

Lack of support for science damaging to our nation

Guest Column

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This guest column was written by Alex Dzierba, Chancellor's Professor of Physics at Indiana University.

The Bush administration's understanding of and attitude toward science, along with its deteriorating support of science, is damaging to our nation's economy, security, health, and quality of life.

Signals that this president is not sympathetic to science came very early in his administration. In March of 2001, the late D. Allan Bromley, who was Bush Sr.'s science adviser, noted, in an op-ed piece in the New York Times, that Bush Jr.'s first budget included significant cuts for the National Science Foundation, NASA and Department of Energy (DOE), "the three primary sources of ideas and personnel in the high-tech economy." Bromley warned that these cuts would do serious harm to our economy. At that time, the president's budget assumed that tax cuts and increased military spending could be sustained by an estimated \$5.6 trillion surplus over the next decade. Bromley ended his article with this: "No science, no surplus. It's that simple." Here we are, five years into the decade, and that anticipated surplus has been replaced by an \$8 trillion deficit, and the cuts to science funding continue. The president's FY2006 budget proposal included a 3.8 percent cut for the DOE Office of Science that funds 40 percent of the physical sciences in our country. Next year's science budgets will be worse, in light of the continuing costs of the war in Iraq, the re-building of the Gulf Coast after the recent devastating hurricanes and this president's refusal to consider doing away with the tax cuts.

The health and support of the physical sciences are essential. The cell phone, modern computer, and the World Wide Web are responsible for a large part of the growth of our economy and standard of living, and these are products of the physical sciences. Imagine living in a world without radar or the tools and equipment found in any modern hospital. These, too, came from the physical sciences.

NASA's science program may not directly affect the economy, but it certainly inspires and makes all of us proud. But the president's absurd plan to send man to the moon again and then to Mars will eat into that science program - for example, the incredibly successful Hubble telescope that has uncovered so much new knowledge about our universe will die an early death as a result. The stunningly successful Mars rover missions show us how much we can learn using robots. In contrast, the shuttle disasters have shown how complicated, risky and expensive manned missions, even to a modest low Earth orbit, can be, and the science return is marginal, at best.

The deterioration of funding for sciences is bad enough, but even more disturbing is how this administration misuses science. The Union of Concerned Scientists (www.ucsusa.org) issued a report "Restoring Scientific Integrity in Policy Making" that has been signed by over 7,000 scientists, including 49 Nobel laureates, 63 National Medal of Science recipients and 154 members of national academies. The report points out how the Bush administration misrepresents and suppresses scientific knowledge for political purposes. Here are some examples. Highly qualified scientists have been dropped from advisory committees dealing with environmental health issues and replaced with people working for industry. The administration ignored the assessment of experts at Livermore Lab, Los Alamos and Oak Ridge who invalidated claims that Iraq sought aluminum tubes for uranium enrichment - a claim used to justify the war in Iraq. Findings of the National Academy of Sciences were misrepresented in support of the president's decision to avoid regulating the emissions that cause climate change. The consequences of this pattern of behavior were brought home loud and clear by the recent hurricanes. Early warnings from experts were ignored, and after the fact, the response was hampered because cronies instead of experts filled key positions, such as the FEMA leadership.

Bush's stance on stem-cell research shows a lack of appreciation for the life sciences as well. Bush also recently came down on the side of teaching intelligent design along with evolution in science classes. This sort of faith-based, muddle-headed thinking in our president is disturbing. Even his own science adviser, John Marburger, said publicly "evolution is the cornerstone of modern biology" and "intelligent design is not a scientific concept."

Unless this administration's stance on science and the support of science is reversed, we will lose our world leadership in the sciences, if that has not already happened. Our economy will suffer, and our ability to prepare for and respond to attacks from terrorists or Mother Nature will be no better, or even worse, than in the recent past.