

Excerpts from

Latour, B., 1987, *Science in Action: How to Follow Scientists and Engineers through Society*, Harvard University Press, 1997

By Andrea Saltelli, September 2015

[Text in square brackets is my comment]

About controversies and the use of rhetoric

P. 59

It is a powerful rhetoric that which is able to drive the dissenter mad.

P. 61

*...we must eventually come to call scientific the rhetoric able to mobilise on one spot more resources than older ones.*

[what is social in science in its capacity to mobilize a broad number of associations]

P. 99

... the settlement of a controversy is the cause of Nature's representation not the consequence ...

P. 118

[on winning the trials of attribution – trade-off between enrolment of allies and attribution of merits]

The whole process of enrolment, no matter how cleverly managed, may be wasted if others gain credit for it.

P. 198 (in Chapter 5, Tribunals of reason)

We have now shifted from debates about reason to disputes about what the world of different people is made of; how they can achieve their goals; what stands in their way; which resources may be brought in to clear their way.[...] what can be tied to a claim to make it stronger? How can the claims that contradict it be untied? No one is accusing anyone else of irrationality, but we are still struggling to live in different worlds.

p. 211

[Difficult to summarize but interesting discussion of cycles of accumulation and centres of calculation – the end result is a great divide between our culture and the others]

“all culture that ‘believe’ in things, and on the other hand, the one culture, ours, that knows things (or will soon know them), between ‘Them’ and ‘Us’”,

p. 222

[what is technoscience and how wide and deep it goes; the cycles of accumulation demand a wide set of conditions which ] cut across divisions usually made between military history, history of science, history of technology, politics, administration or law, ...

All the distinctions one could wish to make between domains (economics, politics, science, technology, law) are less important than the unique movement that makes all of these domains conspire toward the same goal: a cycle of accumulation that allows a point to become to become a *centre* by acting at a distance on many other points.

[This part makes me think of the famous quote of Mumford where it says that science would not be what it is today without its marriage with capitalism]

p. 227

[the need for ‘immutable and combinable mobiles’ which are brought to the centre]

p. 228

[A theme running through the book: what distinguishes science from ethno-science, how comes that we ‘know’ and they – the others races and civilizations - simply ‘believe’; the role of black boxes “where many elements are made to act as one” (p. 131), accumulation cycles and centres of calculation]

The cumulative character of science is what strikes observers so much; why they devised the notion of a Great Divide between our scientific cultures and all the others. Compared to cartography, zoology, astronomy and economics, it seems that each ethnogeography, ethnozoology, ethnoastronomy, ethnoeconomics is peculiar to one place and strangely non-cumulative, as if it remained for ever stuck in a tiny corner of space and time. However, once the accumulation cycle and the mobilization of the world it triggers are considered, the superiority of some centres over what appears by contrast to be the periphery may be documented without any additional divide between cultures, minds and logics.

p. 229

... who includes and who is included, who localises and who is localised is not a cognitive or a cultural difference, but the result of a constant fight...

p.239 – 241

[equation as the sum of all capitalisations, tests and ties]

[equations] tell us what is associated with what; they define the nature of the relation; finally, they often express a measure of the resistance of each association to disruption [...] they are nevertheless

the true hearth of the scientific networks, more important to observe, study and interpret than facts or mechanisms, because they *draw* all of them together inside the centres of calculation.

p. 245

When people wonder how 'abstract' geometry or mathematics may have some bearing on 'reality', they are really admiring the *strategic position* taken by those who work inside the centres on forms of forms.

p. 249-250

The predictable character of technoscience is entirely dependent on its ability to spread networks further. As soon as the outside is really encountered, complete chaos ensues.

p. 255

Believing more the nth order papewr form than common sense is a feature of astronomers, economists, bankers, of everyone who treats in the centre phenomena which are, by definition, absent.