

Thinkpiece

METANEXUS 2007: THE CHALLENGE AHEAD

by William Grassie

Abstract. This essay is William Grassie's valedictory remarks at the Metanexus Institute's 2007 Annual Conference. Grassie asks what is wrong with religion, what is wrong with science, and why the constructive engagement of the two holds the key to setting things right. He cites Sir John Templeton and others to make his case and proposes a new curriculum for general science education that uses the history of nature as a mnemonic and context for promoting better science literacy and the incorporation of science into our cultural traditions.

Keywords: general science education; humble approach; metanexus; science and religion; John Templeton; transdisciplinarity

THE CHALLENGE AHEAD

My charge is to give a keynote in which I lay out what I think the major challenges are for Metanexus and the work ahead. I am to offer not a retrospective but a prospectus, both intellectual and strategic.

I begin by unpacking our call for "the constructive engagement of religion and science." I first examine what's wrong with religion and then turn to what's wrong with science. Throughout, I address why the constructive engagement of religion and science is needed as a corrective, and conclude with some strategic thoughts about how this might be best pursued.

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WHAT'S WRONG WITH RELIGION

In the first case, what's wrong with religion, I have the advantage of being able to merely cite a torrent of new books written by prominent scientist-atheist-philosophers. Richard Dawkins (2006), Daniel Dennett (2006), Sam Harris (2006), Christopher Hitchens (2007), and others have detailed many problems with religion manifest in the world today. Although I disagree profoundly with what we should call their theology, I find myself generally in agreement with the many examples of dysfunctional religiosity that they cite in their books. The list is long—intolerance, anti-intellectualism, wishful thinking, superstition, tribalism, and chauvinism, to name just a few of the human character flaws that often attach themselves to religion. These days, when I read the newspapers and look around the world and at myself, I am frequently reminded of Reinhold Niebuhr's quip ([1941] 1996) that the doctrine of original sin is the only empirically verifiable doctrine of Christianity. We are all flawed.

The negative manifestations of religion and spirituality trouble me—a lot—and should trouble all of us in our rapidly changing global civilization. There is a need for a global reformation of religions, but that transformation will not happen without a confession of our sins. Rather than seeing Dawkins, Dennett, Harris, and the others as enemies of religion, I would rather coopt them into the loyal opposition. If they didn't exist, we would have to invent them. Their conclusions are unjustified, their atheology woefully inadequate; but the moral and intellectual outrage that they manifest is far too often well placed, albeit one-sidedly.

Here I turn to the writings of Sir John Templeton, our principal benefactor. The Templeton Foundation recently changed its mission statement and slogan to "Investing in Big Questions" and "Supporting Science." This is all fine and good, but what Sir John really charged the Foundation and all of us with is the task of transforming religions for the benefit of humanity. He is very clear that he means all religions, not just Christianity or even just the Abrahamic faiths. Sir John writes in his book *Possibilities* (2000):

Many highly educated people feel that religion is obsolete. In some senses they may have a point. We typically do not observe the kind of dynamism in religion that we see in other areas of life such as science, technology and business. To many, religion sometimes seems like a kind of history museum which lacks the excitement and vibrancy of other aspects of life that constantly experience innovation. (p. 9)

For so many religious people, the future of religions seems nothing much beyond the preservation of ancient traditions. Some therefore may not want to consider the possibility of a future of progressively unfolding spiritual discoveries. (p. 6)

Indeed, the sheer variety of opinions concerning the nature of god should give us pause to consider that many religious or theological systems may largely present metaphors and analogies appropriate to our limited humanness and to our varied cultural contexts. We might admit humbly that many and diverse theologies,

though seeming foreign to us, may contain valuable insights about divinity that could complement our own. (p. 18)

Matters of the spirit do not appear to have been monopolized by one doctrine or one religion. (p. 32)

Of course, humans desire certainty. We are limited in our ability to deal with complexity. We rebel against cognitive dissonance. In the political realm, truth and goodness are subservient to the calculus of getting and maintaining power. Religion becomes a weapon in our ideological warfare and tribal conflicts. We see such conflicts being waged throughout the world today in culture wars within our civilizations and in clashes between our civilizations. These religious and ideological battles are waged with increasingly destructive weaponry and increasingly powerful mind-numbing mass media.

The antidote is what Sir John calls the humble approach or humility theology:

The humble approach is meant to help as a corrective to parochialism in religion. Humility reminds us that our concepts of god, the universe, even our own selves, may be too limited. It is universally a wise teaching in most of the great religions that we are all too self-centered. We overestimate the small amount of knowledge we possess. (p. 6)

The humble approach creates enthusiasm for all of us who are concerned about improving the future of civilization. It is an inspirational approach for all of us who are not satisfied to let things drift and who want instead to channel our creative restlessness toward helping to build a world in which progress is vigorous in spiritual aspects of life as well as in scientific, technological and economic ones. (p. 7)

Through humility we can avoid the sins of pride and intolerance and avoid especially harmful religious strife because it is unlikely any religion could know more than a tiny bit about an infinite god. Humility opens the door to being hungry to discover basic realities of the spirit. (p. 8)

To seek to persuade all people to believe in one perspective would be a great tragedy. The wide diversity of faiths and theologies is a precious aspect of the richness of religion despite the fact that from a scientific point of view it can seem flawed and relativized. What is needed may be creative interaction and competition in a spirit of mutuality, respect and shared exploration. (p. 18)

... we no longer limit god to one tribe or one species or one planet but rather humbly search for unlimited love and purpose and creativity vastly beyond limited ancient human concepts. (p. 20)

When I first read Sir John's writings back in 1995, I was immediately hooked. What he was preaching was and remains vitally important for the future well-being of the world. When one of the greatest investors of the twentieth century turns around and invests his fortune in revitalizing and enhancing religion and spirituality, we should stop and take notice. I pray that Sir John and indeed all of us will reap extraordinary benefits from these investments, not so much in domains of the sciences, which have

been doing quite well on their own, as in the domains of religion, where we still have much to learn.

WHAT'S WRONG WITH SCIENCE

So what is wrong with science? Sorry to disappoint some of you, but I am not going to embark upon a diatribe against the evils of philosophical materialism or atheistic scientific naturalism. And I certainly am not going to hold forth criticizing the evils of evolution and Darwinism.

The religion of science, better referred to as scientism, is not science. Scientism is a particular brand of theology and belongs to the first part of this lecture alongside the other religions. We do real science a disservice by confusing the boundaries between scientism and science.

The biggest problems for science, real science, arise from its very success. Humanity has made enormous progress in the last few centuries and decades in the domains of science, discovering causal patterns and relations and then manipulating these with new technologies to our benefit, thereby also increasing our capacities for new scientific discoveries. All of this has resulted in exponential growth in knowledge and power, though unfortunately not a commensurate growth in wisdom and compassion.

Scientific progress also has supported exponential growth in human population and consumption patterns, such that ecological systems around the world are now significantly changed through human behavior. We have been engaged in large-scale environmental engineering and are about to embark upon large-scale genetic engineering of other species and ourselves. We live at an extraordinary moment in the natural history of our planet and the cultural evolution of our species. Sans modern science, we would not be confronted with the kind of problems we see in the world today, nor would we have the extraordinary benefits.

All of this has been accomplished largely through specialization and the division of academic labor, but something profound has been lost in the process. We have lost an understanding of the whole and the holy. We have lost wisdom and a sense of virtue. Here I cite my colleague Eric Weislogel, who wrote the call for this year's Metanexus conference on "Transdisciplinarity and the Unity of Knowledge":

The 20th century may very well come to be considered the "age of hyper-specialization." Through the increasing division of labor—both economic and intellectual—humans have certainly made enormous progress. We see the acceleration of specialization not only in industry, but in higher education as well. Does hyper-specialization, however, with its intensification of complexity and multiplication of information, also produce significant problems? Does it—and must it—lead to disintegration, a fracturing of knowledge, of culture, and of the soul? What impact has hyper-specialization had on education? And what are its implications for that which goes by the name of "science and religion dialogue"?

The challenge of the 21st century will be to integrate or synthesize the outcomes of the exponential growth in human knowledge into meaningful wholes.

It's not that specialization needs to be overcome; it's that individuals, communities, and civilization in general will need to develop the complementary means by which to appropriate and take the measure of all particular expertise. We must regain our ability, a facility, an adeptness at taking the whole into our most profound concern. . . .

. . . A transdisciplinary approach to the unity of knowledge respects the various disciplines and their methodologies, even as it looks for a means for developing a rigorous higher-order appropriation of the knowledge that comes from them. It is the synthetic or integral complement to (not a replacement of) the analytic methodologies of the various sciences. It strategically considers the natural, social, and human sciences, philosophical perspectives, and even religious insights in multi-pronged approaches to theoretical and practical problems. It takes up questions that transcend the boundaries of any given body of expertise. (Weislogel 2007)

There is a great deal of insight and wisdom in these words from my friend Eric, now the Executive Director of the Metanexus Institute. It is easier to state in a few paragraphs but much more difficult to make real in any of us, in our schools, in the world. He uses the phrase "the whole story of the whole cosmos for the whole person." Frankly, I don't begin to understand the whole story or the whole cosmos. I don't begin to understand or manifest what it might mean for me to be a whole person; indeed, mostly I feel rather fractured and finite, full of insatiable longings and infuriating inadequacies.

What is wrong with science is primarily a problem of general education both for the specialists and for society at large. The United States and other countries have invested an enormous amount of money in general science education over the last few decades, but with little success. True, we continue to create extraordinary specialists in many fields, but general science literacy, even among the specialists, seems to be in decline, as any number of current studies indicate.

I believe the primary problem is one of education, and we are going to need a new approach. In contrast to religious exclusivism and postmodern philosophy, science really is an example of a self-transcending learning process that moves toward consensus. Scientists argue a lot, to be sure, but over time they tend to agree about the details. And scientists achieve such consensus in spite of the social, economic, and cultural contexts that necessarily also influence and distort the practice of science. The universalities in science, however, are quite specific, perhaps not very useful in answering the big philosophical and moral questions about meaning and purpose. Science is building a new Tower of Babel, as the sciences break down into a mind-boggling variety of disciplines and specializations. The methods of scientists differ dramatically from one specialization to another; what works for a particle physicist has nothing to do with the work of a microbiologist, and ethologists don't speak the language of embryologists.

All is not lost, however, because in spite of the lack of a universal scientific epistemology and in spite of the exponential growth in information,

the threads of scientific facts are woven on the warp of time and the woof of scale like a magical Persian tapestry. We live in a universe that has been evolving through time over some 13 billion years and is ordered in the scale of entities from the microcosmic to the macrocosmic.

When it comes to religious and philosophical interpretations of science, it is vital that people know the science, and not just in its particulars but in the entire sweep of scientific discovery. Specialists have only a piece of the puzzle, not the whole. A rigorous and comprehensive understanding of science is the precondition to any responsible interpretation of science. The remarkable ignorance about science displayed by many otherwise intelligent people is also disturbing. How do we address these problems in general science literacy and in social acceptance and integration of basic scientific insights into our cultural systems and religious traditions?

Metanexus and others¹ are promoting a new paradigm for teaching science that seeks to address the vast explosion of scientific information and new technologies. This new approach must also address with a sense of urgency the task of applying this new knowledge in the context of growing global challenges at the crossroads of culture clashes and dire portents.

We are promoting an integrated science curriculum that incorporates *the history of nature* as an organizing principle in teaching science. Such an integrated science curriculum covers in *chronological order* and *emergent context* the origins of the universe, the laws of physics, the formation of subatomic particles and simple atoms, the formation of galaxies and stars, the complex chemistry originating in stars, the origin of the solar system including our planet, and the origin and evolution of life, including the cognitive, cultural, and technological evolution of humans. Initially we proposed to develop and test this curriculum at the undergraduate level, believing that undergraduate education is an appropriate place to begin such experimentation and curricula development.

I believe the rationale is compelling. By incorporating the chronological narrative of the universe and hierarchical complexity of nature as the framework, we provide a mnemonic for students and specialists alike to learn and retain the details of science. Beyond mere scientific literacy, students would also be able to understand different philosophical and religious interpretations of science. As the late German physicist and Templeton laureate Carl Friedrich von Weizsäcker (1962) wrote, the most important discovery of modern science has been the history of nature. Unfortunately, this most important discovery of science rarely makes it into the science curriculum or public debates about the interpretation of science.

The goals of such a curriculum would be:

- first and foremost, to facilitate the scientific education of our children and society through teaching the history of nature, increasing excellence and enthusiasm for science studies;

- to educate them about relevant philosophical and religious issues involved in interpreting this natural history;
- to promote the discussion of ethical values and norms pertaining to how humans are affecting their destiny, including changing evolution through our decisions regarding the application and adaptation of new sciences and technologies;
- to train students in the skills of informed debate, moral judgment, and civic engagement, including the uses of scientific evidence in those debates; and
- to alleviate the conflict between some people of faith and public education and to mobilize a religious constituency that supports general science education and publicly supported scientific research both in the United States and on an international scale.

These ambitious goals are easier to state here as a vision than to realize in complex educational bureaucracies. The vision is nonetheless worthy of careful consideration. Our efforts at Metanexus to attract funding for this project have been unsuccessful thus far. It is clear to me, however, that I need to stop talking about teaching and just start. I personally needed to get back into teaching, as a prelude to writing, as part of a larger strategy for making my small contribution to a healthier and safer world. Hence, my decision to step down as executive director of Metanexus and initially to spend the next year teaching science-and-religion courses in the Department of Buddhist Studies at the University of Peradeniya in Kandy, Sri Lanka. I hope that the year in Sri Lanka will be a prelude to many more teaching opportunities in the United States and around the world. I love to teach. It helps me to structure my reading and thinking. Teaching also stimulates my writing and gives me immediate feedback through my students. I fully expect that my students will accomplish much greater things than I have ever dreamed possible.

Unfortunately, and not unlike the remarkable endeavor that we are all engaged in, I do not fit neatly into the departmental structures of the modern university. Why hire a comparative religionist who wants to teach science? In any case, my next job is our next job. And my next job is still part of this meta-nexus that we are building together.

Whether we refer to this meta-nexus as the constructive engagement of religion and science, whether we call it transdisciplinarity and the unity of knowledge, or whether we talk of foundational questions, we are all just beginners, in spite of whatever amazing specialized knowledge we may have obtained in particular fields of science or the humanities. And if the real promise of this meta-nexus is to be fulfilled, if the real charge from Sir John is to be actualized, if the real challenges of the twenty-first century are going to be addressed, this process must also be international and interreligious.

For Metanexus, the next big thing is MGNI, the Metanexus Global Network Initiative. MGNI is an extension of Sir John's visionary Local Societies Initiative, whose more than two hundred societies now claim more than eleven thousand members in forty countries. Many of you represent those societies around the world. The \$8.9 million MGNI program was developed collaboratively with the staff of the John Templeton Foundation. The key elements of the project include:

- \$2,250,000 for up to 75 three-year grants to form new interdisciplinary "metanexus groups" at leading educational institutions in the United States and abroad.
- \$750,000 in additional grants to incentivize institutional matching support for these locally acting interdisciplinary groups.
- \$1,500,000 in continuing support of the top-performing existing local societies.
- \$1,663,000 in support of the annual Metanexus conference, bringing together leaders in the field from around the world.

Envisioned beyond this funding are "center of gravity" grants to support national and regional organizations.

All of this represents a major investment by the John Templeton Foundation and a whole lot of work for the team at Metanexus and all of you. All of this is central to realizing Sir John's vision.

We at Metanexus will continue to develop our online capacities to publish and host a robust and rigorous interdisciplinary and interreligious dialogue. For Metanexus, as for all academics, the challenge is to publish or perish. The pen is mightier than the sword, and the blog is more powerful than the bomb, at least some of the time.

In 2006, *www.metanexus.net* had 1.2 million visitors, 3.2 million page views, more than 700,000 articles viewed online, 160,000-plus articles printed offline, more than 200,000 PDFs downloaded, and 100,000-plus copies of our monthly e-publication circulated.

Let us be sure that credit goes where credit is deserved. Greg Hansell is the remarkable intellect and energy who facilitates most of the work behind the scene, providing not only intellectual and editorial leadership but also a profound skill as a computer programmer. He (and we) cannot continue without your participation as readers and critics, as writers and subscribers, and as benefactors.

I am very proud of this organization, the Metanexus Institute, not because I bear the titles "founder" and "emeritus director" but because of its lofty mission and its values, the incredible network of people involved, the extraordinary intellectual and spiritual challenges presented, the talented and dedicated staff and board, and the profound moral and practical problems that may yet be solved.

In my own spiritual and professional journey, I always was motivated first by the hope that this crazy and wonderful engagement between the domains of science and the domains of religion provided some leverage in a troubled world. I still believe that the constructive engagement of religion and science provides both a fulcrum and a lever to move the world in more positive directions. I discovered along the way that this is not only a powerful tool but also a fun and endlessly fascinating activity. I have learned so much from all of you.

As I mentioned, next year I will teach at the University of Peradeniya. The two courses that I will be teaching include an introductory science-and-religion course, which will take the history of nature as its point of departure. The second will look at the new sciences of religion. (I encourage you to read my recent essay online that details the approach that I take to these new sciences of religion.) In both cases, with both courses, I hope to write regular contributions on the Metanexus Web site. Maybe there is even a book or two waiting to be birthed. Of course, I also will be learning about Sri Lanka, its cultures and religions, and the challenges of an intractable civil war and the often desperate economic need in that country. Sri Lanka strikes me as a microcosm of our world, a paradise full of problems.

I do not know what comes after next year, but I do know that this remarkable organization, the people and ideas involved, and the work to be done will continue to be part of my personal and professional life.

ALL MY RELATIONS

I close as I began, by thanking all of my relations in the manner of the native peoples of North America. The term *metanexus* can mean simply “all my relations,” in the same way that Willard Quine concluded that “to be is to be the value of a variable” ([1953] 1980, 15). *Metanexus* can mean simply “all my relations,” in the same way that Donna Haraway meant when she wrote that “the ‘relation’ is the smallest possible unit of analysis” (2003, 80). This definition of the term *metanexus* includes the networks of friends, families, and colleagues, the networks of ideas and insights passed on through the generations, the networks of biophysical processes that constitute our bodies and brains and the universe, the networks of privileges and responsibilities we have been born into and acquired. In this understanding, the term is merely a description of these varied networks and processes that constitute each of us in this sacred space and time.

The term also can be understood, however, as a promise of that which transcends and transforms each of us and the world. On my Muslim prayer beads there are thirty-three beads. A devout Muslim counts the beads three times through, citing the ninety-nine names of God. By stopping one short of one hundred, we are reminded that there are thousands of other names for God that are not mentioned in the Qur’an. I do not know all of the

names for God, indeed I don't think I know very much about God at all, but I am quite sure that one of those names is surely something like "metanexus." In that name, we are reminded that God is that which transcends, transforms, and connects every entity to the whole and to the whole-some. We need that transcendence and transformation in our individual lives and in the world. We need more wholeness and wholesomeness.

To this other Metanexus, as to all my relations, I give thanks and praise.

NOTE

A version of this essay was presented as valedictory remarks at the Metanexus Institute's Annual Conference, 2–6 June 2007, in Philadelphia.

1. See, for instance, a curriculum developed by SETI titled "Voyages through Time," <http://www.seti.org/site/pp.aspx?c=ktJ2J9MMIsE&b=181004>. See also the work of Eric Chaisson at the Wright Center for Science Education at Tufts University, http://www.tufts.edu/wright_center/eric/ericpage.html. For a more populist approach, see the work of Michael Dowd and Connie Barlow at <http://www.thegreatstory.org>.

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