

# A debatable proposition

Having the US presidential candidates face off over science issues could backfire, **David Goldston** argues.

Scientists pride themselves on being independent thinkers, yet that trait isn't always apparent when it comes to politics. Take, for example, the current web-based petition to push the US presidential candidates to hold a 'science debate' ([www.sciencedebate2008.com](http://www.sciencedebate2008.com)). Entranced by the notion of drawing more attention to science, prominent leaders in the community sign up almost every day with great fanfare. But no one seems to have thought through whether such a debate would actually serve the cause of science. Here are some questions the petitioners ought to be asking.

First, is it helpful to categorize a wide range of issues as matters of science? The petitioners' list of possible debate topics includes climate change, energy policy and other broad policy areas. Certainly, the presidential candidates should be compelled to talk more about climate and energy. But are these primarily science issues? Is there a scientific position on whether a carbon tax is a good idea, or how to structure one? The increasing tendency to conflate science questions — Are we experiencing man-made climate change? — with policy questions — What, if anything, should we do about it? — has been a damaging trend. It has helped to turn science into a political football and has muddied policy debates. At a 'science debate', candidates will try to claim that their position is the one supported by 'science', and the very structure of the debate will send voters the faulty message that these are questions that the natural sciences can resolve. Framing questions of economics, ethics and other aspects of policy as 'science issues' does no favour for either science or politics. And it makes one wonder if the sponsors of the debate merely want to find out whether the candidates agree with their personal opinions on these topics.

Second, is it helpful to have a high-profile debate on research spending? When asked why a debate is needed, petition sponsors often cite the need for greater research spending. The premise here seems to be that the drive to double the budget of the National Institutes of Health (NIH) got a boost when NIH funding became an issue in presidential elections, so the same strategy ought to be used for the physical sciences. But the NIH story should actually give advocates pause. Many scientists believe that the doubling between 1998 and 2003 was mishandled, leaving the field with too many new



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facilities and too few new researchers. And once the doubling was over, NIH funding came to a standstill. Arguably, both these problems were aggravated, if not caused, by raising the political profile of the NIH. The extra attention made the doubling seem like a one-time presidential initiative that could not be evaluated or slowed. Moreover, the NIH budget would probably have seen healthy (and perhaps more sustainable) increases without having been injected into presidential politics. The key proponents of the funding were appropriators in Congress who were already making headway before the idea had the imprimatur of the White House.

And more attention doesn't always translate into more money. The National Science Foundation (NSF) budget has fared relatively well over the years even though the agency is not particularly well known. The NSF's headaches have come when it has been in the political spotlight, as politicians raised questions about the legitimacy of specific grants. In contrast to the NSF, NASA is a household word, but its budget is a political football, and public attitudes toward the agency are mercurial and ambivalent. The debate proposal presumes that to know science agencies is to love them, but that is not borne out by history. In any event, the best indicator of how science will fare under a president is what the candidate says not about science, but rather about domestic spending (see *Nature* 449, 962; 2007).

Third, is a political debate the best place to discuss the 'politicization' of science? 'Scientific integrity in government' is the other topic that seems to be prompting calls for the debate. But this may be a prime example of an important issue that a debate is not well structured

to handle. All issues have subtleties, but this whole question requires a fine-grained discussion of what's science, what's policy, what kinds of work constitute a conflict of interest, and so on. It would be great if all the candidates pledged to appoint scientific advisers on the basis of merit and not to silence government scientists. But 'merit' can mean many things, and the rough-and-tumble of a presidential debate is an unlikely place to sort them out. In fact, if the candidates went beyond anodyne commitments, a debate could easily leave the public even more confused about how a president should use scientific advice. After all, science rarely presents presidents with a clear consensus.

In short, there is no reason to assume that a presidential debate on science matters would be instructive for the public or helpful to scientists. Indeed, have any of the debates thus far done much to clarify policy details? They are much better at underscoring stylistic and broad symbolic differences between the candidates — hardly what the 'science debate' advocates seem to have in mind. Has anyone thought through what a 'science debate' would sound like?

For example, would a debate about teaching evolution help the public to understand the science of evolution more clearly? Would the interest of science be served by nationalizing that debate? One leading scientist recently argued that a discussion of evolution is necessary because a politician who doesn't believe in evolution won't heed scientists on any other issue either, but this is demonstrably untrue. Indeed, a disbelief in evolution, distressing as that is, doesn't even lead politicians to question research spending in biology.

The rush to sign the petition may signal scientists' newfound faith in democracy, but it is more likely to reflect some old misconceptions — that scientists are being slighted if their concerns are not in the limelight, that a high political profile is always the road to success, that anyone with scientific information will arrive at the same policy conclusions. If scientists want to help their cause, they might be better served spending their time on lobbying Capitol Hill and talking to candidates — the kind of political activity often seen as 'dirty work' — rather than leaping into the showy realm of presidential debates. Without further analysis, the idea that a debate will propel the cause of science is more magical thinking than scientific. ■

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**Editor's note:** This column will now appear in the first issue of every month.