



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

EDCP 585

Fieldwork in Actor-Network Theory

Lecture Notes

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1. Methodologies of / in STS

a. Case Study Method in STS (see EDCP 501 Lecture Notes)

b. *Sine controversia*: Controversial Case Studies / Controversy Studies

i. Definition

1. “Disagreement, typically when prolonged, public, and heated.”
2. Phillips (1998, p. 34): “oppositions which occur among closely-allied groups as they struggle to resolve divergent interpretations.... Goodnight notes that in spite of countless case studies of controversies the concept of controversy has been all but completely ignored by rhetoric and argument scholars (2). Recent work has sought to fill this void by elaborating a theory of controversy and fitting the concept into a broader theory of social deliberation.

a. Generally, controversies are conceived as disruptions in the consensual norms of communication (see Doxtader 60; McKeon 26).

b. Kathryn Olson and Thomas Goodnight (249) also base a theory of controversy on the disruption of public deliberation.

ii. Dorothy Nelkin (1971, 1979), *Nuclear Power and Its Critics: The Cayuga Lake Controversy; Controversy: Politics of Technical Decisions*.

1. “More than anyone else, she was responsible for the idea that controversies over science and technology provide a kind of natural laboratory for studying the operations of science and technology and their interactions with the surrounding society” (Giere, 1988).

2. By 1979, she had edited a textbook on the subject, entitled quite simply *Controversy* (Nelkin, 1979); it was required reading in the STS course she taught for many years at Cornell University. Her books were not seminal in the sense that STS scholars are taught to regard the works of Kuhn and Latour as seminal. Largely devoid of social theory and lacking verbal pyrotechnics, Nelkin’s work stayed pretty close to the surfaces of things. (Jasanoff, 2012 p. 439)

a. Nelkin (1971, pp. 245, 246): This paper arises from a case study of the Cayuga Lake nuclear power plant controversy, *Nuclear Power and Its Critics*, which has been published by the Cornell University Press, 1971.

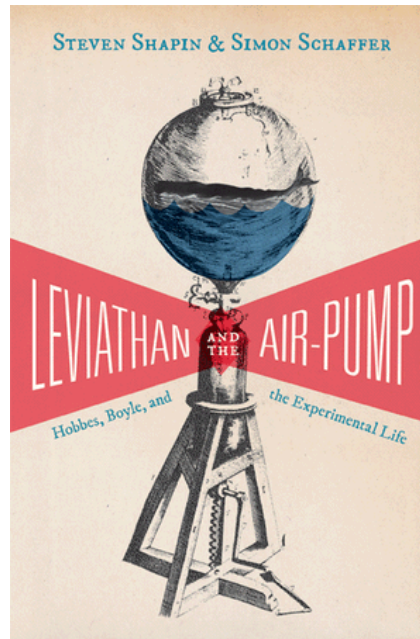
b. The discussion presented here reveals the perpetuation of this dilemma in a contemporary environmental controversy. Several questions are raised when scientists, using their technical expertise, engage in political activity. Is science a politically neutral activity with the scientist responsible only for the quality of his work? Or does his vocation, 'circumscribed in a framework of political decisions', throw him, 'whether he wishes it or not, into the political arena'? These questions, which are controversial enough when scientists participate in decisions concerning foreign policy and weapons development, have recently assumed new significance when scientists turned their attention to environmental issues. Such

- issues are charged with conflicting public values and uncertain technical dimensions, and these are reflected in ambivalent policy. Decisions must often be made despite conflicting technical advice.
- c. When called on for their technical expertise, some scientists recoil from environmental controversies, taking refuge in the 'neutrality of research' position.
 - iii. For a range of insights into controversies, see Brian Martin's publications <http://www.bmartin.cc/pubs/controversy.html> and his insights into controversies and STS, e.g., <http://www.bmartin.cc/pubs/12Bainbridge.html>
 - iv. *Reassembling the Social*, Latour (2005, pp. 45, 50-51): Action should remain a surprise, a mediation, and event. It is for this reason that we should begin, here again, not from the 'determination of action by society', the 'calculative abilities of individuals', or the 'power of the unconscious' as we would ordinarily do, but rather from the *under-determination of action*, from the uncertainties and controversies about who and what is acting when 'we' act—and there is of course no way to decide whether this source of uncertainty resides in the analyst or in the actor.... If we call *metaphysics* the discipline inspired by the philosophical tradition that purports to define the basic structure of the world, then *empirical metaphysics* is what the controversies over agencies lead to since they ceaselessly populate the world with new drives and, as ceaselessly, contest the existence of others.”
 - v. *Science in Action*, Latour (1987): The impossible task of opening the black box is made feasible if not easy by moving in time and space until one finds the controversial topic on which scientists and engineers are busy at work. This is the first decision we have to make: our entry into science and technology will be through the back door of science in the making, not through the more grandiose entrance of ready made science. (p. 4)
 1. It is all very well to choose controversies as a way in, but we need to follow also the closure of these controversies. Here we have to get used to a strange acoustic phenomenon. The two faces of Janus talk at once and they say entirely different things that we should not confuse. (p. 7)



2. This is the general movement of what we will study over and over again in the course of this book, penetrating science from the outside, following controversies and accompanying scientists up to the end, being slowly led out of science in the making. (p. 15)
3. When we approach the places where facts and machines are made, we get into the midst of controversies. The closer we are, the more controversial they become. When we go from 'daily life' to scientific activity, from the man in the street to the men in the laboratory, from politics to expert opinion, we do not go from noise to quiet, from passion to reason, from heat to cold. We go from controversies to fiercer controversies. (p. 31)

4. Rule 1 We study science in action and not ready made science or technology; to do so, we either arrive before the facts and machines are blackboxed or we follow the controversies that reopen them. (p. 258) See **Rules of Method**
- 5.
- vii. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Shapin & Schaffer, 1985)



1. Sargent (1988, p. 57): In order to counteract what they perceive to be the bias of a "members' account," Shapin and Schaffer propose to look at the 17th century from Thomas Hobbes' point of view. Since Hobbes was an "anti-experimentalist" they believe that by focusing upon his criticisms of experimental science they can achieve the perspective of a "stranger" (S and S, p. 5; see Barnes 1974, for a fuller account of the "stranger" approach). To "play the stranger" is to suspect "our taken-for-granted perceptions of experimental practice and its products." (S and S, p. 6)
 2. If we pretend to be a stranger to experimental culture, we can seek to appropriate one great advantage the stranger has over the member in explaining the beliefs and practices of a specific culture: the stranger is in a position to know that there are alternatives to those beliefs and practices. (S and S, p. 6)
 - viii. Collins & Pinch cases in *The Golem* series
 1. *The Golem: What Everyone Should Know about Science* (1993)
 2. *The Golem at Large: What you Should Know about Technology* (2002)
 3. *Dr. Golem: How to Think about Medicine* (2005)
 - ix. "Science, Technology, and Controversy" in *Handbook of Science and Technology Studies* (1995) (pp. 389-526)
 1. Martin & Richards (1995)
 - a. Positivist Model
 - b. Group politics Model
 - c. SSK Model
 - d. Social structural Model
- c. ***Sine defectio*: Breakdowns**
- i. Heidegger (1927/1929 *Being and Time*) *Being and Time* (Division 1:73)

1. Macquarie & Robinson Translation (1962, pp. 102-103): To the everydayness of Being-in-the-world there belong certain modes of concern. These permit the entities with which we concern ourselves to be encountered in such a way that the worldly character of what is within the- world comes to the fore. When we concern ourselves with something, the entities which are most closely ready-to-hand may be met as something unusable, not properly adapted for the use we have decided upon. The tool turns out to be damaged, or the material unsuitable. In each of these cases equipment is here, ready-to-hand. We discover its unusability, however, not by looking at it and establishing its properties, but rather by the circumspection of the dealings in which we use it. When its unusability is thus discovered, equipment becomes conspicuous. This conspicuousness presents the ready-to-hand equipment as in a certain un-readiness-to hand. But this implies that what cannot be used just lies there; it shows itself as an equipmental Thing which looks so and so, and which, in its readiness-to-hand as looking that way, has constantly been present-at hand too. Pure presence-at-hand announces itself in such equipment, but only to withdraw to the readiness-to-hand of something with which one concerns oneself-that is to say, of the sort of thing we find when we put it back into repair. This presence-at-hand of something that cannot be used is still not devoid of all readiness-to-hand whatsoever; equipment which is present-at-hand in this way is still not just a Thing which occurs somewhere. The damage to the equipment is still not a mere alteration of a Thing-not a change of properties which just occurs in something present-at-hand.
 2. Stambaugh Translation (1996, p. 68): Modes of taking care belong to the everydayness of being-in-the world, modes which let the beings taken care of be encountered in such a way that the worldly quality of innerworldly beings appears. Beings nearest at hand can be met up with in taking care of things as unusable, as improperly adapted for their specific use. Tools tum out to be damaged, their material unsuitable. In any case, a useful thing of some sort is at hand here. But we discover the unusability not by looking and ascertaining properties, but rather by paying attention to the associations in which we use it. When we discover its unusability, the thing becomes conspicuous. Conspicuousness presents the thing at hand in a certain unhandiness. But this implies that what is unusable just lies there, it shows itself as a thing of use which has this or that appearance and which is always also objectively present with this or that outward appearance in its handiness. Pure objective presence makes itself known in the useful thing only to withdraw again into the handiness of what is taken care of, that is, of what is being put back into repair. This objective presence of what is unusable still does not lack all handiness whatsoever; the useful thing thus objectively present is still not a thing which just occurs somewhere. The damage to the useful thing is still not a mere change in the thing, a change of qualities simply occurring in something objectively present.
 - ii. Listen to Bruce Mau on design failure or breakdown (CBC, *The Current*, 3 Sept 2014):
 1. <http://www.cbc.ca/thecurrent/episode/>
- d. *Sine scandalum***
 - i. Scandals**
- e. *Sine problema***
 - i. Problematizations**

1. Bacchi (2012, p. 7): A study of problematizations, therefore, offers researchers the possibility of getting inside thinking—including one’s own thinking—observing how “things” come to be. It gives access to the spaces within which “objects” emerge as “real” and “true”, making it possible to study the strategic relations, the politics, involved in their appearance. Examining thought in this way puts into question the presumed fixity of the thing “thought” and, by so doing, makes it possible to think other-wise: “It radicalises our sense of the contingency of our dearest biases and most accepted necessities, thereby opening up a space for change” (Flynn, 2005: p. 33).
- f. Actor-Network Theory (ANT): Mapping Controversies