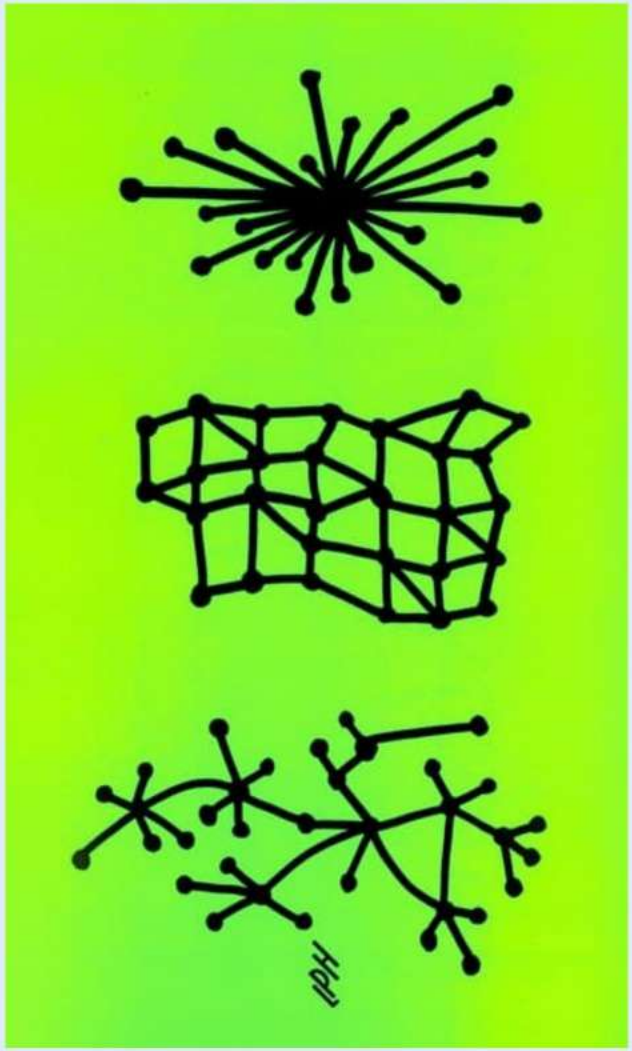
How are democratic (and non-democratic) values embedded in the structure of networks, such as an energy or information system?

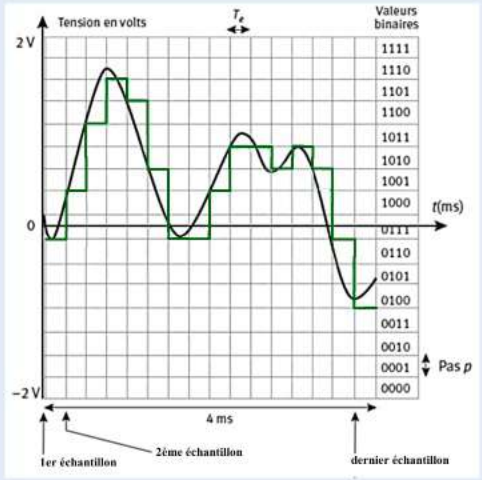


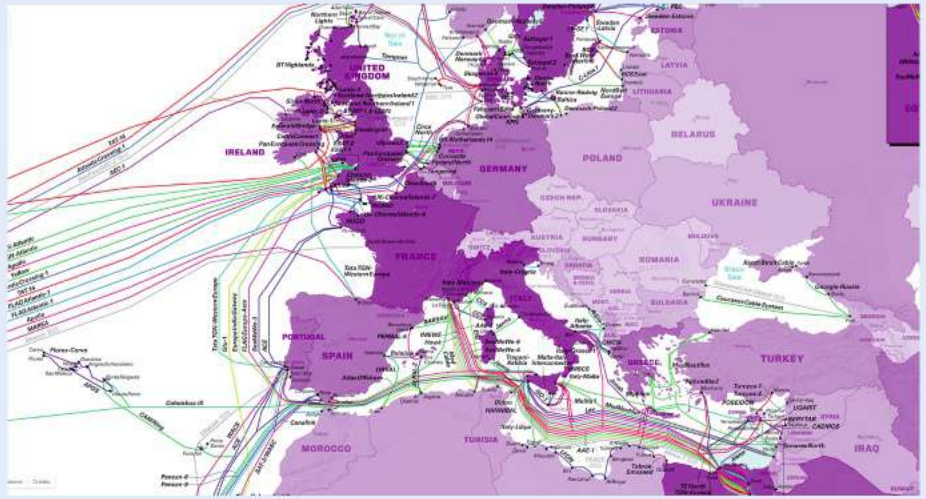


The Internet, a deterministic infrastructure?

2.2 /







The social construction of technologies: a non-linear model

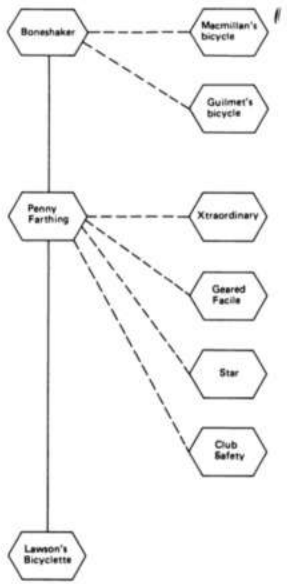


Figure 1.3
The traditional quasi-linear view of the development of the high-wheeled Ordinary bicycle until Lawson's bicycle. The solid lines indicate successful development, while dashed lines indicate failure.

A non-linear representation of
- artifacts
- concerned social groups
- problems
- solutions

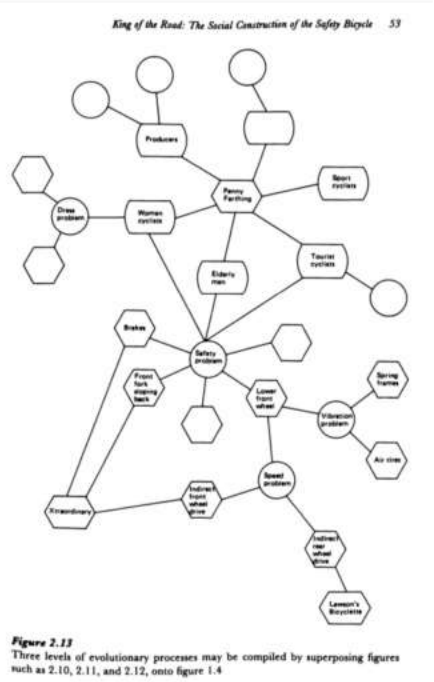
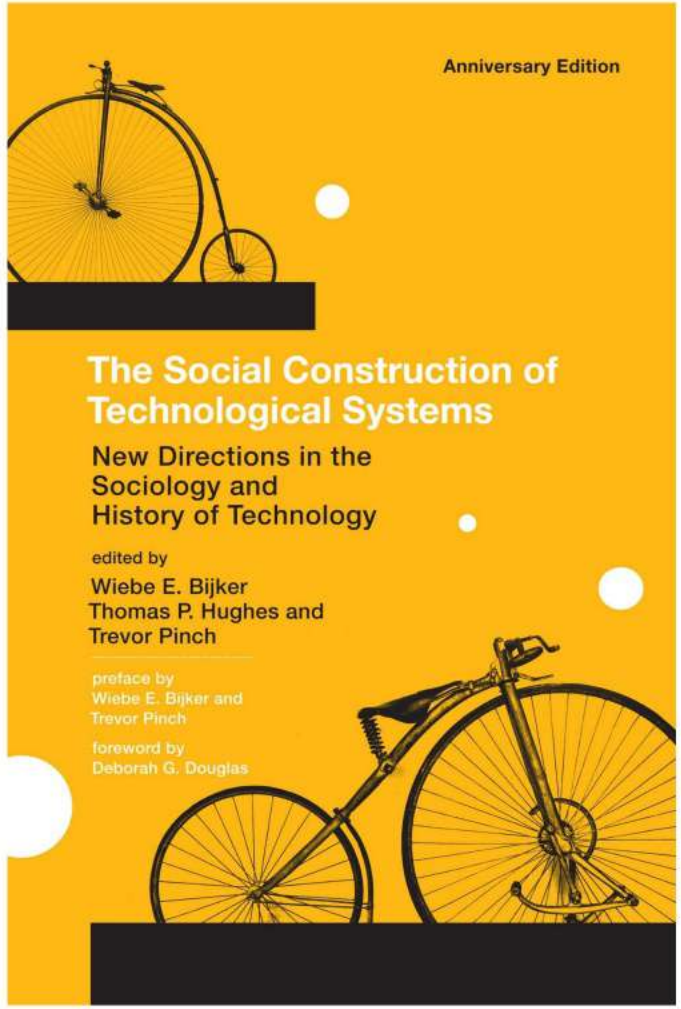
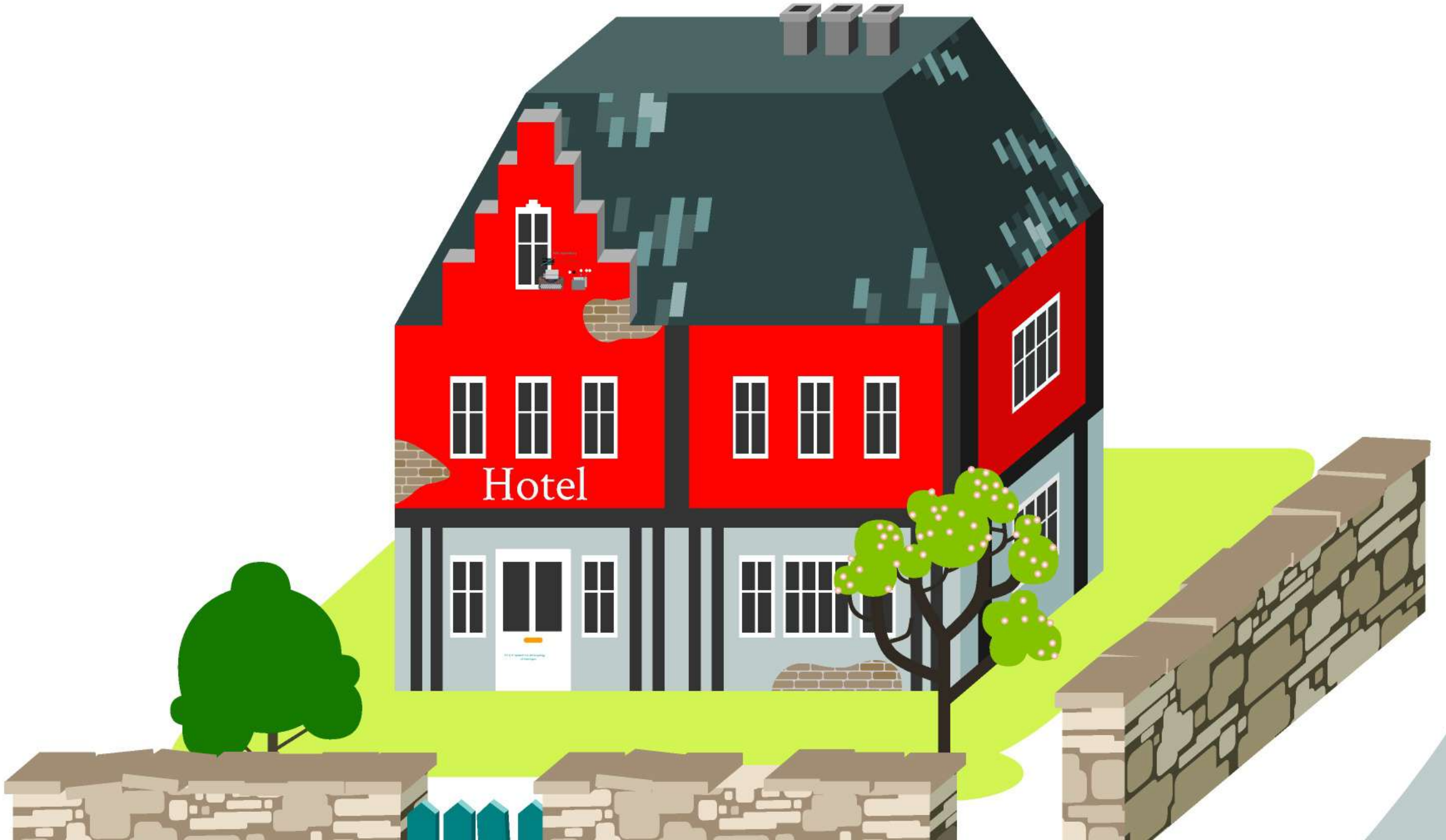


Figure 2.13
Three levels of evolutionary processes may be compiled by superposing figures such as 2.10, 2.11, and 2.12, onto figure 1.4

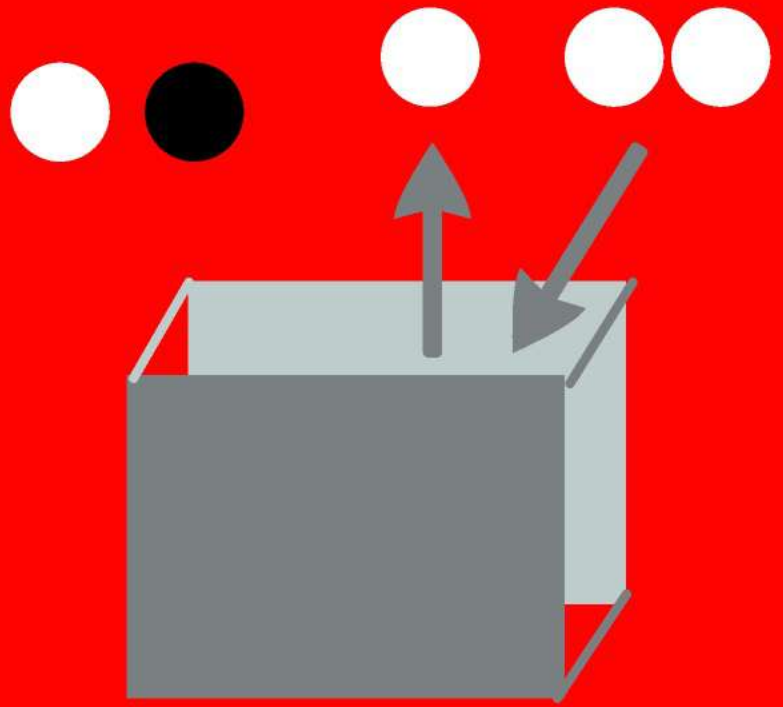



Hotel

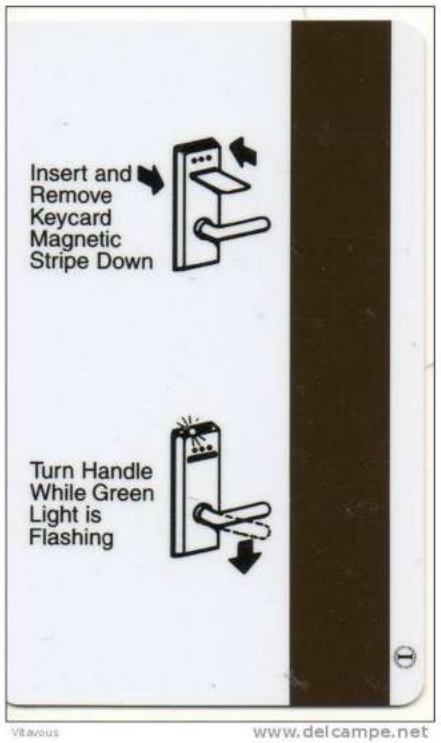
Path dependency

~~efficiency~~
profitability

Paul David (1971)
"Clio and the Economics of Qwerty"
The American Economic Review, Vol. 75, No. 2



2.4 // A symmetrical anthropology of techniques



Technical artifacts and social interactions are transformed and co-evolute through associations and substitutions

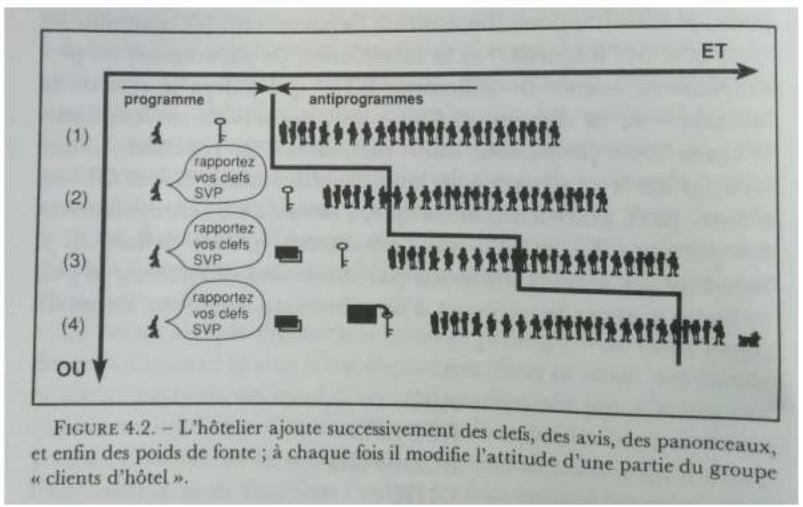
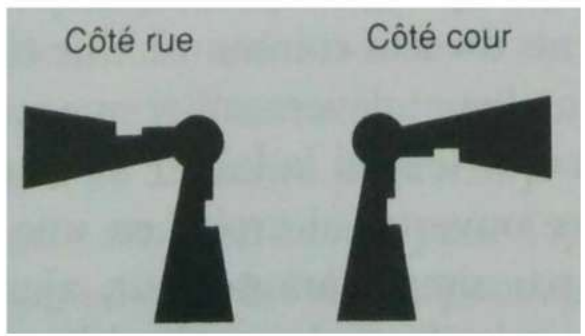
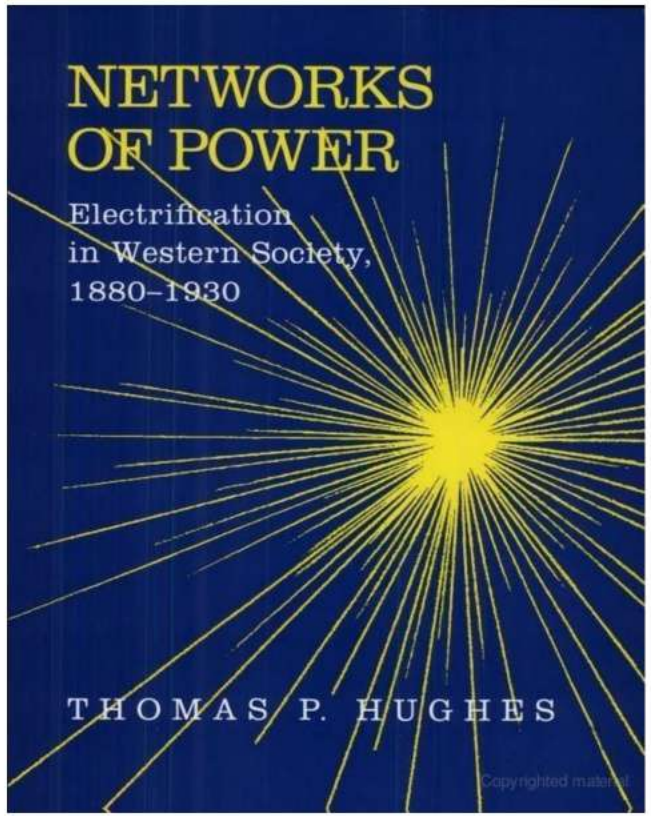


FIGURE 4.2. – L'hôtelier ajoute successivement des clefs, des avis, des panonceaux, et enfin des poids de fonte ; à chaque fois il modifie l'attitude d'une partie du groupe « clients d'hôtel ».



2.4// The "Seamless Web", a non-causal model



"The Electrification of America"
by Thomas P. Hughes (1979)

heterogeneous engineering
- gas lighting prices
- copper prices
- Joule's 1st law : P = I^2 x R = IV
- losses = I^2 x length x quality / section of a copper wire
- Ohm's law V = RI

for an efficient lighting at affordable prices, the incandescent lamp designed by Edison is 100 watts, 100 ohms, 1 amp, 100 V

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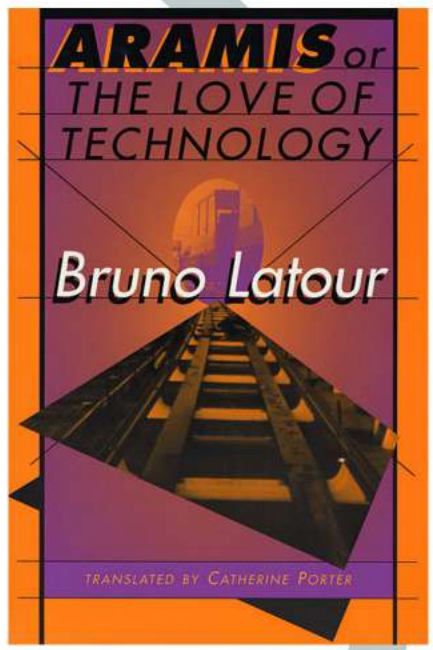
d Society

Sociotechnical perspectives

- Study things, not perceptions
- Describing the stability of our social (political, economical, moral) world cannot be done without technical objects
- There is no dichotomy between social and technical perspectives. Within a controversy, we can often identify diverging sociotechnical configurations

Sociotechnical perspectives



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