

## Does science need to be consensual to be authoritative?

One of the common public expectations of science is that it speaks authoritatively about the way the physical world works and thereby what the physical consequences of different human actions and interventions are likely to be. Science and scientists are believed to offer something different to public life compared to politicians, journalists, lawyers, priests or celebrities.

But what is meant by ‘authoritative’? And how does scientific practice best earn and maintain authority in the face of public challenge and scepticism?

I want to explore one important dimension of scientific authority-building, namely the interplay between the ideas of consensus and dissensus. And I want to do this using the example of the IPCC. The question can be put simply: does the pronouncement of a scientific consensus on an issue such as climate change increase or weaken the authority of science? And for whom exactly - scientists, different publics, policy-makers, politicians?

The IPCC has made a very specific claim as to its consensus-making character. As too have many commentators outside the IPCC – whether they be politicians, lobbyists, advocates or critics. Thus in the very first report Sir John Houghton wrote, “Although ... there is a minority of opinions which we have not been able to accommodate, the peer review has helped ensure a high degree of consensus amongst authors and reviewers regarding the results presented. Thus the Assessment is an authoritative statement of the views of the international scientific community at this time” [IPCC, 1990: v: emphasis added].

Or from a more popular outlet, *The Guardian* newspaper’s headline on 27 January 2007, just before AR4 WGI report was released, read: “UN’s vast report will end the scientific argument. Now will the world act?”

But is the IPCC right to be aiming for and proclaiming a scientific consensus, at least in the way that it does? Or to ask the question more generally, when seeking to be authoritative on complex issues of public policy

importance should science be issuing consensus statements? Would people have more confidence in climate science if there was a minority view – e.g. about the evidence of attribution or about future risks - that was officially recognised by the IPCC, rather than climate science being presented as an all-encompassing consensus?

Philosophers of science [John Beatty and Alfred Moore develop exactly this argument](#) ... and I believe it applies very well to the case of climate change and to the IPCC.

The argument in favour of consensus as authoritative is that it reflects what science supposedly is uniquely disposed to be good at: applying rules of reasoning which lead unambiguously and universally from evidence to conclusion – the same evidence presented to the same disciplined mind leads to precisely the same conclusion. A lack of consensus then would undermine the authority of science because it might suggest conflicting conclusions had been reached prematurely, or that personal or cultural biases and values had protruded into this rational process.

This is the position that seems to be implicitly assumed by many protagonists in the climate change debate, whether mainstream or critical voices. It was the view expressed above by Sir John Houghton for example, and it is the view of climate critics who assert that science properly conducted should lead to unanimous consent. By pointing out the existence of minority dissenting positions outside the IPCC, *ipso facto*, they undermine the authority of science in the eyes of the public.

But the argument against consensus as authoritative, at least in the context of wicked problems like climate change, seems to me to be compelling. Let me mention just three aspects of this argument:

- Majority rule works very effectively in maintaining expert authority in other social institutions, like parliaments and the courts (voting MPs and juries). Maybe the IPCC's authority – in the eyes of critics and the public, if not too in the eyes of politicians - would have been enhanced had it acted on its own rules for minority reporting in the SPMs.

- The requirement of consensus is pernicious – it encourages agreement in a group of experts where there is none, in order to protect the authority of the group. Maybe the IPCC should more openly embrace the idea of expert elicitation, or even expert voting, as has been suggested for example by David Guston (“A scientific body that does not partake in ... a politics of transparent social choice ... is not a fully democratic one” – from ‘On Consensus and Voting in Science’, pp.378-405 in S.Frickel and K.Moore (eds.) *The New Political Sociology of Science*, Madison, WI: University of Wisconsin Press). For example, such an approach to disagreement could usefully have been applied to the case of the [sea-level rise controversy in IPCC’s AR4](#).
- The presence of officially sanctioned--even welcomed!--minorities, and thereby dissensus, actually enhances the authority of science. It shows that it is ‘OK to disagree’ and thus indicates that the deliberative procedures of a body like the IPCC are fair and accommodating to the full range of views.

This was the true tragedy of Climategate – not that the CRU emails revealed any fundamental faking of substantive data or fraudulent practice. But that they showed a scientific culture which was closed to criticism and which was resistant to the open sharing of data. When this was exposed, the tenacity of defending in group/out-group boundaries paradoxically weakened the public authority of climate science rather than strengthened it.

By going down this path, climate scientists have handed the scientifically-credentialed critics of climate science an easy target. And this has handed to politically-credentialed critics of climate policies a powerful handle for converting the agonistic spaces of legitimate and healthy democratic argument into distracting, yet publicly entertaining, arguments about the authority of science.

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13 February 2013