

BOOK REVIEW/COMPTE RENDU

Michel Callon, Pierre Lascoumes and Yannick Barthe. *Acting in an Uncertain World: An Essay on Technical Democracy*. Translated by Graham Burchell. Inside Technology. Cambridge, MA: MIT Press, 2009, 298 pp. \$US 35.00 hardcover (978-0-262-03382-4)

Michel Callon, first author and presumably the driving intellectual force behind *Acting in an Uncertain World*, has a well-earned reputation as one of France's leading contemporary sociologists. While his work is often linked to that of Bruno Latour, his friend and (until recently) colleague at the École des Mines de Paris, Callon has tended toward more applied and less abstract questions than Latour. This book, first published in French in 2001, is a notable attempt to link real-world developments in the politics of knowledge — particularly the tensions between citizens and authorities that are most frequently expressed on environmental and health issues — to some of the more academic concepts developed in actor network theory (ANT) and the sociology of scientific knowledge (SSK), including hybridity, translation, the social construction of knowledge, and the increasingly problematic divide between expert and “lay” ways of knowing and acting politically.

While the topic is not new, the approach of Callon and his colleagues is provocative. In the book's opening pages, they point out that their discussion begins where most accounts end: with the stubborn and increasingly problematic stalemate between different claims to knowledge and authority. They argue against Ulrich Beck's implicit conclusion that the collapse of the progress narrative and the rise of uncertainty as the predominant political worldview leads to *diverging* understandings of risk and the formation of competing interest groups. Instead, they see the end of “indisputable knowledge” as an opportunity for “democratizing democracy,” or challenging the “double delegation” of authority to experts and politicians that has anchored decision-making in modern democratic societies. The discussion is not simply academic — Callon, Lascoumes and Barthe point to several cases where this is already happening, most notably in fields such as AIDS research, gene therapy, nuclear waste disposal, and the use of genetically modified organisms in agriculture (the latter two are exemplars in Europe only). In cases such as these, they argue, citizens, experts, and (in some cases) policymakers have travelled

a long road together, often from the very beginning of the problem, and have each engaged in mutual learning over the long term, thus offering a model for how to act progressively under conditions of conflict and uncertainty.

One of the major problems with modern science and politics, the authors suggest, is its conceptualization of decision-making. A particularly trenchant section of the book (ch. 2), deals with the triumph of reductionist logic in the natural sciences (and, by extension, in politics). Reductionism is the philosophy of isolating problems (bracketing them off from the world), placing them in the controlled environment of the laboratory, introducing variables of input and output, and thereby arriving at conclusions that can be applied universally. Essentially, reductionism is about achieving finality: we bracket something off, probe it, and then set it aside or (ideally) use it to investigate other problems. The difficulty, according to Callon and colleagues, is that finality is a false idol that traps us politically. All parties to a controversy will play the finality card: representatives of government and industry will too often say to concerned citizens “yes, your concerns are legitimate, but we have to decide now based on the science that is in front of us,” while opponents will reply using some variation of the precautionary principle “that no action should be permitted until we know for certain what will happen.” In response to this trap, the authors argue that we need to rethink what decision-making means. Rather than approaching decisions as final events (to be made for all-time and from which we all “move on”), *Acting in an Uncertain World* advances the alternative notion of “measured action” or measured decision-making, where “you do not decide [an outcome], you take measures” that are based on inclusive processes that involve both experts and the public, but that ultimately remain open-ended so as to incorporate new knowledge, discoveries, and claims. The need for finality, the authors argue, is usually overstated, more the product of expediency and habit than actual necessity. The antidote to the false dichotomy of recklessness versus paralysis is a willingness to remove the artificial temporal horizon that currently defines decision-making, while at the same time creating new mechanisms for consistent citizen involvement in the ongoing process of determining measured actions.

While this rethinking of decision-making is promising, some questions remain unaddressed. For instance, the irreversibility of many environmental and health issues (global climate change, species extinction, the release of genetically modified organisms into the biosphere, exposure to toxins) means that even measured action in these cases establishes finalities. *Acting in an Uncertain World* also suffers from a dose of Habermasian optimism. While the authors explicitly argue against the

Habermasian divide between instrumentalist and communicative action (arguing that citizens should hold their interests intact when participating in “hybrid forums” with experts and politicians), the underlying assumption nonetheless remains that dialogue, if equitably structured, will lead to positive outcomes. As others have pointed out, this black-boxing of dialogue as a process is precisely what ANT theorists have rejected elsewhere. Finally, Callon and colleagues pay little attention to the role that organizations such as corporations and large environmental groups play in structuring the public sphere. In the (idealized) world of measured action, experts and citizens come together as representatives of no one but themselves, a situation that is rarely seen in the rough and tumble world of environmental and health politics.

Acting in an Uncertain World is an original and ground-breaking book. It reflects a malaise with current forms of delegative democracy that have not kept up with the realities of citizen involvement and the increasing complexity of social problems. Unlike other works that simply reflect upon this state of affairs, Callon and colleagues advance a possible means to address it. An interesting and important field of research beckons.

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Nathan Young is an Assistant Professor in the Department of Sociology and Anthropology at the University of Ottawa. Issues considered in this review are addressed in Nathan Young and Ralph Matthews, *The Aquaculture Controversy in Canada: Activism, Policy, and Contested Science* (Vancouver: UBC Press, 2010).