Science on the Platform in 2008

By Susan Maya

As the 2008 Presidential election heats up, many Americans are becoming increasingly aware of a different kind of thermal trend—global climate change. The Intergovernmental Panel on Climate Change (IPCC) received the Nobel Peace Prize last year, yet this issue, along with funding for medical research, scientific competitiveness, and technology policy, has been noticeably absent from the political discourse. However, a recent grassroots movement to organize a presidential debate on science and technology is gaining momentum. In November, Americans will have the opportunity to acknowledge the important implications of science policy. Science policy encompasses two crucial arenas: how scientific knowledge informs policy, and how federal support for science, both financial and educational, advances the interests of our country. During the current election cycle, scientists and lay-people alike should press the candidates to address critical matters in science and to commit to funding basic research. Under the Bush administration, a nominal commitment to science and technology has not gone unnoticed. The President kept the promise made by former President Clinton to double the NIH fiscal year 1998 budget in five years (1, 2, 3), and in 2006 President Bush introduced the American Competitiveness Initiative to encourage innovation (4). Funding leveled off during his second term, however (3), and in a less tangible sense what has emerged is an ominous lack of deference to scientific findings and integrity. The White House has significantly demoted the role of the science advisor to the president, a position currently held by John H. Marburger III, a physicist and former director of Brookhaven National Laboratories. This shift is evidenced by the symbolic removal of the "assistant to the president" title and relocation of the Office for Science and Technology Policy (OSTP) from the White House to a neighboring building (1). Perhaps most troubling, before Marburger even took office, President Bush had already decried embryonic stem cell research and set a dangerous precedent for discounting evidence on climate change (5).

So what's at stake for the United States? Many scientists, economists, and local government officials fear the looming decline in U.S. competitiveness, especially against fast growing nations in Asia. As countries like China, South Korea, and Singapore experience rapid economic growth, offer tax incentives for scientific R & D, and place less regulations on research, the percentage of international students in American science and engineering training programs has decreased (6). The best way for the U.S. to compete is to continue to foster innovation at a faster pace than anyone else; doing so requires a president prepared to invest in basic research. Basic research has been under funded while R & D spending for the Defense Department increased 7% in 2004 (6). Recent developments, such as the possibility of creating embryonic stem cells from differentiated skin cells, highlight the tremendous economic opportunity and prestige available to a government ready to position itself at the forefront of scientific breakthroughs.

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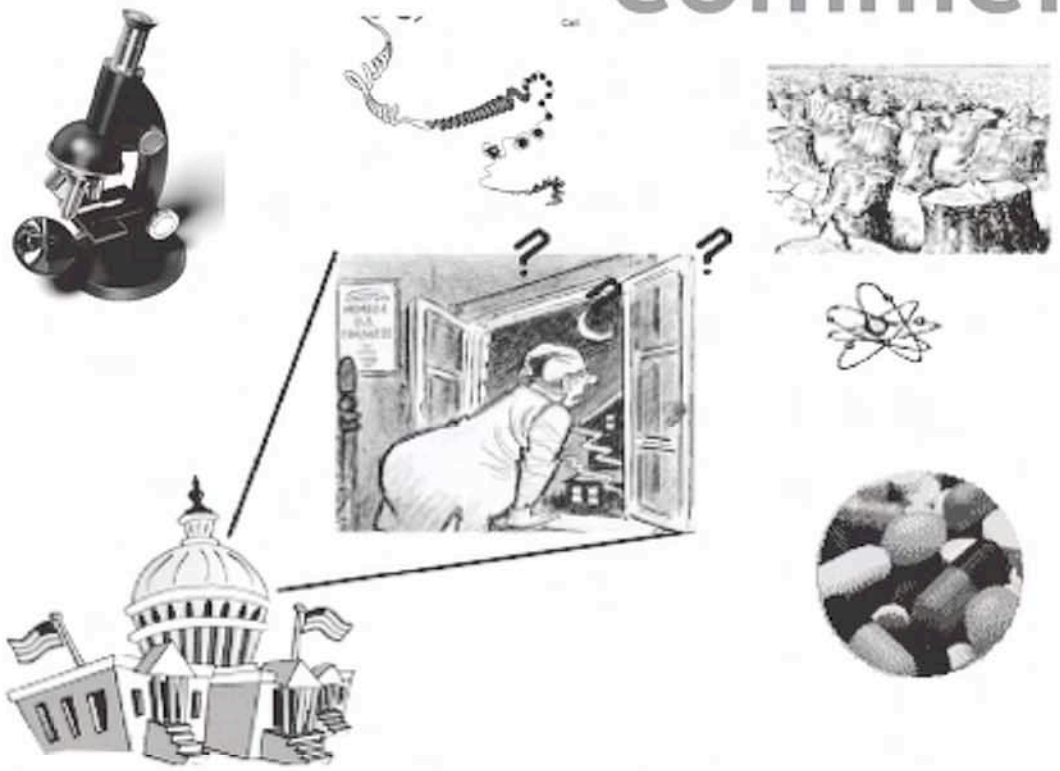
Yet, recent Gallup polls show that a majority of Americans may not want or believe in the need for politicians who value science. A whopping 70% of the general population agreed that a candidate's views on evolution should have little to do with the campaign (7). Granted, the incoming president's knowledge of selection theory may not be relevant to foreign policy or economic woes, but voters' indifference toward basic scientific literacy in their national leader is sobering. Ideally, the chief executive would be able to run a country and be well



versed on relevant scientific subjects ranging from avian flu to carbon emission rates. In the absence of this fairy-tale, the incoming president should appoint an advisor who can master this cornucopia

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of subjects and carry the gravitas to command the respect of the American people, because these issues will require forceful legislation and executive actions. As physicist Laurence Krauss explained, it's not just about what the candidates know, but rather "what they're willing to learn" (8).

The Science Debate 2008, set for April 18 in Philadelphia, demonstrates, if nothing else, the overwhelming eagerness within the scientific community to engage in politics after years of frustrating neglect. With an impressive list of over 150 organizational supporters as well as eleven Nobel Prize winners, prominent politicians, and leading thinkers in science, the movement deserves public recognition. Joining them are Harvard's own Drew Faust and Nobel Prize winner Dudley Herschbach, Frank B. Baird Professor of Science (sciencedebate2008.org).* It is interesting to note that only one candidate has been outspoken about the role of science in her prospective administration—Hillary Clinton has pledged to revive the role of the science advisor and restore scientific integrity (9). During the general election, one should hope that both candidates will have something meaningful to say about science.

* To put your own name on this list, visit www.sciencedebate2008.org.

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