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Beware: transparency rule is a Trojan Horse

Last month, the US Environmental Protection Agency (EPA) proposed a new rule to “ensure that the regulatory science underlying Agency actions is fully transparent, and that underlying scientific information is publicly available in a manner sufficient for independent validation”. The alleged justification is a crisis in science over replicability and reproducibility.

At face value, the proposal might seem reasonable. It isn’t.

Many EPA watchers believe that the rule targets long-term epidemiological studies that linked air pollution to shorter lives and were used to justify air-quality regulations. In my view, the rule could keep that and other high-quality evidence from being used to shape regulations, even if there are legitimate reasons, such as patient privacy, why some data cannot be made public. It could potentially retroactively exclude an enormous amount of respected evidence. This would make the EPA less able to serve its function “to protect human health and the environment”. The window for speaking up is closing fast.

There is a crisis in US science, but it is not the one claimed by advocates for the rule. The crisis is the attempt to discredit scientific findings that threaten powerful corporate interests. The EPA is following a pattern that I and others have documented in regard to tobacco smoke, pollution, climate, and more. One tactic exploits the idea of scientific uncertainty to imply there is no scientific consensus. Another, seen in the latest efforts, insinuates that relevant research might be flawed. To add insult to injury, those using these tactics claim to be defending science.

A previous attempt to restrict the use of vetted science was the 2001 Data Quality Act, which resulted in guidelines for how information could be used and disseminated. The Competitive Enterprise Institute, a think tank in Washington DC dedicated to limited government, was quick to invoke it to try to prevent the distribution of a major EPA report on climate change.

Those lobbying for data that underlie regulations to be publicly available have not made similar demands for other data, such as the composition of fracking fluids, or the information confidentially supplied by companies to register pesticides with the EPA.

Guests present when the EPA administrator unveiled the rule included US Congressman Lamar Smith (Republican, Texas), who has repeatedly introduced legislation to exclude research justifying the US Clean Air Act; Myron Ebell of the Competitive Enterprise Institute, who has long challenged the scientific consensus on climate change; and lawyer Steve Milloy, who also disputes anthropogenic global warming and has long ties to the tobacco industry, which floated similar proposals in the 1990s to try to thwart regulation of second-hand smoke.

Conspicuously absent were the scientific organizations that are working to improve data and transparency in research. Three prominent journals (*Nature*, the *Proceedings of the National Academy of Sciences*, and *Science*) issued a joint statement condemning the rule, even though new policies at the journals had been used to justify it.

One week before the proposed rule was announced, a group called the National Association of Scholars — which uses an acronym easily confused with that of the prestigious National Academy of Sciences — released a report called 'The Irreproducibility Crisis of Modern Science'. The association (I will not call it the NAS!) describes itself as dedicated to "academic freedom and disinterested scholarship" and has focused mostly on critiquing undergraduate courses. The report dwells frequently on climate science, yet the greatest concerns among scientists over reproducibility relate to biomedicine and psychology. The association's president, anthropologist Peter Wood, has compared climate scientists to circus hucksters. Smith championed the report's launch.

I urge the scientific community to get out ahead of efforts that I believe are intended to exploit discussions about reproducibility and transparency for political ends. For starters, researchers should recognize that the term 'regulatory science' as used in the rule does not carve out some separate category of work commissioned by government agencies. It applies to all science.

The geochemists, hydrologists and forest ecologists who worked out the cause of acid rain in the 1960s and 1970s did not set out to study air pollution.They did not think of themselves as environmentalists, although they became embroiled in a public-policy debate. If regulators had ignored ground-breaking papers, they would not have acted to control acid rain. Something similar can be said for the atmospheric chemists in the 1970s and 1980s who realized that chlorofluorocarbons were depleting the ozone layer. That led eventually to the Montreal Protocol, once decried by industry groups — now hailed as a success.

Even the EPA's own science advisory board has protested that the rule seems to have been designed without input from the scientific community, that public access to data from older studies might not be feasible, and that consideration must be given to confidentiality and privacy and, for complex existing data sets, the cost and effort of making them accessible. The rule also fails to take into account extant government mechanisms for vetting science or ways to conduct independent re-analyses without publicly releasing subjects' personal data.

Robust science is being challenged and needs to be defended. Scrutiny is appropriate. Making it more difficult to apply science to governmental regulations is not.

The comment period on the proposed rule closes soon (30 May). Scientists can submit comments at go.nature.com/2ioiz46. Do.