Foreknowledge in public policy: new practices, new objects, and new challenges for a political sociology of predictive expertise

Call for Papers for a Special Issue in *Science & Technology Studies*

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The special issue critically examines the role of foreknowledge – forecasts produced by energy system models, climate change scenarios, numerical predictions used in chemicals regulation, algorithmic prognoses of crime hot spots and so on – in policy making and public debate. It starts from the observation that the landscape of prediction-for-policy is rapidly evolving, as profound changes affect the production, validation, and use of foreknowledge. Sharply increasing computing power and the availability of large quantities of data have renewed existing modeling practices, and led to the emergence of new predictive techniques based on "big data", algorithms and machine learning. New actors, such as local and global authorities, firms and civil society groups have entered the field, and produce models, simulations and scenarios, while transnational actors intervene in processes of evaluation, validation and standardization of foreknowledge. Finally, concerns about industrial, environmental and health risks have created new expectations on public policy (Beck, 1999) and led to the development of predictive or "anticipatory" capacities in state administrations (Nelson et al., 2008) and civil society organizations.

As a consequence, some welcome the advent of more "reflexive" forms of governance, in which foreknowledge is used by a variety of private and public actors to evaluate the unintended consequences of policy decisions and the side-effects of technology development (Voß et al., 2006, Guston, 2014), while others warn that the "colonization of the present" by techno-scientific futures (Kaiser, 2015) silences local voices (Miller, 2004, Mahajan, 2008), and unduly reduces the openness of public debate (Voß, 2013). The special issue is aimed at extending on-going discussions in the field of STS on prediction, anticipation and foreknowledge, taking a fresh look at its politics, and its relation to policy making and governance.

STS scholars have shown that foreknowledge not only represents social reality and its possible or probable evolutions; it also *shapes* it in a variety of direct and indirect ways. Following recent work on the way economic knowledge in general and economic and financial models in particular equip and format markets (Callon, 1998, Mackenzie, 2004), such political and social effects of foreknowledge have been captured through the notion of *performativity*. Following this line of thought, knowledge about the future travels through socio-technical "arrangements of prediction" (Schubert, 2015) – instruments, infrastructure, and shared practices – that bring together and redefine social actors. Such knowledge is performative by co-creating causes, effects, potential solutions, and affected constituencies. Climate change forecasts, for example, define the mechanisms by which risk occurs, and who is vulnerable, simultaneously (Jasanoff, 2010).

We also propose to extend what scholars have called the new political sociology of science (Frickel et Moore, 2006, Bonneuil et Joly, 2013) to the variegated technologies of prediction, so as to pay closer attention to conflicts and power asymmetries in knowledge production, normalization and regulation activities by public agencies and private actors. Models for instance, which are at the core of predictive practices, vary in form and content depending on the context of knowledge production, as well as the demonstrations that those who produce and employ models are interested to make. As with other forms of policy relevant knowledge, the field of modeling reflects the politics of policy making, the diversity of intentions and actors that are involved, the power struggles among them, and the resulting shifts in policy frames. How do "performation contests", so to speak, play out? In a field of diverse anticipatory instruments and propositions, what explains what foreknowledge prevails and why? Applying this perspective distinctly leads to go beyond the notion of an "anticipatory state" that makes 'enlightened' decisions based on an assessment of the long-term consequences of different options, to embrace the variety of conflicting actors and institutions that take part in the construction of public policies, and competitively produce and mobilize foreknowledge in the process.

We invite empirical contributions on the production, validation and use of foreknowledge in public policy and global governance, spanning different countries and issue areas, so as to develop a differentiated take on contemporary transformations of predictive practices and their link to policy making. We anticipate the special Issue's focus on foreknowledge in public policy will intersect with a range of conceptual and theoretical work. This may include, for example:

- *Ontological politics*: what entities and problems do technologies of prediction bring into being? How does this link up to processes of agenda-setting and framing?
- *Performativity*: what are the technical, social, cultural and political arrangements and infrastructures that enable model-based predictions to perform social reality?
- *Regulatory science*: How do practices of validation and standardization contribute to stabilize new and sometimes precarious forms of policy-relevant knowledge?
- *Epistemic communities*: how do modellers or data scientists organize internationally, especially when they come from different social worlds (e.g. research, market, policy)?
- *Technical democracy*: when do predictive practices contribute to policy deliberation, and when do they on the contrary close down public debate?

We invite abstracts of 850-1000 words. The deadline for receipt is January 20 2017. Please indicate the names of all authors and their institutional affiliations on the top of the abstract, and submit abstracts to s.aykut@gmail.com and demortain@inra-ifris.org. Authors submitting abstracts selected to go forward for the Special Issue will need to submit full papers for review by April 30 2017. The Special Issue is scheduled for publication in early 2018.

Prospective Schedule

- Submission of abstracts: 20 January 2017
- Submission of first drafts: 30 April 2017
- Final submission to S&TS: December 2017 / January 2018