The Thomas Berry Lecture

The Cathedral of St. John the Divine New York City September 26, 2009

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THE THOMAS BERRY AWARD recognizes the importance and relevance of the vision and work of Thomas Berry. I am honored to participate in supporting those, and in sharing this Award with the eminent prior recipients.

1. THIS CATHEDRAL

I first encountered this great cathedral many years ago when I entered Columbia as an undergraduate. I walked past it almost daily for 4 years, entering frequently, awed by its scale and majesty, aware that the structure itself, the largest house of worship in the Western hemisphere, reflected the history and importance of religion in society over the many centuries of the human experience. Obviously much of a cathedral is uniquely Christian and there is great variety among the houses of worship of different world religions, but all religions share structures of morality and intellect that have guided their followers for centuries.

I learned over the years how the Cathedral of St. John the Divine has become a progressive social force serving the diverse people of our city and nation, inviting all to enter and share their ideas and values, their music and art, with the mission of being "a unifying center of intellectual life and leadership, supporting values of community and stewardship." And I recognize its outstanding ecumenical leadership.

Therefore, it is with special pride that I speak here today, the possibility of which never occurred to me during my many visits half a century ago.

We meet here today at a time of crisis on Earth,

with the threat of climate change accelerating, and the human response hanging in the balance. This great Cathedral reflects a set of values that respects the importance of all species, as demonstrated by its annual celebration of creation at the Feast of St. Francis Day, October 4, at which time the Cathedral extends its grace to all who enter, including the Blessing of the Animals. This is therefore a most appropriate place for us to reflect on the need for scientific, religious, economic, academic, government and civic leaders to attain a new unity of thinking and action in order to address the existential threat of climate change to all species. I have been inspired by Thomas Berry, Mary Evelyn Tucker, John Grim and others whose moral voices and eloquent words you will hear in these remarks.

2. THE CHALLENGE FROM THE SCIENTIFIC COMMUNITY

The challenge from the science community has become clear. Twenty-one years ago, James Hansen, the Director of NASA's Goddard Institute for Space Studies, testified before Congress (Senate Committee, June 23, 1988) and delivered the first well-publicized warning of the threat of climate change. Hansen's office at Columbia is one block to our west on Broadway, and he "has now concluded, partly on the basis of his latest modeling efforts and partly on the basis of observations made by other scientists, that the threat of global warming is far greater than even he had suspected." In a recent letter to John Holdren, Science Advisor to President Obama, Hansen wrote: "a stark scientific conclusion that we must reduce greenhouse gases below present amounts to preserve nature and humanity, has become clear. It is still feasible to avert climate disasters, but only if policies are consistent with what science indicates to be required."

The overwhelming majority of scientists who understand the climate field have reiterated these warnings and strengthened them as the situation has deteriorated beyond the rate of Hansen's original expectations and warnings. Hans Joachim Schellnhuber, the head of Germany's Potsdam Institute for Climate Impact Research, recently observed: "We are on our way to a destabilization of the world climate that has advanced much further than most people or their governments realize."

The internationally recognized Intergovernmental Panel on Climate Change (IPCC), released The Fourth Assessment Report last year, analyzing the scientific reality of global warming during the period 2001 to 2007. The IPCC constitutes the largest collaborative science project ever undertaken, involving 4,000 scientists who are specialists in the applicable sciences. R. K. Pachauri, Director General of The Energy and Resources Institute in India and now Director of Yale's new Climate and Energy Institute, received the 2008 Nobel Peace Prize on behalf of all of the participating scientists. Established by the United Nations in 1988, the IPCC has been instrumental in providing comprehensive, rigorously documented assessment reports every five to six years, summarizing the current knowledge and future projections of climate change. The IPCC has provided irrefutable data and analysis informing public opinion as well as policy-makers of the scientific reality of climate change. The IPCC left no doubt, as scientific fact, that the causation of this immense climate change rests squarely with the billions of human beings on this Earth, and that the risks to the planet are immense.

In August, 2009, the United States Department of Defense published a warning that climate change would become a major issue of national security, with potential large scale drought, starvation, flooding of coastal areas, massive refugee movements, and wars over rights to water and land.

E.O. Wilson of Harvard, among other prominent scientists, has made clear that we are in the midst of a sixth extinction of species on our planet, and that this is the first for which human activities are predominantly responsible, as opposed to the prior extinctions that took place over million of years as planet Earth evolved. Wilson has also commented that humans cannot expect that we will be immune from that same ultimate fate.

We live in a world we did not create and that we must not destroy. Environmental issues respect no borders, and the future of human life on our planet is interdependent with other living organisms. Global warming will significantly change the world as we know it, accelerating the ongoing crash of biodiversity, diminishing all life.

3. THE VISION OF THOMAS BERRY

Thomas Berry's extensive writings provide guidance for us in this time of crisis. Berry expressed the hope on the eve of this new millennium, nine years ago, "that we see these early years of the 21st century as the period when we discover the great community of the Earth, a comprehensive community of all the living and non-living components of the planet. We are just discovering that the human project is itself a component of the Earth project..." and he expressed the fervent belief that recognition of these truths is the foundation of our journey into the future.

As an influential cultural historian, Berry articulated his belief that in earlier times people were profoundly concerned with divine-human relations, and in more recent centuries, people have become increasingly involved with inter-human relations. But Berry believed that the natural world is our primary revelatory experience, and that world religions in recent times have neglected the manifestation of the Divine in the natural world. He said "Our future destiny rests even more decisively on our capacity for intimacy in our human-Earth relations." Berry criticized universities and other institutions for their emphasis on how humans can use and exploit the Earth through the systems and standards of the professions: science, engineering, law, education and economics. He believed that we humans have an inadequate recognition that it is this planet that brings us into being, sustains us in life, and delights us with its wonders.

Berry posited that "The Great Work before us (is) the task of moving modern industrial civilization from its present devastating influence on the Earth to a more benign mode of presence." It "is not a role that we have chosen... We were chosen by some power beyond ourselves for this historical task. We do not choose the moment of our birth, who our parents will be, our particular culture or the historical moment when we will be born. We do not choose the status of spiritual insight or political or economic conditions that will be the context of our lives. We are, as it were, thrown into existence with a challenge and a role that is beyond any personal choice. The nobility of our lives, however, depends upon the manner in which we come to understand and fulfill our assigned role."

Berry believed that we must expand the scope of religious and humanist concerns to embrace the larger life systems and all species of the planet. As a lawyer, I am intrigued by Berry's call for a broader vision of rights. Berry stated "As regards *law*, the basic orientation of American jurisprudence is toward personal human rights and toward the natural world as existing for human possession and use. To the industrial-commercial world the natural world has no inherent rights to existence, habitat or freedom to fulfill its role in the vast community of existence. Yet there can be no sustainable future, even for the modern industrial world, unless these inherent rights of the natural world are recognized as having legal status…"

Berry extended this thinking to the economy as well, stating that we "must recognize that a human economy can only exist as a subsystem of the Earth economy." Thus, Berry proposes a radical shift in our world view, leading to my question, Can we change our value systems in order to meet the challenge of the future?

4. HOW CAN WE MEET THE CHALLENGE OF THE FUTURE?

Scientists can create numerous solutions to address the climate change challenge, but nothing will happen unless governments and societies acknowledge their responsibility to do so. Eight years ago the American Academy of Arts and Sciences published the proceedings of two conferences held at the Academy as the Fall 2001 issue of Daedalus entitled Religion and Ecology: Can the Climate Change? These followed the ten World Religion and Ecology Conferences at Harvard 1996-8. All twelve were under the direction of Mary Evelyn Tucker and John Grim. The Daedalus issue includes the eloquent and powerful challenge of Professor Michael B. McElroy, then Chairman of the Earth and Planetary Sciences Department at Harvard and Director of the Harvard Center for the Environment.

McElroy stated: "We live at a unique point in the history of planet Earth. After almost four billion years of evolution, a single species... has evolved with the capacity to think, to contemplate not only its place in the universe but also potentially to control its own destiny and that of other species as well." "Only recently, however, in the past century or so, have we developed the capacity to alter the environment on a global scale."

McElroy went on to quote the late Roger Revelle, one of the first scientists to study global warming: "we have embarked on an unplanned global experiment and our ability to predict the consequences is deficient. We need to step back and take stock if we are to avoid serious mistakes. We need a moral compass: there are ethical as well as technical issues to be addressed if we are to chart a responsible course to the future."

McElroy challenged us on a basis other than science, asking: "Do we have a moral obligation to preserve the diversity of life forms on Earth? If our actions lead to elimination of entire ecosystems on the planet, tropical rainforests for example, should our children have the right to hold us accountable? What are the rules by which we should live and be judged? What is our proper place in nature? If posterity is to serve as jury, to whom do we answer as judge? If there are no penalties, why should we care? Science alone cannot provide answers to these questions. Nor can we expect a definitive response from our colleagues in economics."

Invoking both the Old and New Testament in response to the argument that the United States need not do anything about greenhouse gas emissions until developing countries act as well, McElroy warned: "Is there not an ethical imperative for the rich to take the first step? The New Testament extols the responsibility of the rich to help the poor."

McElroy concluded: "We need a global vision to recognize that there is a unity to life on Earth, that we are part of nature, not independent, that we have the potential to change our environment but that we must exercise this power with discretion. We need a deeper appreciation for ourselves and for nature, drawing on insights not only from science but also from the intellectual heritage codified in the world's great philosophical and religious traditions."

Brian Swimme, distinguished cosmologist and prior recipient of the Thomas Berry Award, stated in *The Hidden Heart of the Cosmos* "humans, through our scientific insight and our technological skills, have become a macrophase power, something on the level of the glaciations or the forces that have caused the great extinctions of the past. Yet we have only a microphase sense of responsibility or ethical judgment. We need to develop a completely different range of responsibility."

The hope that humanity can, and indeed will, sustain life on this planet rests with those governments and institutions that will marshall the intellectual and political resources to address the central environmental challenges that will determine the human future. Those scientists and economists who have studied climate change believe that the dangers can be abated, but the missing ingredient has been the willpower of government leaders and the public to recognize the gravity of the risks, to understand the applicable science, and to attack the problem, all of which are necessary to implement the solutions that can be developed.

5. THE RESPONSE TO THE CHALLENGE

Thoughtful institutions–governments, universities, corporations and world religions must address issues that relate to climate and the environment with a deep awareness of their relevance to the very maintenance of human life and the life of many other species on Earth. There has been a meaningful response to this challenge from the scientific community.

Many religious leaders have recognized the danger we face. In July, 2009, Pope Benedict XVI referred to and drew on "the great visions (of) Teilhard de Chardin," the French Jesuit scientist and philosopher who died in 1955," in expressing the hope that "at the end we will have a true cosmic liturgy, where the cosmos becomes a living host." Pope Benedict recently issued an encyclical entitled "Charity in Truth" ("Caritas in Veritate") in which he critiques our current economic system and how it harms both people and the planet, and Pope Benedict has also chosen "Care of Creation" as the theme for 2010 World Peace Day.

This follows in the tradition of Pope John Paul II, whose New Year message of 1990 stated "Theology, philosophy and science all speak of a harmonious universe, of a cosmos endowed with its own integrity, its own internal, dynamic nature. This order must be respected. The human race is called to explore this order, to examine it with due care and to make use of it while safeguarding its integrity."

Ecumenical Patriarch Bartholomew II, the leader of the Greek Orthodox Church, has repeatedly emphasized human responsibility for the environment, and has sponsored seven symposia on Religion, Science and the Environment, with an eighth to be held in October, 2009 in the United States, focusing on New Orleans and the Mississippi River. Archbishop Rowan Williams, leader of the Anglican Church, has made strong appeals to care for creation. And in August, 2009 the Episcopal Church in the United States adopted a resolution endorsing the Earth Charter, a resolution proposed by this Diocese of New York and the Diocese of Newark.

The mission of the Earth Charter Initiative is to promote the transition to sustainable ways of living and a global society based on a shared ethical framework that includes respect and care for the community of life, ecological integrity, universal human rights, respect for diversity, economic justice, democracy, and a culture of peace.

The Dalai Lama and numerous other leaders of world religions similarly urge increased attention to the issues of climate change and the preservation of biodiversity. The role of religion is crucial; for many people, religion is the most powerful force in their lives, not community or nation.

Some governmental leaders are clearly aware of the dangers of climate change, and to the ongoing destruction of the intricately-balanced biosphere which we share with other species. Prime Minister Anders Fogh Rasmussen of Denmark, speaking at the United Nations General Assembly in September, 2008 referred to the "grinding catastrophe of global warming". And the parliament of Scotland in June, 2009 set the world's most ambitious greenhouse gas reduction targets, 42% by 2020.

The Global Humanitarian Forum released a report in September, 2009, *The Anatomy of A Silent Crisis*, documenting the impact of climate change as the most severe, ongoing, silent, unrecognized, crisis of human history. Its president, Kofi Annan, former secretary general of the United Nations states in his introduction: "If we do not reverse current trends by close to 2020, we may have failed. If political leaders cannot assume responsibility for (success at the COP-15 conference in Copenhagen in December, 2009), they choose instead responsibility for failing humanity. In 2009, national leadership goes beyond the next elections, and far beyond national borders."

On the economic and business side, increasingly economists are aware of the potential significant economic impact of Climate Change, both the costs of mitigation and the costs of doing nothing. The Stern Review's *Economics of Climate Change* in 2007 concluded that not taking action in response to climate change will cost more than taking action. At the corporate and investment level, Ceres and the Global Reporting Initiative are leading the movement for investors and corporations to understand the impact of climate change on each corporation.

But we live in an age dominated by short-term thinking-two and four year electoral cycles, quarterly and annual financial results, and values that reflect material consumption and instant gratification. People find it difficult to consider the long term – a future beyond our own lives, and perhaps those of our children. Analysts of population growth generally conclude their estimates around the year 2100, as if we either cannot project further or have no responsibility beyond that date. But 2100 is within the lives of our children and grandchildren. What do we expect their lives to be like at the end of this century? And what will their expectations be in 2100 for their children and grandchildren? Are not future generations an imperative for action by the human community now?

I would note also that for most of the policymakers of the world, "development" only means economic development, but we really should be emphasizing a more comprehensive definition of human development, with a commitment to social and moral values along with improvement in standards of living for all people.

The *Boston Globe* carried a cartoon on August 21, 2009 by Dan Wasserman showing two United States Senators chatting and one remarks to the other "Is it time we got serious about climate change? Experts predict drought, famine, disease... even threats to National Security," to which the other replies "Ah, yes, but no sign of any risk to re-election!"

While it is usual human behavior to address problems only at the last possible moment, why has there been such a lack of governmental response, worldwide, to the factual analyses of scientists and the call to action by so many religious leaders? Part of the responsibility rests with the media which, with notable exceptions, is relatively ignorant of science, as are most people, and easily confused by propaganda from certain selfish business interests and ideologues. The American press generally has insisted on what they call "balanced reporting," meaning that any article which reports on climate change must include some equivalent comment from an environmental skeptic, whether that person is truly informed about the science of climate change or not. This insistence by much of the press on requiring a balancing viewpoint suggests that science is just opinion, and not fact.

Compare the response of the Western world, especially the United States, to the Cold War. I do not recall the press finding it necessary to present a balancing viewpoint, reflecting Soviet attitudes towards and fears of the West. But then, the existential threat of nuclear annihilation was seen as a clear and present danger, as opposed to the gradual, but potentially fatal global warming, which threatens to conquer this Earth like an irreversible cancer.

6. THE DANCE OF THE EARTH

Over the summer, I pondered what to say upon receiving this prestigious award. Focus came to me when I saw the world premiere of Orbo Novo at Jacob's Pillow in Becket, Massachusetts, a dance with original music presented by Cedar Lake Contemporary Ballet, choreographed by Sidi Larbi Cherkaoui and based on Jill Bolte Taylor's book My Stroke of Insight. Dr. Taylor was a neurologist who suffered a stroke, and subsequently, having recovered, wrote of that experience. Orbo Novo creates a universe where past and future meet, dancers are trapped within a labyrinth-a moveable set of cage-like vertical grids, which constitute borders and limits. They dance as if they are trapped within their own bodies, as well as within the stage set. The program notes suggest that Orbo Novo searches for the perfect balance between heaven and earth, an exploration of the present moment, the Now, by trying to untangle the future from the past. Cherkaoui's note concludes: "I see it not so much as

choosing to hope, but more as hoping for the ability and insight to choose."

Novo Orbo became for me a metaphor for the human condition today, as we all share this planet, perhaps trapped on it, as Earth shows the strains of climate change, the result of our human actions. Is Earth suffering a stroke, or cardiac arrest? and the question arises whether Earth can recover, as did Dr. Taylor.

I interpreted *Novo Orbo* as a dance of the Earth, and we humans have in fact become the choreographers of this Earth. We are not dancers controlled by fate. There is no escaping from this planet, and unless we address the existential threat of climate change, we are simply choreographing a dance of destruction, ultimately, at least for the human species and many other species on this Earth. Or will we, in Cherkaoui's words, have "the ability and insight to choose" the way out of our trap?

John Holdren has been quoted in the past as saying "The human response to climate change will be three-fold: mitigation, adaptation and suffering; and we will have a great deal of all three." The only question is how much we will have of each.

7. CONNECTING VALUES AND SCIENCE

Thomas Berry has taught us that we must connect both science and values to the reality that we live totally immersed in the Earth community. Neither science nor religion has as great an impact as they should on public policy relating to global warming, which I believe is the most serious global challenge of our time. As we observe the negotiations leading to the COP15 Conference in Copenhagen this December, there is an immense disconnect between what scientists and others believe is the minimum that must be achieved to address the problem and preserve this Earth as we know it, and the political leaders who seem bent only on achieving as much as they can achieve, whether sufficient or not.

At the United Nations earlier this week (September, 2009), the leaders of the United States and China offered non-binding commitments on climate change, devoid of definitions or timetables. Hopefully, their stated good intentions will result in serious negotiations that may yet lead to success at Copenhagen. At the same session, Pachauri, Chair of the IPCC, warned "science leaves us with no space for inaction now." In short, the world's policymakers are wrestling with scientific imperatives that are not susceptible to political compromise. As our political leaders seek a "solution" that will strike a "balance" between those who recognize the problem and those who do not, nature scoffs. Or, in the words of the ancient proverb: "Man plans; God laughs."

Berry presented the case that in the modern world, the dominant intellectual framework since Descartes and Newton has made human societies as independent as possible from the natural world, and made the natural world as subservient as possible to human decisions. However, he did not contend that the application of our scientific-technological powers in this direction derived solely from the scientific tradition, although that is a common accusation. He stated "The danger and the misuse have come ultimately from the deficiencies of the spiritual and humanist traditions of Western cultural development... Both our religious and our humanist traditions are primarily committed to an anthropocentric exaltation of the human." Perhaps the success of the human species has blinded us to the threat of climate change due to anthropocentric arrogance.

Berry considered the challenge of our time as similar to a geological shift. "So now in this transition period into the twenty-first century, we are experiencing a moment of grace, but a moment in its significance that is different from any previous moment. For the first time the planet is being disturbed by humans in its geological structure and its biological functioning in a manner like the great cosmic forces that alter the geological and biological structures of the planet."

Berry saw a "moment of grace" as having both destructive power and creative potential. Referring to the potential impact of climate change and global warming, Berry concluded: "So severe and so irreversible is this deterioration that we might well believe those who tell us that we have only a brief period in which to reverse the devastation that is settling over the Earth." And Berry expressed the profound hope that we human beings would rise to this challenge and develop a way of life on and in this Earth that is not destructive.

Berry called the expectation of modern human beings that everything can be solved by technology a "technological trance". He disdained the blind faith that many have that technology will solve all problems. We all know that technological advances not accompanied by application of the "precautionary principle" have led to the unregulated use of chemicals in agriculture and industry, resulting in significant harm to the health of people as well as the environment. Faith in technological solutions must be matched with a healthy respect for both foreseeable and unintended consequences.

Nevertheless, the moral imperative of mitigating the impact of climate change and adapting to it requires us to embrace the potential in innovative technologies. No one could have foreseen the unbelievable technological progress in virtually all fields of human endeavor since Sputnik was launched half a century ago. Immense sums have been invested in the exploration of space, the development of medical advances, military technology, and the internet. We must make the same deep commitment to investing in research and innovation in all directions that might hold promise for mitigating the impact of climate change, and adapting to it.

The present estimate of the potential impact on Earth of unchecked climate change is calamitous, and we do have, in geological time, only a brief period in which to mitigate and adapt. We must use technology as effectively as possible, but technology alone cannot achieve the avoidance of the destructive power of climate change. This is the "moment of grace" described by Berry, the brief period in which we human beings must undergo a moral transformation in our habits and our lives, in order to fulfill the role that Berry saw as the challenge of our historical moment.

We cannot rely on science and technology to miraculously save our Earth. With an understanding and acceptance of scientific reality, we human beings must attain the moral and political will to preserve our planet for our children, grandchildren, and further generations. Religion and science see the long-term problem; it is time that all of society take action.

8. CONCLUSION

Thomas Berry is the preeminent inspirational leader in the field of moral and ethical ecology, which he based on the cosmology of Teilhard de Chardin. Berry stated in *The Great Work, Our Way into the Future*: "It is tragic to see all those entrancing forms of life expressions imperiled so wantonly, forms that came into being during the past 65 million years, the lyric moment of Earth development. Yet as so often in the past, the catastrophic moments are also creative moments. We come to appreciate the gifts that the Earth has given us."

I believe we must choreograph our way into the future by listening intently to the music and dance of the Earth, and of all the species that share Earth with us, as represented by the examples of the animals, birds, reptiles, insects, fish and trees, appearing on the cover design of the program for this award ceremony. It reflects my thinking that we need to include the concept of an Earth community in the arts as well as in science, ethics and policy. I cannot think of a better way to conclude these remarks than by reading the dedication that Thomas Berry wrote for *The Great Work*:

"To the children To all the children To the children who swim beneath The waves of the sea, to those who live in The soils of the Earth, to the children of the flowers In the meadows and the trees in the forest, to All those children who roam over the land And the winged ones who fly with the winds, To the human children too, that all the children May go together into the future in their full Diversity."

Notes

The quoted remarks of Thomas Berry and Brian Swimme appear in *The Great Work*, Thomas Berry, 1999.

The quoted remarks of Michael B. McElroy and Roger Revelle appear in *Daedalus*, the American Academy of Arts and Sciences, Fall 2001, in the paper "Perspectives on Environmental Change: A Basis for Action", Michael B. McElroy.

The quoted remarks of Kofi Annan appear in the introduction to *The Anatomy of a Silent Crisis*, Global Humanitarian Forum, 2009.

The quoted remarks of James Hansen and Hans Joachim Schellnhuber appear in *The New Yorker*, June 29, 2009, profile "the Catastrophist", by Elizabeth Kolbert.