

Tapping the shale

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Growth in scientific knowledge seems to lead to an exacerbation in debate over politically sensitive issues rather than resolution? Nuclear power, global warming, vaccination, creationism, fracking... the list goes on.

There are at least two possible explanations. First, controversies arise because of the complexity of nature. Secondly, politics and power drive the debate. The result is that on any given issue there is not only the complexity of the science with which policymakers, advocates, ethicists, healthcare workers, environmentalists and others must contend with but also the personal interests of individuals, politicians, activists and countless stakeholders.

In the current issue of the journal *Interdisciplinary Environmental Review*, Adam Briggie of the University of North Texas, in Denton, Texas, USA, focuses on the politics and science of [fracking](#), hydraulic fracturing, for tapping natural gas from layers of ancient shale deep within the earth's crust. Fracking is big business offering a relatively unlimited source of carbon energy as conventional oil and gas supplies dwindle or become increasingly inaccessible. Unfortunately, the science is complex, not fully understood and the possible environmental effects of pumping high-pressure water and fracking chemicals into deep layers of rock that might contaminate [underground water sources](#), interfere with local geology and potentially release vast quantities of air pollution.

In some parts of the world fracking is already being carried out much to the dismay of many local citizens, politicians and renewable energy

advocates. In other regions moratoria have blocked access to this carbon source for the time being. Still other parts of the world are watching closely to see how the fracking debate pans out before deciding on whether to tap their own shale.

One might assume that crafting a policy on fracking would be a simple matter of weighing up the facts, doing a cost-benefit-risk analysis and voting yes or no. indeed, the use of science to legitimate policies is a fundamental feature of modern democracies. But, politicians and democracy are not the ideal entities we might hope them to be and facts can be used selectively in parallel with statistics and safety assessments to push a particular agenda that will shift the power balance to the benefit of a given politician, political party or other with their own agenda. Nevertheless, says Briggie, "Science is what sets policy apart from politics, because it supplies a disinterested point of view. The truths seen from this point of view may be inconvenient, but it is better to base decisions on science than on the wishful thinking of any given political interest." Unfortunately, Occam's razor is often blunted by the rough edges of politics.

Briggie suggests that while the science must be kept in mind in any environmental debate past issues – acid rain and the hole in the atmospheric ozone layer were driven not by a scientific consensus but by the development of technological solutions, namely smokestack scrubbers and replacements for chlorofluorocarbons. These were implemented while politicians, scientists and activists continued the debate on the sidelines. The same approach might work for fracking and perhaps even [global warming](#) and climate change caused by carbon emissions. We don't need consensus on the science, we don't need parties on opposite sides of the debate to agree, we simply need a fix to be implemented that will benefit us all. "Promoting best available technologies is a no-regret, common-interest strategy," says Briggie. "We should look to technology to spur us into action and stop digging our

heels in science."

More information: Briggie, A. (2014) 'Nature or neoliberalism? Two views on science and the persistence of environmental controversies', *Interdisciplinary Environmental Review*, Vol. 15, Nos. 2/3, pp.94-104. www.inderscience.com/offer.php?id=63646

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