

How fundamentalism fails American science education

Randolph T. Holhut, 5 June 2009

Can a country where more people believe in the Devil than in evolution maintain its leadership in the sciences?

That's a question that David Baltimore, Nobel laureate and president of the California Institute of Technology, asked in a recent op-ed piece in the *Los Angeles Times*.

Baltimore believes that "Asia has the potential to blow us out of the water" because their scientists and engineers "are as good as ours, as imaginative as ours - they work longer hours and are more dedicated."

The numbers bear him out. India's colleges and universities are turning out more than 40,000 computer science graduates each year, and the enrollments in those programs are rising while U.S. colleges struggle to fill their science programs. And China produces more 325,000 engineers each year, or five times more than the United States.

By contrast, Baltimore wrote that our nation has a "lack of federal leadership in funding schooling that emphasizes math and science" with a "fragmented educational system that leaves much to local control" and an attitude of "general anti-intellectualism."

China is not a paradise politically, but it isn't having arguments over whether Darwin's theories are correct. It isn't rewriting science textbooks to give the Biblical version of creation equal weight with evolution. It isn't letting narrow political agendas or special interests trump scientific or medical facts.

Anti-intellectualism has always been a powerful force in America. Combine that with religious fundamentalism and you have a recipe for economic, scientific and political disaster. Because scientists in secular societies like Asia and Europe aren't fighting fundamentalist dogma and political hackery at every turn, they are now poised to kick our collective butts. And when this happens, most Americans will never know what hit them.

Why are we still arguing about Darwin? Why are more schools around the country forcing teachers to treat "intelligent design" (the new euphemism for creationism) as something as valid as evolution? Why do two-thirds of Americans (according to a CBS News poll taken last month) favor teaching creationism and evolution side-by-side in public schools?

This is happening because America is now a post-literate, post-logical society where truth and reason no longer matter. Fundamentalism appears to be gaining on modernism and what's become known as the "reality-based community" is treated with total contempt by people willing to distort science (and facts in general) for political gain. All you have to do is look at the way the Bush administration - that perfect nexus of religious fundamentalism and cynical politics - treats science.

Take the issue of global warming. There is little doubt in reputable scientific circles that the earth's climate is changing and that those changes - mainly brought on by the burning of fossil fuels - will ultimately cause major environmental problems.

The rest of the world's reaction to this is to work on ways to reduce greenhouse gas emissions. Europe has taken the lead in this area, developing new technologies to reduce energy use and pollution. The United States lags behind because it has been decided by the Bush administration that global warming is a myth. The United States - the nation that consumes about a quarter of the world's energy and natural resources - has rejected the Kyoto Protocol and any other steps toward reducing energy use.

This sort of willful blindness infects every bit of the Bush administration's treatment of science. If the facts conflict with their beliefs or the ability of their corporate patrons to make more money, they either ignore the facts or fund studies that give them the version of the facts they want.

The anti-intellectual, anti-reason myopia that now infects America will come back to haunt us. As this nation turns into a religious cult with nuclear weapons, scientific innovation will migrate to places where radical clerics and corrupt politicians aren't calling the tune. Just as our manufacturing base has migrated overseas, our scientific and intellectual base will travel the same path.

Baltimore wrote in his piece for the *Times* that the thousands of international students who once filled our math and science programs are now staying home because the schooling in China and India is as good as America's, while the Bush administration has made it increasingly difficult for international students to study here. Both China and India have poured huge sums of money into education, while American schools are falling behind.

The countries not held hostage by fundamentalism will ultimately overtake the United States. The technological lead the United States once had will vanish. We will become an industrialized nation without industry, a technologically advanced society without technologists.

The future belongs to those who aren't slaves to dogma and are willing to innovate. It belongs to societies where intelligence and hard work are rewarded and excellence is celebrated. Sadly, these qualities are not in great supply in the United States today.

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