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### Rethinking science and religion

Howard Smith

Sunday, December 21, 2008



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Politicians, and everyday Americans, too, are thinking about new approaches to national policy. One that is ripe for reassessment is the appropriate role of religion in matters of science.

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Religion provides us, as individuals, with its ethical and human perspectives on civic decisions, including judgments on issues prompted by scientific discoveries. But during the Bush years, religion was too narrowly defined by a small subset of opinions, and was used to constrain federal science programs rather than strengthen them.

Limiting embryonic stem cell research is an obvious example. Approaches to HIV/AIDS provide another. Reproductive rights, environmental policies and the teaching of evolutionary biology were also encumbered by world views based on particular religious attitudes.

Perceptions about science and religion have taken a new and critically important turn over the past 20 years because of a dramatic development: The death of the "god of the gaps." This god is the one who, for most of history, was invoked to explain the mysterious workings of the world - the creation of the universe, for example, or the nature of life. This god was needed to explain the gaps in our understanding - but during the past decades nearly all such gaps have disappeared.

My own field, astrophysics, can today explain plausibly, although certainly not completely, how the universe came into being and how the Earth was formed. Biology, likewise, has a firm handle on what makes life tick.

We know that the universe began about 13.73 billion years ago in a blaze of light from an infinitesimal point that rapidly expanded: the Big Bang scenario. We know that the Earth formed about 9.2 billion years later, and the first life on Earth began less than a billion years after that. We have discovered more than 300 planets orbiting stars other than our sun. Although none are Earthlike in character, we expect to identify several in the next decade with telescopes under development. Perhaps we will even detect life on some of them.

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The steady successes of science over the past 100 years provide reassurance that even current puzzles will eventually yield to the scientific methods. Never before has science been able to speak with such authority on fundamental questions that once were the sole purview of religion.

But at the same time, we have uncovered profound mysteries - dark matter and dark energy, for example, 95 percent (!) of the cosmic order but of unknown character - and these awaken a tangible sense of humility: We do not know it all.

Today, religious people have cause to rejoice. The god of the gaps may be dead, but spiritual life is reinvigorated because God is no longer just the perfunctory explanation for mystery.

God is the author of wonder.

Americans are religious people, and they care about these things. The Pew polls of religious attitudes, among others, consistently report that about 70 percent of Americans view themselves as religious. But other polls indicate that Americans rely heavily on science, too.

One reason may be that they both address meaning. As Stephen Hawking opines: "We want to make sense of what we see around us and to ask: What is the nature of the universe? What is our place in it, and where did it and we come from?" Both science and religion provide answers.

Process theologies - schools of religious philosophy that assert that "becoming" is as central as "being" - offer ways to incorporate the new paradigm of God produced by the successes of science. One of their key insights is the essential place of relationships. Religion opens up the ethical dimensions between us and the newly comprehensible world, and explores meaning.

In my own Jewish tradition, humanity is seen as a partner of God, and is obligated to improve a world that was created in time and that, far from being static, constantly evolves - a Big Bang universe.

Our religious commitments can be strengthened by new insights into nature and the wonders they convey. There is spiritual strength derived from no longer needing God to acquit our ignorance, but maturity derives also from recognizing responsibility to the world. Science does not address responsibility, but it does open our eyes to the issues that arise. Religion, when it, too, opens eyes, can foster the ethical debate about the obligations generated by science and technology.

Discussions that include religion and science will not necessarily reach decisions more easily, but they can make them more thoughtful and meaningful. The approaching holiday and inaugural seasons are perfect times to begin rethinking our old attitudes toward religion and science.

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