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Saving the "Ignorant American": Reflections on Science, Religion, and Public Scholarship



Dr. Linda MacCammon

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In recent years, an increasing number of scholars, pundits, social commentators, and educators have voiced concerns about the growing anti-intellectualism and anti-rationalism in the United States. The evidence is compelling. According to the Pew Research Center, nearly two-thirds (63%) of those who regularly attend religious services reject evolution as the best explanation for life on earth compared with only a third of those who attend less often.ⁱ Debates about teaching creationism alongside evolution in the public schools, as well as conservative challenges to historical and scientific content in textbooks continue to make headlines. And despite decades of peer-reviewed research, a significant number of Americans, including high-profile members of Congress, continue to reject the scientific consensus on climate change.

The increasing skepticism toward fact-based content, as well as downright hostility toward higher education was evident in the 2012 presidential race. In response to criticism over inaccurate campaign ads, Governor Romney’s campaign manager stated that “We’re not going to let our campaign be dictated by fact-checkers.”ⁱⁱ At a campaign rally, former Senator Rick Santorum sneered at President Obama’s push for universal higher education, calling the president “a snob” and suggesting that college is a place where “liberal” professors “indoctrinate” students to promote a progressive agenda.ⁱⁱⁱ Meanwhile, American students continue to lag behind their foreign counterparts in science, math, reading, and critical thinking skills and to demonstrate a woeful ignorance of geography, history, literature, and the fundamentals of basic civics. A recent study by the South Poverty Law Center reports that sixteen states do not require any instruction on the history of the civil rights movement and in another nineteen states the coverage is minimal.^{iv} Sadly, the situation doesn’t improve after graduation. Jay Leno’s “Jaywalking” segments are embarrassingly funny evidence of “The Ignorant American.” Laughter aside, a new survey by the Center of the American Dream at Xavier University found that one third of U.S. citizens would fail the test for citizenship.^v

A variety of reasons have been offered for America’s academic decline. Prime suspects include the Internet and social media, the breakdown of the family, rampant materialism, a decline in reading, mediocre television programming, an erosion of educational standards and values, home schooling, techno-gadgets, Christian fundamentalism, the mainstream media—the list goes on. Whatever the reasons, the ability of Americans to critically reflect upon and evaluate information in order to make reasonable judgments about what is factual and true is being lost.

Those of us who work in higher education are very aware of the problem. We see the results of America’s “culture of distraction” and broken educational system with each incoming class. In response, many undergraduate colleges and universities are developing more rigorous core curricula and introducing new retention and assessment models. While these initiatives may improve student learning and institutional effectiveness, it’s questionable whether

they can turn the tide against the steady stream of biased assertions, half-truths, and misinformation that students (and non-students) seem so willing to accept without serious question or doubt. As with most complex problems, the answers aren't clear-cut or easy, but one of America's greatest jurists, Supreme Court Justice Louis Brandeis, offers us a good place to start.

In his famous *Whitney v. California* opinion in 1927, Justice Brandeis presents a spirited defense of free speech, making the point that "without free speech and assembly, discussion would be futile; that, with them, discussion affords ordinarily adequate protection against the dissemination of noxious doctrine; that the greatest menace to freedom is an inert people; that public discussion is a political duty, and that this should be a fundamental principle of the American government."

Despite Rick Santorum's snarky appraisal, higher education was central to Justice Brandeis's vision of a free and enlightened America. In fact, he considered teaching a fundamental right along with free speech and freedom of assembly. As educators we have a responsibility to our students, but we also have a responsibility to challenge the "noxious doctrine" that permeates the culture at large with better information, better ideas, and better arguments. But success in the public square requires that we address the academic insularity and compartmentalization that feed many critics' perceptions of the "Ivory Tower." The much publicized "war" between science and religion illustrates the nature of the problem.

The "War" Between Science and Religion

Contrary to popular belief, the war between science and religion is not a widespread phenomenon. For centuries science and religion peacefully co-existed, using the powers of faith and reason to understand God and the mysterious processes of creation. Conflicts between the disciplines arose chiefly because of two fundamental differences in how each discipline views the world. First, science and religion have very different notions about what constitutes truth and how it can be known (the epistemological problem). Scientific truth is based on observation, experimentation, and testing, whereas religious truth is based on authoritative scriptures, the teachings of the tradition, and personal experiences of the divine. Second, science and religion have very different understandings of the nature of reality (the ontological problem). Many scientists embrace a materialist position, which holds that there are no spiritual realities; instead, they contend that everything can be reduced to or explained by the interactions of material elements in the universe. Religious persons insist that there is a spiritual dimension of existence that transcends the material world. Christians contend, for example, that the biblical God brought the material universe into existence and continues to sustain and interact with it. Human beings have a purpose and a destiny that are inextricably bound to this divine-human relation.

Despite these differences, by the middle of the 20th century many scientists and theologians believed a convergence of the disciplines was possible, desirable, and even inevitable. In 1966, the Nobel prize-winning physicist, Charles H. Townes, gave a talk to a Bible class where he articulated many similarities between science and religion (e.g., the role of faith in inquiry, discovery as revelation, expected paradoxes) and explained why he believed science and religion may ultimately converge.

For they both represent man's efforts to understand his universe and must ultimately be dealing with the same substance. As we understand more in each realm, the two must grow together. Perhaps by the time this convergence occurs, science will have been through a number of revolutions as striking as those which have occurred in the last

century, and taken on a character not readily recognizable by scientists of today. Perhaps our religious understanding will have seen progress and change. But converge they must, and through this should come new strength for both.^{vi}

While Dr. Townes's dream of convergence has not yet occurred, neither has the all-out war touted by the media and other vested interest groups. The reality is quite different and far more complicated.

Ian Barbour's Four-fold Model

In the late 1980's, the American theologian and physicist, Ian Barbour, developed a famous fourfold typology for the relationship between science and religion that classifies the relationship as one of conflict, independence, dialogue, and integration.^{vii} Practitioners of the conflict model, which radicalize the differences between the scientific and religious worldviews, make opposing claims that threaten the credibility of the other. For example, in recent years, Richard Dawkins, Daniel Dennett, and Christopher Hitchens (referred to as "The New Atheists") have forcefully argued that God and the supernatural claims of religion are delusional and dangerous, having no basis in reality. In their view, everything can be explained through the physical sciences and Darwinian evolution.^{viii} Railing against the biases of scientific orthodoxy, intelligent design creationists Michael Behe, William Dembski, and Paul Nelson of the Discovery Institute have argued with equal force that structures in the natural world are so complex, specified, and purposeful that they could not have randomly occurred and evolved through natural selection.^{ix} The only plausible answer is the existence of an intelligent cause (the infamous "God of the Gaps") as cosmic designer. In embracing the conflict model, atheists, intelligent design advocates and other creationists (e.g, Old Earth and New Earth creationists) have done little to further the quest for knowledge; instead, they have only succeeded in muddying the waters and alienating many people.

The independence model offers a very different tack. Science and religion are not viewed as "winner-take-all" competitors, but as wholly separate disciplines. Each uses different languages and different methods of inquiry that generate different kinds of truth claims which are legitimate within their respective domains. Thus, while science explains "the how" of things (the domain of brute facts), religion explains "the why" of things (the domain of existential meaning). Since there is no apparent overlap, scientists and theologians can work and think as they like without opposing or even relating to each other. The great Swiss reformed theologian, Karl Barth, expressed this approach in a letter to his niece explaining the relationship between creation and evolution:

Has no one explained to you in your seminar that one can as little compare the biblical creation story and a scientific theory like that of evolution as one can compare, shall we say, an organ and a vacuum-cleaner—that there can be as little question of harmony between[the two] as of contradiction?

The creation story deals only with the becoming of all things, and therefore with the revelation of God, which is inaccessible to science as such. The theory of evolution deals with what has become, as it appears to human observation and research and as it invites human interpretation. Thus one's attitude to the creation story and the theory of evolution can take the form of an either/or only if one shuts oneself off completely from faith in God's revelation or from the mind (or opportunity) for scientific understanding.^x

As this excerpt indicates, within the independence model, science and religion are separate but equal participants in the quest for knowledge. Religion and the sciences may interact, but it has little to do with furthering the work of their respective disciplines.

A more interactive approach is offered by the dialogue model, in which science and religion engage as conversation partners, posing questions and sharing knowledge that enrich both disciplines. In a letter to the director of the Vatican Observatory, Pope John Paul II offers an excellent description of the model, echoing Dr. Towne's desire for convergence:

Science develops best when its concepts and conclusions are integrated into the broader human culture and its concerns for ultimate meaning and value. Scientists cannot, therefore, hold themselves entirely aloof from the sorts of issues dealt with by philosophers and theologians. By devoting to these issues something of the energy and care they give to their research in science, they can help others realize more fully the human potentialities of their discoveries. They can also come to appreciate for themselves that these discoveries cannot be a genuine substitute for knowledge of the truly ultimate. Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish.^{xi}

This sentiment—which is rarely cited—is also shared by Barbour who believes that dialogue is the most promising model of the four.

The Pope's letter initiated a multi-year collaboration between the Center for Theology and Natural Sciences at Berkeley (CTNS) and the Vatican Observatory. In the 1990's the Director of the Observatory organized a series of conferences that brought together an international group of scholars including physicists, biologists, neuroscientists, philosophers, and theologians to explore the topic of God's action in the world. Physicist Robert John Russell explains that the overall goal of the project was to "engage theology, philosophy, and natural science in a process of constructive and creative mutual interaction".^{xii} The result is an outstanding—and brain-busting—series of books that examines divine action in the areas of quantum cosmology, chaos and complexity, evolutionary and molecular biology, neuroscience, and quantum mechanics. In addition to Dr. Russell, other notable participants included Philip Clayton, John Polkinghorne, Arthur Peacocke, Nancey Murphy, Langdon Gilkey, Willem Drees, Jürgen Moltmann, Francisco Ayala, Ian Barbour, Ted Peters, and John Haught. The series is an important one because it is an interdisciplinary effort to develop new understandings of divine action in the world and to articulate a more holistic and integrated understanding of human existence in relation to God, nature, and the cosmos.

The final model in Barbour's typology is Integration, which takes dialogue a step further by blending the disciplines together to form a conceptual unity. In this model, traditional theological doctrines are reconsidered in light of advances in the natural sciences. The writings of Arthur Peacocke, Alfred North Whitehead, Pierre Teilhard de Chardin and others have used an integrationist approach to develop theologies and forms of process thought that synthesize science and religion. The writings of some of the participants in the Vatican/CTNS project fall into this category as well.

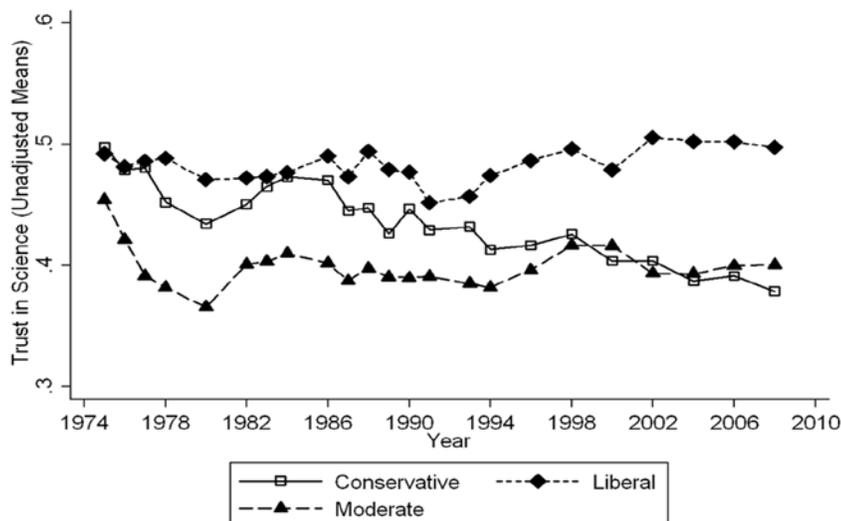
Barbour's typology has been criticized by some scholars as too simplistic, but it's an important contribution because it reveals the dominance of the conflict model in the public square. From talk shows to news programs to blogs to Sunday morning pulpits, the conflict model dominates discourse, generating more heat than light. Barbour's typology also reveals the prevalence of the independence model in higher education. Disciplinary autonomy has

been a long-cherished value in academia, but the traditional boundaries that separate disciplines into discrete departments often hamper opportunities for faculty in science and religion (as well as other disciplines) to interact and collaborate in a sustained and meaningful way. The Vatican/CTNS project is a notable exception, but the importance and value of the series also highlights a related problem; namely, the lack of public scholarship in America. When interdisciplinary studies of this type do occur, the work is largely confined to individual courses, esoteric conferences, *Festschriften*, and peer-reviewed journals that do little to challenge the shallow and distorted understandings of science and religion in the public square or to translate and disseminate the scholarship for general audiences. Given the compartmentalization of the Academy, it's highly unlikely that many people outside of the Vatican/CTNS project (whether scientist, theologian, or layperson) have ever heard of the series or know anything about it.

The problem is that the lack of sustained interdisciplinary engagement and outreach are having corrosive effects on both disciplines.

The Decline of Faith in Science

In a recently published peer-reviewed article, Gordon Gauchat, a sociologist at the University of North Carolina, Chapel Hill, argues that science has been politicized to such an extent that trust in science depends on political ideology.^{xiii} Using data from the 1974 to 2010 General Social Survey, Gauchat finds that “New Right” (NR) conservatives and regular church-goers are far less likely to trust science than moderates and liberals. As the graph from the study indicates, public trust in science is relatively stable among moderates and liberals, but there is a significant and steady drop in trust among conservatives.



A surprising finding is that the decline cannot be attributed to a lack of education. In fact, the more education a conservative has, the less likely he or she is to trust science. Gauchat believes the reason lies in the insular nature of the conservative sub-culture in America. Within the New Right's echo chamber “ideology and identity intervene to create social ontologies [accepted ways of being] in opposition to established cultures of knowledge (e.g., the scientific community, intelligentsia, and mainstream media).”^{xiv} Moreover, the priorities of science have shifted from space exploration and defense to government regulatory policies—like climate change legislation—which conservatives generally oppose. While Gauchat acknowledges the

limitations of his study, his work offers important insights into why many highly educated conservatives voice serious doubts about the truth claims of science.

The results of Gauchat's research wouldn't be so troubling if it didn't have serious public policy implications, not only for America but for the world at large. A case in point is the House Committee on Science, Space, and Technology, which has jurisdiction over NASA, the National Weather Service, and the National Science Foundation. The Chairman, Rep. Lamar Smith (R-TX) is a conservative climate change denier who has appointed like-minded Republicans to key sub-committee posts. For example, the vice chairman of the Subcommittee on Space and Aeronautics, Rep. Mo Brooks of Alabama, has expressed skepticism about global warming and carbon dioxide levels. In his view, more carbon dioxide in the atmosphere "means that plant life grows better."^{xv} Another member of the House Science Committee confirms Gauchat's research to the extreme. Rep. Paul Broun (R-GA) is a physician with an M.D. and a B.S. in chemistry. In a recent "Off-the-Record" speech, Broun lashed out at the scientific community using creationist language that epitomizes the conflict model.

God's word is true. I've come to understand that. All that stuff I was taught about evolution and embryology and the big bang theory, all that is lies straight from the pit of Hell. And it's lies to try to keep me and all the folks who were taught that from understanding that they need a savior. You see, there are a lot of scientific data that I've found out as a scientist that actually show that this is really a young Earth. I don't believe that the earth's but about 9,000 years old. I believe it was created in six days as we know them. That's what the Bible says. And what I've come to learn is that it's the manufacturer's handbook, is what I call it. It teaches us how to run our lives individually, how to run our families, how to run our churches. But it teaches us how to run all of public policy and everything in society. And that's the reason as your Congressman I hold the Holy Bible as being the major directions to me of how I vote in Washington, D.C., and I'll continue to do that.^{xvi}

Currently, Broun is the Chairman of the Subcommittee on Investigations and Oversight, which has general and special investigative authority on all matters within the jurisdiction of the Science Committee. This includes ongoing review of laws, programs, and policies regarding climate change, environmental protection, weather forecasting, space exploration, and government-funded scientific research and development.

Anti-science skeptics and climate change deniers are not restricted to a single House committee, however. While not as stridently candid or fanatically evangelical as Broun, their views are voiced throughout Congress and in many Governors' mansions. Prominent names include Sen. Rand Paul, Sen. Marco Rubio, Sen. John McCain, Sen. Tom Coburn, Gov. Scott Walker, Sen. Rob Portman, Rep. Steve Stockman, Rep. Dana Rohrabacher, Sen. Mike Crapo, Sen. Kelly Ayotte, Sen. David Vitter, Gov. Bob McDonnell, Rep. Mark Kirk, Gov. Susana Martinez, Sen. John Thune, Sen. Roy Blunt, Senate Minority Leader Mitch McConnell and House Speaker John Boehner.

With such anti-science mentalities (whether genuine or politically motivated), the prospects for a scientific renewal in America or adequate funding for climate science and other global environmental issues appear bleak indeed.

The Decline of Organized Religion

Organized religion in America has also experienced a significant decline in recent years. According to the 2012 Pew Research Center polling, one-fifth of Americans do not affiliate

themselves with any religious tradition—the highest percentage ever recorded in Pew polling. The report states that in the last five years alone,

the unaffiliated have increased from just over 15% to just under 20% of all U.S. adults. Their ranks now include more than 13 million self-described atheists and agnostics (nearly 6% of the U.S. public), as well as nearly 33 million people who say they have no particular religious affiliation (14%). This large and growing group of Americans is less religious than the public at large on many conventional measures, including frequency of attendance at religious services and the degree of importance they attach to religion in their lives.”^{xvii}

While there’s been a decline in religious affiliation, the news is not all bad. Many of the country’s unaffiliated adults are spiritual in some way. According to the survey, “Two thirds say they believe in God (68%). More than half say they often feel a deep connection with nature and the earth (58%), while more than a third classify themselves as “spiritual” but not “religious” (37%), and one-in-five (21%) say they pray every day. In addition, most religiously unaffiliated Americans think that churches and other religious institutions benefit society by strengthening community bonds and aiding the poor.”^{xviii}

These statistics would seem to offer some hope for organized religion, but the outlook for another “Great Awakening” is not very promising. As with science, religion also suffers from a credibility problem, but the reasons for it are quite different. According to the report, unaffiliated persons say that they’re not looking for a religion that might be right for them because “religious organizations are too concerned with money and power, too focused on rules and too involved in politics.”^{xix}

The latest Pew study is an important source for understanding current trends in the American religious landscape, but given the responses of many in the survey it also reveals just how confused people are about religion. “Spiritual but not religious” reflects the people’s desire to explore existential questions, but it also indicates the extent to which many theologians, religious leaders, and educators have failed in their duty to educate people about religion as a dynamic, evolving expression of human existence—regardless of tradition. They have also failed in their duty to challenge the dogmatic hierarchies, simplistic thinking, and abuses of power that alienate so many people today. The refusal to engage in or in some cases even permit constructive religious criticism and dialogue has effectively ceded the public square to “The New Atheists” and to the likes of Rep. Broun and other religious “purists” who continue to profit from misinformed perceptions of religion by many Americans. It’s no wonder the ranks of the unaffiliated are growing.

The Need for Public Scholarship

Such is the state of the science and religion today, at least as perceived and experienced by many Americans. Clearly the people’s trust has been damaged by many irresponsible and self-serving practitioners, both inside and outside the disciplines. But all of us share some of the blame. By Justice Brandeis’s standard, we have indeed become an “inert people” who have surrendered to the “noxious doctrine” of anti-intellectualism and anti-rationalism, a doctrine that distorts and erodes the credibility of all academic disciplines as well as the values and integrity of our way of life. Regaining that trust will require that Americans reject the intellectual passivity and laziness that characterize much of the culture today and accept some responsibility for their own education. They must cultivate intellectual curiosity and commit themselves to seeking out the truth no matter where it leads them. Such a commitment

requires time, effort, persistence, a healthy dose of skepticism, and the firm belief that education is a life-long vocation that involves more than simply getting a diploma or degree.

As educators, we must commit ourselves and our institutions to what Justice Brandeis calls the duty of public discussion. Ian Barbour's dialogue model and the Vatican's collaboration with the Berkeley center offer a promising approach, albeit an esoteric one, but that can be easily remedied—perhaps "Divine Action for Dummies"? All kidding aside, instead of conflict or academic separation—which have contributed to the rise of the "Ignorant American"—we must promote and fund the kind of public scholarship that furthers the quest for knowledge for all people. This means making public scholarship (e.g., community issue forums, civic literacy, "reader-friendly" publications and programming), an important part of every institutional mission and faculty tenure decision. It means more faculty involvement in the media in all its forms at both local and national levels. And it means offering a very different model for public discussion, one that encourages a lively but respectful exchange.

End Notes

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