

***Knowledge of Climates and Climates of Knowledge***  
**Amanda Machin, Zeppelin University**

The changing climate has attracted attention from numerous fields and disciplines. Part of its intrigue lies in the impossibility of boxing it into one area of knowledge and treating it with conventional methods. The entangled complex of issues that comprises climate change has disrupted and to some extent transfigured traditional linear conceptions of the connection between science and society. Queries regarding what expertise consists of, how it is communicated and the ways in which it might be incorporated into democratic processes have found no easy answers. What these questions have done is to undermine the simplistic assumption that scientists can straightforwardly impart instructions regarding not only what *should* be done, but also regarding what *can* be done to mitigate and alleviate massive environmental upheaval.

Nevertheless, the difficulties thrown up by this unique issue have commonly settled back into the question: *‘what does knowledge tell us about climate change?’* My assertion in this short contribution is that this question needs reversing, to become: *‘what does climate change tell us about knowledge?’* For as much as science crucially endeavors to reveal the existence and extent of environmental change through the application of various methods and models, the issue of climate change can reveal just as much about the existence and extent of human knowledge: its configurations, its contestability and its boundaries. If, ‘social epistemologists’ are as Patrick Reider characterizes: ‘a group of thinkers whose primary focus is the relation between knowledge and society’ (Reider 2014), then climate change serves as a useful focal point.

Does climate change tell us that we simply need *more* knowledge that is higher quality and better communicated? Does climate science demand the proliferation of data upon which knowledge can be gleaned? Such ideas ignore the ‘wickedness’ of this issue (Hulme 2009). Its complexity precludes any straightforward ‘reading off’ of the results. Then does climate change rather reveal the utter impossibility of knowledge? Is humanity doomed to a choice between skepticism and ignorance? For sure, climate change has repeatedly revealed the uncertainty subsisting in the predictions of the future for a complex system, in which multiple elements - atmospheric particles, ice sheets, jet streams, human individuals, socio-political collectivities - interact in patterns that have no past precedence. And yet, it does not mean that we know nothing at all.

It might well be difficult to accurately predict, for example, the potential rise in sea levels. Highlighting this lack of certainty, which will likely remain however much data is produced, exposes the boundaries of knowledge. And yet this does not mean the research is invalid or unhelpful; attending to the possibility of rising sea levels draws attention to the damage this would inflict. It highlights the dependence of societies upon their environmental conditions and the extent of their ability to master or adjust to them. It exposes the uneven distribution of both damage and the capacity to respond to damage. Climate science, as is the case with any science that deals with complex systems and wicked problems, may not be able to accurately forecast the future but it can influence our political priorities and social values.

It is equally important to notice that this relation works the other way too. Political priorities and social values affect and frame the type of knowledge that is generated by scientists. This is clear from the extent to which climate change has moved from a marginal concern to a mainstream interest. For Reider: ‘Knowledge is largely directed by the questions we, not merely as individuals, ask, but far more importantly, the questions a given society is willing to invest its resources to discover’ (2014). And, further, what a given society counts as a ‘discovery’ will affect the direction that knowledge takes.<sup>1</sup> Scientific facts, as Paul Feyerabend explains, do not exist independently of their social context and ‘there exist also facts which cannot be unearthed except with the help of alternatives to the theory to be tested, and which become unavailable as soon as such alternatives are excluded’ (1999, 92). Climate change, then, reveals that *what we know is socially contingent and politically conditioned*.

Wittgenstein offers a useful account here. He explains that we can make and rely upon claims of knowledge because they are based upon some sort of foundation or ‘bedrock’. There is some common ground that is placed beyond doubt. Doubt itself relies upon certainty (1975, 115): ‘Doesn’t one need grounds for doubt?’ (1975, 122). Nevertheless, this bedrock is not fully *fixed*: ‘I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false.’ (1975, 94). The inherited background upon which we build our knowledge, and against which its rationality can be accessed, can be called the *current social climate*. Such a climate can be transformed. It is always possible to question knowledge and what is taken for granted; it is always possible to break or bend the rules: ‘our rules leave loop-holes open’ (1975, 139).

Thus, the meaning or weight of an expert opinion depends upon the particular social climate in which it is conveyed. Who is even counted as an ‘expert’ is socially and contingently determined. This is not to claim that scientific evidence is not valid and valuable, only that the particular meaning of such scientific evidence is conditioned by its social context: ‘All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system’ (1975, 105). Opening up such a system can force unjustifiable assumptions and traditions out of their shadowy subsistence, and enliven bodies and disciplines of knowledge. This is why the generation of new knowledge and the advancement of scientific research is not at all in competition with democratic processes but is rather complemented by them. Feyerabend advocates the critically examination dominant theories and the application of new ones that may not even use the same terminology: ‘Unanimity of opinion may be fitting for a church... variety of opinion is a feature necessary for objective knowledge’ (1999, 97). The democratic ethos of openness, as expressed by William Connolly (2005) serves both science *and* politics. For such an ethos allows the contestation of the status quo, the challenge to the social conventions that constitute the bedrock of society, the enrichment of both the prevailing climate of knowledge and the knowledge of climate.

---

<sup>1</sup> Thanks to Alexander Ruser for this point.

The aim and presupposition of consensus and certainty on the issue of climate change is therefore highly problematic. Rather, what this issue reveals is the importance of opening up the possibilities for the reinvention of policy and the renewal of knowledge. We should attend to what we know about climate.

**Contact details: [Amanda.Machin@zu.de](mailto:Amanda.Machin@zu.de)**

### **References**

- Connolly, William E. *Pluralism*. Durham and London: Duke University Press, 2005.
- Feyerabend, Paul. "How to be a Good Empiricist: A Plea for Tolerance in Matters Epistemological" in *Knowledge Science and Relativism: Philosophical Papers 3*, edited by John Preston. Cambridge University Press, 1999.
- Hulme, Mike. *Why We Disagree About Climate Change*. Cambridge University Press, 2009.
- Reider, Patrick J. "Knowledge as a Public Commodity" *Social Epistemology Review and Reply Collective 3*, No. 6 (2014): 53-55.
- Wittgenstein, Ludwig. *On Certainty*. Wiley-Blackwell, 1975.