

Critical Point Experts

The modern world needs experts, but describing their nature and role is surprisingly difficult, says **Robert P Crease**

Expertise, argue Cardiff University sociologists Harry Collins and Robert Evans, is “the pressing intellectual problem of the age”.

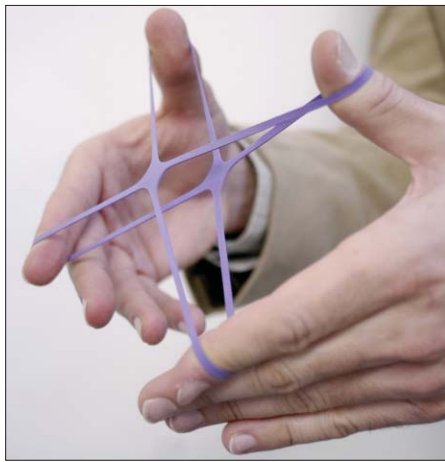
Can this really be true? Surely everyone knows what an expert is: an authority to whom a layperson can comfortably defer for advice. Scientists, who are usually regarded as experts *par excellence*, could be forgiven for not seeing expertise as a problem, for they are routinely involved in dispensing and using expertise. It seems odd to claim that expertise might be more of an intellectual problem than, say, creating a unified theory of gravity, decoding the genome or understanding the early universe.

But expertise – what it is and what role it plays – is surprisingly difficult to describe when looked at carefully. The difficulties appear both inside science and out, but they are revealed most dramatically in the use of scientific expertise in law and politics. At a trial, each side digs up its own expert witnesses, all of whom say that they represent the scientific community and that the experts on the other side are untrustworthy hired guns – intellectual mercenaries if you like – with the jury left to guess which side to believe. In politics, controversies such as the existence of global warming and the safety of nuclear power generate conflicts over who selects experts, whose advice is tainted by ideology, and what the scope and limits of testimony should be.

Recently the subject of expertise has attracted much scholarly attention. A book entitled *Rethinking Expertise*, by Collins and Evans, is due out this autumn (University of Chicago Press), while their perspectives, along with others, are included in an anthology entitled *The Philosophy of Expertise*, a book co-edited by Evan Selinger and me (Columbia University Press). And Collins, who has edited a forthcoming issue of the journal *Studies in History and Philosophy of Science* on the subject, is hosting a workshop in Cardiff this month to discuss the role of expertise in everything from interdisciplinary physics projects to the implementation of technical advice about how to prevent dolphins from being snared in fishing nets.

A periodic table of expertise

Collins grew interested in expertise during his 30-year sociological study of the hunt for gravitational waves (*Physics World* Decem-



In the know Untangling the complexities of expertise.

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ber 2004 pp10–11). One day while he was having lunch with some gravitational-wave physicists, Collins noticed that, although he had never studied physics beyond A-level, he was engaged in a seamless conversation with them. “They are never going to give me a job,” he told me recently, “but from the conversation it would have been hard to spot who was the physicist and who the outsider.”

The experience motivated him to draw a distinction between *contributory* expertise, possessed by active practitioners of a field, and *interactional* expertise, whereby someone can speak knowledgeably about a subject without being able to contribute new ideas to it. “It’s more than talking the talk but less than walking the walk,” he told me. “It’s like ‘walking the talk’.”

Collins first noticed interactional expertise in his own field, where sociologists often acquire it when they study how people in other fields behave. But he found that interactional expertise is also widespread inside science. It is essential, for instance, in projects where people have to interact across disciplinary borders, and where managers and peer-reviewers must make decisions in areas in which they are not trained. “There would be no science without interactional expertise,” Collins says. “It is impossible for every expert to possess every technical skill they need to work in a big collaboration.”

The concept proved so valuable that Collins and Evans set out to develop a systematic theory of forms of expertise, and

compiled what they ambitiously named a “periodic table of expertises” – an attempt “to classify all the kinds of expertise that might be brought to bear on a technological problem”. It includes about a dozen types of expertise that range from categories such as language speaking that everyone must have to live in a society, to more specific, higher-level and domain-restricted categories such as contributory and interactional expertise.

But the pair’s most ambitious and controversial aim is ultimately to help facilitate the resolution of public controversies with a scientific dimension. When politicians try to resolve such controversies, two simple and tempting choices present themselves: let the public decide; or take the matter out of the public’s hands and assign it to specialists. “The first choice risks technological paralysis” Collins and Evans write in their article in the expertise anthology, while “the second invites popular opposition”. They hope that their analysis of expertise can help define better the kinds of people who should be allowed to participate in decision making about the technical aspects of controversies.

The critical point

Would an improved understanding of expertise be sufficient to resolve debates about global warming and nuclear power? No, for technical aspects are generally not what drives such controversies: perception and prejudice; self-interest; and utopian visions are vitally important in framing them.

Collins and Evans know this. They mean only to lay the groundwork for better institutional tools to handle controversies. At first glance their position appears drearily commonsensical: experts are likely to make better technical judgments than the rest of us; and governments should defer technical issues to experts even though experts are sometimes wrong. Still, some sociologists have severely criticized Collins and Evans for this view, which they see as undemocratic, elitist and a throwback to the days when the word of experts was unquestioned.

But the importance of starting on the right foot for solving the controversies that surround issues like global warming and nuclear power is what leads Collins and Evans to claim that expertise is “the pressing intellectual problem of the age”.

● The Studies of Expertise and Experience workshop is on 16–18 August in Cardiff, UK: www.cf.ac.uk/socsi/expertise

Robert P Crease is chairman of the Department of Philosophy, Stony Brook University, and historian at the Brookhaven National Laboratory, US, e-mail rcrease@notes.cc.sunysb.edu