

Editorial

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A recent op-ed piece by a retired Australian politician argued that voters in Western democracies are exhibiting a distrust of elites and experts. This is seen in such recent results as the election in Australia of politicians from fringe parties (such as One Nation) and the election of Donald Trump in the U.S., people who explicitly deny recent scientific finds such as the evidence of global temperature rises partly as a result of human activity in the past two hundred years, and the absence of any evidence that vaccination can result in neurological damage to young people. The Brexit referendum in the U.K. is another manifestation of this phenomenon, as large numbers of voters ignored warnings by economists and others of the eventual adverse consequences of exiting from the European Union and the strong ties—social, familial, financial, legal, and economic—built up over the past forty years.¹ In his address printed below, Peter Baume cautions us against blaming many of these voters: they are, he argues, doing what they think is best for them. But it is a challenge for us.

As an aside, I'm grateful for compulsory voting in Australia, introduced federally in 1924 (although not for Aboriginal Australians until 1984) as the result of a successful private member's bill, after a decline in voting turnout from 71% at the 1919 federal election to less than 60% at the 1922 election. At the 1925 election the turnout jumped to over 91% (Evans 2006). Compulsory voting must provide electoral inertia against a lurch to extremism.

It is not necessary, in the organ of the Royal Society of NSW, to spell out why such mistrust in scientific expertise is of concern, but in 1995 the late Carl Sagan said it better than I could:

“We've arranged a global civilization in which most crucial elements profoundly depend on science and technology. We have also arranged things so that almost no one understands science and technology. This is a prescription for disaster. We might get away with it for a while, but sooner or later this combustible mixture of ignorance and power is going to blow up in our faces.” (Sagan 1995).

And, as others have said, it's blowing up already. Which is why institutions such as the Royal Society are so important.

Author Arthur C. Clarke is remembered, *inter alia*, for remarking, “Any sufficiently advanced technology is indistinguishable from magic” (1973). The solid-state physics of our mobile phones, etc., let alone the use of relativity in GPS, must mean “magic” to most of us. So, we in the Western world are surrounded by magical devices. Is this involvement with magic a possible explanation for the recent flight from science and rationality evident in politics? If so, will better education overcome our descent?

One of the best recent initiatives of the Society's is the annual forum of the four learned academies—the Australian Academy of Science, the Australian Academy of Humanities, the Australian Academy of Technological Sciences and Engineering and the Academy of the Social Sciences in Aus-

¹ Not to mention the fraught frontier in Ireland.

tralia—the topic of which last November was Society as a Complex System: implications for science, practice and policy.

Complex systems, almost by definition, are not easily grasped and understood, even by disciplinary experts, especially when there is interaction among systems in distinct domains—for example, hydrological, climate-related, meteorological, and social. Such issues have been dubbed “wicked,” a term first used in this context by C. West Churchman in 1967. Problems here are wicked not in the sense of being evil, but in the sense of being resistant to solution, because of complex interdependencies, or other stumbling blocks to resolution.

The 2016 Forum has resulted in nine papers in this issue, which Len Fisher summarises and considers: read his piece to see what I mean. Suffice it to say here that the complex issues covered include human population and the biosphere, climate change, health care, the Murray-Darling Basin, appropriate metaphors to describe the role of DNA in embryogenesis and the emergence of the individual, formalising and modelling complex systems, diaspora advantage, and communicating the science of complexity and the complexity of science. Several of these themes will be pursued at the 2017 Forum, to be held in November.

As well as Peter Baume’s address at the Society Annual Dinner, 2017, mentioned

above, there is a refereed paper by Salimi et al. on octopus hearing. The issue ends with four PhD abstracts from young researchers, chosen by their universities for the brilliance of their recent dissertations.

I thank Ed Hibbert, Rory McGuire, and Jason Antony for their assistance in the production of this issue, which marks a return to our publishing two issues of the *Journal* a year, in June and December. Remember, the Journal Archive can be found on-line, at <https://royalsoc.org.au/links-to-papers-since-1856>.

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Bibliography

- Churchman, C. West (1967), Wicked problems, *Management Science*, 14(4) B-141,2.
- Clarke, Arthur C. (1973), “Hazards of prophecy: the failure of imagination,” in his collection, *Profiles of the Future: An Enquiry into the Limits of the Possible* (1962, rev. 1973), Popular Library.
- Evans, T. (2006), Compulsory voting in Australia, Australian Electoral Commission, Canberra. http://www.aec.gov.au/About_AEC/Publications/voting/files/compulsory-voting.pdf
- Sagan, C. (1995), *The Demon-Haunted World: Science as a Candle in the Dark*, Chapter 2, Science and Hope, Ballantine Books, p 26.

