

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/100471/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Collins, Harold Maurice , Evans, Robert John and Weinel, Martin 2017. STS as science or politics. *Social Studies of Science* 47 (4) , pp. 580-586. 10.1177/0306312717710131

Publishers page: <https://doi.org/10.1177/0306312717710131>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



## STS as Science or Politics

Harry Collins, Robert Evans and Martin Weinel

### VERSION HISTORY

This is the authors' version of a work that was submitted to *Social Studies of Science* on 10 March 2017 and accepted for publication on 9 May 2017. It is being made available in accordance with the publisher's policies on open access.

Please note that changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version.

For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper. For this, and other information, please go to: <https://doi.org/10.1177/0306312717710131>

### **Contact details (all authors)**

Centre for the Study of Knowledge Expertise and Science (KES)  
Cardiff School of Social Sciences  
Glamorgan Building  
King Edward VII Avenue  
Cardiff CF10 3WT  
UK

Emails:

Collins:	CollinsHM@Cardiff.ac.uk	
Evans:	EvansRJ1@Cardiff.ac.uk	(Corresponding author)
Weinel:	WeinelM@Cardiff.ac.uk	

## **STS as science or politics?**

### **Abstract**

In a recent editorial for this journal, Sismondo makes two claims. First, he states that STS bears no responsibility for the emergence of post-truth politics. Second, he claims that debates about the nature of expertise that take place within STS are irrelevant in this context. In contrast, we argue that whether or not STS had a causal influence on the emergence of post-truth politics, there is a clear resonance between the two positions and that the current political climate makes empirically informed and scientific analyses of expertise and the form of life of science more important than ever. We argue that treating STS's contribution to these matters as essentially political rather than scientific surrenders any special role we have as experts on the organisation and values of science and leaves STS as just one political actor among others.

### **Keywords**

Science; democracy; expertise; policy-making; post-truth; third wave of science studies.

## **STS as science or politics?**

Sismondo (2017) re-packages the history of STS for the post-truth era. His claim is that STS is not to blame for post-truth because the arguments never pointed in that direction. Thus the 'science warriors' must have been mistaken because STS had never threatened scientific truth. This distorts the history of our field. The logic of symmetry, and the democratising of science it spawned, invites exactly the scepticism about experts and other elites that now dominates political debate in the US and elsewhere.

The 1970s violation of Mannheim's proscription on the extension of the sociology of knowledge and the application of symmetry gave rise to a revolution: it cracked the pure crystal of science and it showed that the social and political could have an impact anywhere. This created a continuing problem for STS, first raised by the science warriors and now made urgent by recent events. The pioneers of STS were aware of the difficulty from the beginning. Their reaction to the science warriors was to show that the new arguments were well motivated, competently carried out, and empirically accurate; in short, the new arguments had arisen out of a *scientific* approach to the nature of science and, therefore, the new accounts of how science worked were a problem for analysts and science warriors alike. (For examples of the science wars debates see the April 1999 issue of *Social Studies of Science*; Edge (1999) provides a summary of these exchanges, whilst Labinger and Collins (2001) provides a more positive example of dialog between STS and natural scientists.)

Despite these well-documented debates, Sismondo makes a retrospective bid to absolve STS of any cognitive responsibility for the post-truth world. He says:

Our arguments that 'it could be otherwise' ... are very rarely that 'it could *easily* be otherwise'; instead, they point to other possible infrastructures, efforts, ingenuity and validation structures. That doesn't look at all like post-truth. [p. 3, emphasis added]

STS does usually show that the establishment of 'this' rather than 'that' scientific outcome requires a lot of work but the difference is that this includes political work. Before SSK it was always and only scientific work that was needed to make scientific

truth; after SSK what was once seen as the socially sterilised work of experiment and observation became hard to distinguish from political work. By revealing the continuities between science and politics, science studies opened up the cognitive terrain to those concerned to enhance the impact of democratic politics on science but, in so doing, it opened that terrain for all forms of politics, including populism and that of the radical right wing.

To claim that STS never came down on the side of politics rather than technical expertise is, itself, to try to do some serious political work. If we want to avoid being accused of falsifying our own history we have to admit that for much of the time the views STS was espousing were consistent with post-truth irrespective of their authors' intentions or their causal impact. The flaw in Sismondo's analysis is the idea that post-truth is 'easy' and that this is what separates its crude politics from the more sophisticated analysis of STS. But post-truth is hard work: look at the work Trump and his supporters are putting into it beyond simply working a Twitter account; look at the work Joseph Goebbels did to tell 'the big lie'; look at the work that had to be imagined to organise George Orwell's 'Ministry of Truth'.

What we should be asking is 'what kinds of work are required to sustain post-truth and how does this differ from the kind of work needed to sustain the scientific form of life?' If we can show ways in which the social organisation of the kinds of work differ then we can show that some claims are not based on expertise or science. More ambitiously, if we can show that one kind of organisation is to be preferred to the other, then STS will have

provided an academic and empirical starting point for resisting the kind of populism that supports post-truth.

### **Expertise, science and democracy**

There are already many examples of this kind of effort. Oreskes and Conway's (2010) detailed empirical study shows how the appearance of continuing scientific controversy can be misleadingly maintained for the consumption of policy makers and the public even though the consensus within the scientific community is strong. Ceccarelli's (2011) analysis of 'manufactured controversies' and Weinel's (2010) idea of a 'counterfeit scientific controversy' work in the same way. Collins, Bartlett and Reyes Galindo (2017, forthcoming) show how the social practices of fringe sciences can be distinguished from those of the mainstream. In other work, it is the improper marginalisation of sound knowledge, typically from low status social groups, that is the focus (e.g. Arksey, 1998; Carson, 2000; Epstein, 1996; Harding, 2006; Irwin, 1995; Ottinger, 2013). In all these examples, understanding who can legitimately contribute to expert debate requires social scientists to use their special understanding of the formation of knowledge to reject the *misuse* of expertise by certain elite experts and give credit to the work of low status, experience-based experts.

None of this says anything about how the scientific truth of the matter will eventually settle out but policy-making is a short-term business and has to deal with expert knowledge as it exists in real-time. Expert knowledge, and particularly the substance and degree of consensus between experts, needs to be properly understood so that it can be, and will be, fairly and accurately presented to public and policy-makers. This is one

place where social scientists can use their expertise – we are experts on the nature of consensus, not the substantive findings of science. Post-truth politics becomes a problem for STS if it sees any challenge to expert knowledge as a political failure to include all perspectives rather than a failure in the organisation or presentation of science. . The ‘democracy is all’ position plays into the hands of the populist politicians who can use public support to legitimise their claims, leaving STS with no response – a situation prefigured in the late-1990s debates over MMR vaccine. To turn STS into a political movement is to throw away its unique academic resource – the special understanding of the organisation and values of science.

There is a body of work in STS that provides a different way to respond to post-truth. The Studies of Expertise and Experience (SEE) research program and the ‘third wave of Science Studies’ in general (Collins and Evans, 2002) are based on an argument against post-truth *avante la lettre*. There the problem was seen as:

... a tendency to dissolve the boundary between experts and the public so that there are no longer any grounds for limiting the indefinite extension of technical decision-making rights (p. 235)

When the political implications of SEE and the third wave were worked out more carefully in 2010 by the current authors our:

... main concern [was] to combat ‘technological populism’... [and defend] a preference for democracies which actively promote discussion and debate of

technical matters yet which reject populism of all kinds while still rejecting technocracy. (2010: 185)

In *Why Democracies Need Science* (Collins and Evans, 2017), it is further argued that some forms of democracy – not populist or overly direct democracy – share many important values with science and we should choose science even when utilitarian arguments do not justify the choice – a position called ‘elective modernism’.

Back in 2002 when the SEE/third wave paper was published, its authors imagined that core STS scholars would welcome a proposal that set out to preserve the major ideas coming out of science studies but which could, nevertheless, be used to oppose anti-science and anti-expertise sentiments. Its authors were wrong! But now, as populism and the emergence of a post-truth society becomes everyone’s problem, we hoped the opposition in the heartlands of STS to the third wave/SEE approach would be ameliorated. It looks like we are wrong again. Critics like Jasanoff continue to insist, as though saying it enough times will make it true, that our proposal fails ‘to attend to a massive critical literature showing that a narrow focus on citizens’ technical competence misses the politics that frames the debate’ (Jasanoff, 2017: 275), even though it has been shown over and over again that the approach is continuous with the framing debate which preceded it (e.g. Collins et al., 2010; Collins and Evans, 2002, 2003, 2007, 2017: 74ff; Evans and Plows, 2007). The crucial difference between the literature Jasanoff refers to and our approach is nothing to do with framing; it is that, in the latter, ‘expertise’ is used as an analyst’s category informing normative claims about the expert status of particular actors (Collins, 2008). The warrant for this is that STSers are experts on expertise and on

the form of life of science. Understanding expertise is vital as never before and yet Sismondo describes the entire debate about expertise as ‘oddly irrelevant’. Acquiescing in the dismissal of STS as a source of expertise about expert knowledge is, of course, consistent with a conception of STS as a primarily political agent whose over-riding goal is the democratisation of science and expertise.

Sismondo is right to be concerned about the consequences of post-truth politics but wrong to suggest that political outcomes cannot be enhanced by empirically informed, scientific understandings of expertise and of the organisation and values of science. Such understandings support choices about what to prioritise and who to trust and, crucially, would replace populism with expert deliberation of the kind that is compatible with representative democracy (see Durant, under submission). In other words, there is nothing wrong with Sismondo urging STS scholars to engage in political work to support democratic institutions but, unless our scientific contribution is mobilised too, then STS can be no more than one political actor among many, and a minor one at that. We need to draw on our scientific understanding of science and expertise as this is what allows us to make a distinctive intervention that is not available to other political actors.

### **We have always been modern!**

Ironically, STSers already believe that expertise is real and already have a notion of science as a distinct form of life. That is why we know there is something wrong with populist politics and, presumably, why Sismondo felt impelled to write his editorial. Our whole way of life – the prizes we give for achievement in our field, the way we award jobs in universities, the very award of degrees, the idea of fairness in various kinds of

refereeing – depends on a recognition that there is something more to expertise than attribution; we do not act as though expertise is purely relational and we know that if the world is given over to the possibility of ‘alternative facts’ then our way of life will be destroyed.

One might argue that this is just compartmentalisation – we justify ourselves scientifically while our analyses point in the opposite direction – it has always been so! But even compartmentalisation fails in the face of many of our claims. Consider Oreskes and Conway’s work, and Irwin’s study of the dangers of organophosphate herbicides – just two of the examples cited above in which STS endorses some claims to expertise and challenges others. Why, if science is just another form of politics, are we horrified when we learn that the tobacco and oil companies are paying scientists to produce a counterfeit controversy? We are horrified because we already have a clear idea of what good science should look like. Why are we indignant that the evidence of the farmworkers who actually had to spray the 245T was ignored? Is it *just* because they were the underdogs being ignored by an elite? No – it is because we think they could bring some real expertise to bear on the matter! So we already recognise that science has a distinctive form of life and that there is a reality to expertise or these cases would not engender shocked indignation, just political opposition.

STS, if it is not be hypocritical at heart must find a way to justify expertise in general and scientific expertise in particular. STS has never shied away from reporting the failures of scientific institutions but post-truth requires STS to say what it means for science to succeed. The authors try to do this under the headings of SEE, the third wave and elective

modernism. If our efforts are flawed and STS cannot find a better way to say why science matters, then STS will be intellectually bankrupt.

## **Summary**

Hard questions for STS were posed long ago but were largely ignored in the relatively politically benign years before the recent terrifying outburst of populism. Sismondo argues that these questions are based on a misunderstanding of what STS claimed and that, to the extent it has a duty to respond, the exemplary methods are activities such as blog posts and data archiving that support political campaigns against post-truth. This would be right if STS was a political movement for promoting democracy but it is not. STS is an academic/scientific discipline aimed at understanding the nature of knowledge.

Although politics is not the core work of STS, the work can and does have political consequences. By explaining the nature of knowledge STS provides an answer to the long-standing and now urgent problem of how to use expert advice without either promoting technocracy or giving comfort to undesired populist sentiments. Unless we want to engage in post-truth activities ourselves we should not be pretending that our major contribution to this new understanding of knowledge – recognising the role of social and cultural factors in the creation of scientific knowledge – does not have the potential to give comfort to post-truth politicians and their supporters. We need to face up to the fact that it does, and find new ways to justify a choice between the knowledge-claims competing to inform public opinion and policy. It is ironic that the one place this is not recognised is in the heartlands of STS.

## References

- Arksey H (1998) *RSI and the experts: the construction of medical knowledge*. London ; Bristol, PA: UCL Press.
- Carson R (2000) *Silent spring*. Reprinted. Penguin classics, London: Penguin.
- Ceccarelli L (2011) Manufactured Scientific Controversy: Science, Rhetoric, and Public Debate. *Rhetoric & Public Affairs* 14(2): 195–228.
- Collins H (2008) Actors' and analysts' categories in the social analysis of science. In: Meusburger P, Welker M, and Wunder E (eds), *Clashes of knowledge*, Springer Netherlands, pp. 101–110. Available from: [http://dx.doi.org/10.1007/978-1-4020-5555-3\\_4](http://dx.doi.org/10.1007/978-1-4020-5555-3_4).
- Collins H and Evans R (2002) The Third Wave of science studies: Studies of expertise and experience. *Social Studies of Science* 32(2): 235–296.
- Collins H and Evans R (2003) King Canute Meets the Beach Boys: Responses to the Third Wave. *Social Studies of Science* 33(3): 435–452.
- Collins H and Evans R (2007) *Rethinking expertise*. Chicago: University of Chicago Press.
- Collins H and Evans R (2017) *Why Democracies Need Science*. Cambridge: Polity.
- Collins H, Weinel M and Evans R (2010) The politics and policy of the Third Wave: new technologies and society. *Critical Policy Studies* 4(2): 185–201.
- Collins HM, Bartlett A and Reyes-Galindo L (2017) The Ecology of Fringe Science and its Bearing on Policy. *Perspectives on Science* 25. Available from: <http://arxiv.org/abs/1606.05786> (accessed 9 March 2017).
- Durant D (under submission) Expertise and the Politics of Hyper-Guardianship.
- Edge D (1999) Editorial Postscript. *Social Studies of Science* 29(5): 790–799.
- Epstein S (1996) *Impure science: AIDS, activism, and the politics of knowledge*. Berkeley: University of California Press.
- Evans R and Plows A (2007) Listening Without Prejudice?: Re-discovering the Value of the Disinterested Citizen. *Social Studies of Science* 37(6): 827–853.
- Harding SG (2006) *Science and social inequality: feminist and postcolonial issues*. Race and gender in science studies, Urbana: University of Illinois Press.

- Irwin A (1995) *Citizen science: a study of people, expertise, and sustainable development*. Environment and society, London ; New York: Routledge.
- Jasanoff S (2017) Science and Democracy. 4th ed. In: Felt U, Fouche R, Miller C, et al. (eds), *The Handbook of Science and Technology Studies*, Cambridge, MA: The MIT Press, pp. 259–288. Available from: <https://mitpress.mit.edu/books/handbook-science-and-technology-studies-0>.
- Labinger JA and Collins HM (eds) (2001) *The One Culture?* Chicago, IL: The University of Chicago Press. Available from: <http://www.press.uchicago.edu/ucp/books/book/chicago/O/bo3634845.html> (accessed 2 March 2017).
- Oreskes N and Conway EM (2010) *Merchants of doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. 1st U.S. ed. New York: Bloomsbury Press.
- Ottinger G (2013) *Refining expertise: how responsible engineers subvert environmental justice challenges*. New York: New York University Press.
- Sismondo S (2017) Post-truth? *Social Studies of Science* 47(1): 3–6.
- Weinel M (2010) Technological decision-making under scientific uncertainty: preventing mother-to-child transmission of HIV in South Africa. PhD, Cardiff, UK: Cardiff University. Available from: <http://orca.cf.ac.uk/55502/>.