

SOME REFLECTIONS ON SCIENCE AND THEOLOGY

by Trent Owings

I left the pastoral ministry about twelve years ago. Since then I have watched the world and the church from a very different perch than I once occupied. I took this new place, however, still the product of a theological education, in large part provided by Lexington Theological Seminary, a person shaped by two decades as a pastor of congregations of the Christian Church (Disciples of Christ) and a person who viewed life and the world through the screen provided me by my education and experience in the church. These things I am and always will be, and my present work in an Admissions Office of a Maryland public university and the relationships I have nurtured with faculty members have combined to provide me a different view on the church and the world and tools with which to think it through.

I think, as every observer of every time thinks, that something critical is gathering to work its way out over the next years and decades, having to do with religion and the present state of the culture. The growth of fundamentalist and evangelical churches and the experimenting with New Age religious practices and myths, indicate that certain yearnings and needs are not addressed by the culture undergirded by science and its results and driven by economic interests, and that they will be served. Our primary instrument for the present mastery of the world and its processes, that combination of science and economics, has created a setting for modern life that is fraught with tensions. The view of the world implied in the tools by which the mastery has been realized, is one which sees no central place for human beings nor any resource to satisfy yearning for meaning. Robert Wright in Nonzero, The Logic of Human Destiny quotes physicist Steven Weinberg. "The more the universe seems comprehensible, the more it also seems pointless." (1) Our mastery has led to threats once spoken of as theoretical now apprehended as pressing dangers. As I write this there is a discussion on an NPR radio program on the evidence that water is being used at a rate that cannot be sustained across the globe.

The persistent religious yearning is taking shape in ways which require the denial of what our culture has shown us about the nature and character of the world. In order to be religious it seems necessary to turn our backs on what we know about the world and life in the world, but not on the products and services it provides us.

These issues were catalyzed for me in reading and reflecting on a recent edition of the Chronicle of Higher Education. In the November 26, 1999 edition of the Chronicle there were several pieces which indicated that the issue of the tension between religion and the dominant themes of the culture are getting some renewed reflection. There was a news report on the recent action of the National Council of Catholic Bishops proposing policies that seek to insure the Catholic character of Catholic colleges and universities in the United States. This action comes at the mandate of "Ex Corde Ecclesiae". Among the recommendation of the Bishops are; that each member of the Board of Trustees of

Catholic Colleges and Universities must be committed to the practical implications of the Catholic identity of institution, as far as possible, the majority should be Catholics committed to the church, the president of the institution should be Catholic and the institution should seek to appoint Catholic professors. (2)

The theological ground upon which all rests is the affirmation that the intertwined institutions of the communion of the church are the means by which all of Creation is brought into communion with the Triune God for its completion and fulfillment. The Roman Catholic community has a luxury not afforded denominations like our own. It is global in membership and structure and has not relented on the fundamental and necessary relationship between all its structures. Thus universities and ruling bishops have an unbroken relationship.

There are concerns in the academic community, obviously, the protection of academic freedom; they fear an intrusion on their research, publications and teaching. The proponents of the new rules soft peddle possible interference. I think the Catholics have raised the important issue that the context in which teaching goes on is larger than the disciplines being taught, but we all would have to look elsewhere than structure and lines of authority to address the matter.

The second piece in the Chronicle was a report on research being done on the role of religious commitment and religious communities in dealing with certain kinds of human problems, like the treatment of addictions, crime and illness. Some of those interviewed for the article acknowledged that such issues have not been studied before because of persistent academic prejudice regarding the religious. What is now taking place is an academic look at exactly how religion affects aspects of human behavior, suffering and healing.

Finally, on the back page of the Chronicle, in a large space devoted to a featured essay, physicist Lawrence M. Krauss writes a piece titled "An Article of Faith: Science and Religion Don't Mix". Krauss's piece is occasioned by the recent spate of conferences, papers, books and classes on the relation between religion and science. First he argues that their appearance is the result, not of genuine interest, especially on the part of science, but of the infusion of money by The Templeton Foundation. Krauss confesses that academics are inclined to rush to those locations where money comes gushing forth. In the case of exploration of the relation between science and religion, he opines this is not a good idea. It is not a good idea, he argues, because religion and science are on opposite sides of the human experience. He says that when scientists do their work religion never enters their discussions. He says that science deals with ideas which are falsifiable and religion deals with matters of faith.

Krauss concludes his essay with what he believes to be the most critical danger of this movement of science and religion toward one another. He worries that in proximity, science faces being coerced by religion in varying degrees. He says simple proximity may inhibit scientists in their work out of fear of offending religious sensibilities. He also points out that in the extreme there are religious interests out to force the capitulation of

science on certain issues, or the banishment of the discoveries of science by usurpation of political power, an emerging danger.

Stephen Jay Gould expresses suspicion of the Templeton Foundation in Rocks of Ages (3). I think his critique is very close to that of Krauss. Those who approach the issue from the side of religion in what is sponsored by the Templeton Foundation are interested in finding in science support for cherished religious notions such as purpose in the unfolding of the universe, intelligence as essential to the order of the universe, and confirmation of the belief that human beings are an expression of something essential in the universe. These are in fact the ideas which people like Krauss, Stephen Jay Gould, Daniel Dennett, Lee Smolin, James H. Birx etc.(4) believe have been overthrown by evolutionary biology and physics. They view this overthrow as one of the great intellectual revolutions in history. The religious want present complexity and consciousness to confirm their presumption about God. The theoreticians of science argue that such expressions can be accounted for by the simple mechanisms of natural selection.

I must confess some ambiguity about these religious presumptions. As well read as some theologians are in the sciences and as attentive as they are to the actual way in which the world is constructed, they dismiss what is believed by many to be the actual genius of the generation of science. I distrust all systems which require God as a discrete object or reality in the external world and which argue that God is a fundamental actor in the shape of the world. While the present complexity may be explained by means of reductionist principles, it does force upon us unavoidable issues. There is an actual history which has arrived at the present complexity, and human beings experience the world as the complex matter it presently is. It is a difficult matter to determine how the needs and fruits of this present complexity match up with the means by which it has come about, according to the theoreticians of science.

Krauss raises a primary issue himself when he confesses his own lining up at the money trough when it is filled. It is, however, when the money comes from the Templeton Foundation, with a religious interest, that he objects. The issue raised here is that implied in all external funding of science and research is the question of the aims and interests in which the doing of science and research is nested and the uses to which the results are put. Science is always done in a context not created or determined by science itself, and that context is laced with interests, aims and desires which are not accounted for in the science, but determine the uses to which the discoveries of science will be put.

The most intriguing of Krauss' remarks is,..."Perhaps most important, science has discovered absolutely nothing in the past century of remarkable activity that has any spiritual implications." The fact of the matter is that the "Zeitgeist" of our time has been largely shaped by the working of science. An implication of the working of science is the banishment of superstitions about the world. In the place of superstitions are the results of scientific investigations. More significant than that is the erosion of the treasured place of human beings in the order of the world, the questioning of the centrality of

consciousness to the nature of the world, and the dismantling of any notion of the world as unfolding toward some end. The spiritual impact of this revolution is that science has provided a view of the world in which a significant place for human beings is dismantled. I don't think that it is a coincidence that the emergence of existentialism, and its analysis of human existence as out of joint with the world and pointless and its reflection on the despair that such discoveries produce, took place in the world when science was making some of its greatest strides in understanding the world.

I wonder, as well, if it is possible that the toppling of metaphysics by a variety of permutations in philosophy could be at all understood without the expanding discoveries of physics and biology and the assurance regarding the processes by which all in the real, external world has come to be. The confidence of science that there is nothing in the external world which corresponds to the speculations of metaphysics or the hopes of religion has altered the total landscape in which we live, not just the world of organisms, molecules or atoms.

There is a wonderful irony in this. At the same time that science seeks to rid the world of the "anthropic principle"-- the notion that human beings are the end of the evolution of the world-- it placed into the hands of human beings the means to exercise mastery over the world. And with this comes the attendant ecological crisis.

But the presumption that there is nothing to be found in the external world to correspond to fundamental human yearnings for purpose, meaning and place has not in the least diminished their expression nor their importance. At a time when science seems to be reaching a zenith, when there could be a book written titled The End of Science, (5) the resurgence of religion takes the shape of fundamentalism. It is certainly worth reflection to ask if there is not some inherent relationship between these two cultural trends. The discoveries of science have not eliminated such issues from human existence, but has only made them sharper. Even scientists who ply these trades are driven by such yearning and needs. This is expressed in Edmund O. Wilson's book Biophilia (6) in which he ponders the wonder at the world behind his science, and in several novels about science and the people who do it, like The Voyage of the Narwhale, Mr. Darwin's Shooter, The Goldbug Variations, and Blood Meridian (7).

In this situation it seems to me that there emerges a thin, barely visible strand of relationship between the article on the Catholic Church and its attempt to figure out a way for the religious to be the setting in which academic work is nested, and Krauss' protest against a dialogue between religion and science. There are, however, significant errors in the fundamental understanding in both efforts. The Vatican thinks that what is necessary is to make the university Catholic and the way to do that is by rules and policies. The mistake Krauss makes is to understand the dialogue between religion and science to be a matter of competing views about the nature of the external world. Unfortunately, so does the surging fundamentalist movement in America. The contribution of religion and theology in a dialogue with the academic community has to do with the analysis of the larger setting which consists of the demands of life in the world that are unavoidable,

which all human beings, religious or secular, theologian or physicist, necessarily experience and must respond to. I do not think that the way this can be done is by making rules, as the Catholic Bishops have decided. It has to do, rather, with the effort to establish a setting in which one always asks, “What does this mean for the life of human beings in the world?” and always analyzing the way we deal with the yearning for meaning and the way in which we make judgments about the use and function of what is being discovered by the research that is being done. And most especially, in the case of a university like where I work, there needs to take place an analysis of what constitutes teaching and learning.

Finally, I have been thinking some about what these observations mean for doing theology itself. If we cannot be confident that there is something across the deep abyss which separates us from the world as it is actually constructed that corresponds univocally to the symbols and structures of religious life and theological discourse, what is the religious life and theology about? It is that in human experience which corresponds to the quest for meaning and the burden of judging. Since the yearnings and burdens cannot be satisfied by what is discovered about the nature and character of the external world, then that which corresponds to these necessities are constructions of human consciousness and culture.

Among the questions that must be addressed in doing theology is what criteria determine if the work is satisfactory, faithful, useful. A couple come to mind. One is exactly that raised by the mandate of the Vatican to American Catholic colleges and universities. If religion has been born out of the necessary yearning for meaning, then it is necessary to recognize its concrete expression and do the work on the curled edge of its advancing wave. From the precarious perch on the advancing wave the theologian is carried along on the history of the institution and the discipline and must create theology from the resources of the past into the unknown future. It is no mean thing that the resources of institution, myth, symbols, themes, cultural and artistic achievement, ethical reflection and symbols have sustained a place in human culture as long as they have. Certainly one of the things that needs to be acknowledged is that this durability signifies something other than superstition and folly. Theology works in this continuum. However, I don't think one can any longer presume to be doing only Protestant or Catholic or even Christian theology. The movement of culture and history is throwing all the world religions into one another by the movement of peoples and information in an unprecedented way.

It is necessary to take note of this continuity and what it brings, but it is not necessary that it dictate the results. I think the Vatican is mistaken in this regard. It is not the business of religion or theology to tell the academic disciplines what they must do or what they must find as a result of their work, but to elucidate with the scientists the world they are shaping, the issues that are raised, the meaning of the quest of human beings to find the truth. The issue is who takes responsibility for shaping the context in which science and the teaching of the science is done and to note that if someone does not take responsibility for it, it will come about willy-nilly and that can have tragic and irreparable

consequences. To take this responsibility is not to impose values that must be followed or dogma about what must be found at the end of the academic quest, but to make certain that these deeply compelling human issues which swirl around the disciplines, are taken into account.

Theologians must apprehend the shape of the moment in which it is being done. Respect and attention should be paid to the arts and sciences of the time and to the culture and letters of the time. The theology produced should reflect that the theologian has allowed these elements of the time to wash over and through him or her.

This is a dicey issue. I think we can safely say that the theologian must be somewhat familiar with the work of science, the processes it uses, the way it has parsed knowledge into different disciplines. But what use can the theologian make of what he or she has come to see and understand? In the case of Arthur Peacocke, (8) and those influenced by his work, they have “borrowed” the discoveries, ideas, processes of the sciences and use them in ways that seem to defy fundamental nuggets of truth that some in the sciences believe they have uncovered.. Peacocke understands and uses the processes of evolution, that is, how life got from where it began to where it currently stands. But rather than acknowledge what many believe to be the foundational notions of these processes-- evolution that it is mechanistic and blind and nothing else is needed in order to account for the present complexity-- Peacocke molds the idea of God by means of the structure and processes and forces a place for God in the account. Now the question of confiscation of ideas is an interesting one. I am not at all sure that Krauss or Gould would be as apoplectic about a poet confiscating the images, ideas, processes and structures of science as they are about a theologian. The end of the use of such scientific things by the poet is certainly not the same as that of the scientists who formulate and use them in their work. I would be interested in knowing what Gould and Krauss and Dennett think about the leaps of imagination in which Loren Eisely engaged in his powerful and poetic explorations of science and its discoveries (9). Is the theologian allowed the same kind of license as the poet or the novelist? It is not impossible or illegitimate to use images from science in the doing of theology. It is, as cautioned by Krauss and Gould, extremely important to know exactly what you are doing and not to presume to have a knowledge of the external world which comes by some other means than the working of science.

The clue, I think, is the issue that the theologian is seeking to address. As much as fundamentalists may fulminate about it, the issue for the theologian is never first and primarily the nature and structure of the external world. It has far more to do with those issues named which elude the tools of science. There are theologians who use some of the ideas of science such as atomic structure, change and development by evolutionary processes, and a process view of reality where things are not viewed first in terms of what they essentially are, but in terms of their being as determined by their context. But they do this, not with the aim of co-opting the work of science, but in the service of another purpose. For Jay McDaniel and John Haught, (10) the problem addressed is environmental crisis and the role of human beings in that crisis. The damage stems from the way human beings view the external world and their relation to it. This is not first

about the structure and processes of the external world, but its value and the character of the bonds that bind human beings to that external world.. What McDaniel and Haught are interested in doing is creating an alternative view of these matters that has a chance of altering the way in which human beings behave in that world, so that the damage might cease and healing might begin. I do think it requires another language about the external world than is in the lexicon of the sciences to bring about the changes in human beings that may be required.

Along with delineating the issues appropriate to theology, the view of reality theology expresses must be coherent and aesthetic. It must be as complete as possible, addressing the expression of meaning and burden of judgment using the world as it has been shaped by the time in which it is done. It must satisfy the quest for meaning by the account it gives of the world and human life within it, and it must, on that basis of the account, seek to provide resources and guidelines for the judgments human beings in that world must make.

These arenas are not exclusive to theology. Rather they are the burden of all human beings who live in the world. But the ways of thinking about the world and models of living in the world immediately available to the culture do not have resources of enough depth and complexity to adequately provide human beings with clear, coherent and adequate way to think about living in the world. Theology, religious experience and the community of the church do have some resources to bring to the struggle and it is a common struggle for all people and for all people engaged in the academic disciplines and for the students who learn from those engaged in the discipline. The place at which religion and science meet, or theologians and scientists meet, is at these necessary swirls of life that are not the subject of science, but wash over the results of the work and from whence comes the curiosity and zeal of the scientist. When scientists and theologians dialogue, they are not going to dialogue about the shape and nature of the external world, but about how human beings live in a world that is shaped the way science has determined that it is, about the implications of fundamental ideas and what they are going to do with the products of science. To do science without raising these issues is to be isolated and irresponsible for what you create when the work is done.

The central and critical issue is not only a theological one, but an existential one. If the evidence can not be gleaned from science to confirm the doctrines or ideas of religion, one is faced not only with the discovery of the flaws of religious ideas, but also with the actual state of affairs that science believes it has discovered. One is faced with the discontinuity of our existence with the elemental structure and processes of the external world and the discovery that to continue to live requires a decision on the goodness of life and the possibility of meaning in living. This is central to the theological enterprise, to find a way to give expression to something that corresponds with this “faith” and decision to live in the world. In this way, it might be the case that science has made a significant contribution to thinking about theology, by clarifying the heart of religion.

I found in Moby Dick, in the visit of Ishmael to the chapel in New Bedford this observation; “But faith, like a jackal, feeds among the tombs, and even from these dead

doubts, she gathers her most vital hope.” (11) I think the vital hope named is necessary for all..

1. Wright, Robert, Nonzero, The Logic of Human Destiny, Pantheon Books New York 2000.
2. “Ex Corde Ecclesiae”, An Application to the United States, National Conference of Bishops, United States Conference, 1999.
3. Gould, Stephen Jay, Rocks of Ages; Science and Religion in the Fullness of Life, The Library of Contemporary Thought, Ballantine Publishing Group, 1999. The contribution of this book is not so much how Gould treats the problem. It is, rather, that he addresses the problem at all. The writing and publication of this book suggests to me that something is going on out there in the culture.
4. Gould, Ibid; Dennett, Daniel, Darwin’s Dangerous Idea, Evolution and the Meaning of Life, A Touchstone Book Published by Simon and Schuster, 1996. Smolin, Lee, The Life of the Cosmos, Oxford University Press, 1997. Birx, James H. Interpreting Evolution, Darwin and Teilhard de Chardin, Prometheus Books, 1991. Dennett attempts to describe the implication of Darwin’s discoveries about the mechanisms at work in the development of life on philosophy. He argues that philosophical questions and answers must be reexamined in the light of Darwin’s insight. Smolin seeks to account for the existence of the necessary narrow parameters of light, gravity and movement that are the precondition for life by Darwin-like evolutionary processes in the physical universe. Birx directly takes on Chardin’s attempt to introduce metaphysical elements to the notion of evolution.
5. The End of Science
6. Wilson, Edmund O., Biophilia, The Human Bond with Other Species, Harvard University Press, Cambridge, Massachusetts, and London, England 1984.
7. Barrett, Andrea, The Voyage of the Narwhale, W.W. Norton, New York, London, 1998. McDonald, Roger, Mr. Darwin’s Shooter, Atlantic Monthly Press, 1998. Powers, Richard, The Goldbug Variations, William Morrow and Co., 1991. McCarthy, Cormac, Blood Meridian, Or the Evening Redness in the West, Vintage Books, Random House, Inc. 1992. Andrea Barrett writes about the ways in which established and flawed cultural assumptions direct the doing of science. McDonald’s book is the story of a simple, deeply religious man who becomes aid to Darwin on his voyage and how this man begins to discern the deep impact of Darwin’s discoveries on the world in which he is so deeply rooted. Powers is an adventurous novelist on the impact of science on the lives and consciousness of people who inhabit our culture and time. McCarthy describes in Blood Meridian the strange convergence of science and destructiveness in 19 century America.
8. Peacocke, Arthur, Theology for a Scientific Age; Being and Becoming, Natural, Divine and Human, Fortress Press, 1993.
9. Eiseley, Loren, The Immense Journey, Charles Scribner’s Sons, New York 1957.
10. McDaniel, Jay B., Of God and Pelicans; A Theology of Reverence for Life, Westminster/John Knox Press Louisville, Kentucky 1989. Haught, John F., The Promise of Nature, Paulist Press New York/Mahwah, New Jersey 1993.
11. Melville, Herman, Moby Dick, Bantam Books Toronto, New York, London, Sydney, originally published 1851, Bantam Classic 1981.

