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Faith and the Challenge of Global Warming

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The Challenge of Global Warming

According to the Intergovernmental Panel on Climate Change (IPCC), the earth is gradually getting warmer, and human activity is a significant contributing cause. This warming is already changing the face of the earth in ways that were unanticipated only a generation ago. Worldwide, changes in weather patterns are already disrupting human ability to produce food, changing the distribution and severity of some diseases, threatening the safety of homes, and causing many plant and animal species to become extinct.

There is a prominent thread throughout the world's major religions that a benevolent Creator created this world and declared it to be good. The Creator granted stewardship of this beautiful and diverse creation to humankind. We are now learning that the face of the earth is changing in troubling ways, and that we, the stewards, are significant contributors to those changes. The report of the IPCC impels us to reassess the quality of our stewardship.

We will examine briefly the scientific understanding of global warming as presented by the IPCC and consider how we can respond to this challenge as people of faith.

The Intergovernmental Panel on Climate Change

(IPCC), a group of more than 2000 leading climatologists, is sponsored by the World Meteorological Organization, an agency of the United Nations. The IPCC was assigned the responsibility of analyzing and reporting the scientific conclusions of climatologists and related researchers from all over the world. The IPCC began its work in 1988, and in November of 2007 released the fourth of its Assessment Reports. The reports are available at <http://www.ipcc.ch/>.

The Causes of Global Warming

Global warming is the increase in average global atmospheric temperature over an extended period of time. The consensus of climate scientists is that greenhouse gases are the major contributors to global warming. These gases capture a portion of the sunlight that is reflected from the earth's surface and convert it to heat instead of letting it pass into outer space. The more of these gases there are in the atmosphere, the more heat the earth retains.

Scientists struggle with how to distinguish between natural variations in temperature from one year to the next and temperature variations that are the result of human activity. They try to distinguish between which species of plants and animals have disappeared primarily because of human activity and which ones would have disappeared naturally. Because of the complexity of the factors involved, they are hard pressed to know how to predict the trends of these and hundreds of related phenomena. It is the task of the IPCC scientists to make these determinations. To do it, they piece together the findings of thousands of reports from thousands of researchers all over the world and tease out the patterns and implications.

Climate scientists have chosen the year 1750, around the beginning of the Industrial Revolution, as the beginning of significant human contributions to global warming. The primary human contribution has been the huge quantities of greenhouse gases (primarily carbon dioxide, but also methane and nitrous oxide) that humans have poured into the atmosphere over the past 250 years. In 2004 alone, human activities produced about 30 billion tons of carbon dioxide, along with amounts of other greenhouse gases equivalent to about another 20 billion tons of carbon dioxide in global warming effects. These quantities are above and beyond what is emitted from natural sources.¹

How Certain Can We Be?

Many people take the position that if we do not know with complete certitude the causes and effects of global warming, we should not do anything, for fear of creating more problems than we cure. The IPCC scientists tell us that, because of the complexity of the systems they are studying, it will never be possible to achieve such a high level of certainty. The IPCC policy summaries are peppered with phrases like "very likely," "very high confidence," "medium confidence," "much evidence," and the like. Scientists, by nature and by training, tend to be highly conservative and cautious when stating scientific results. They talk openly about any uncertainties in their conclusions, no matter how slight. This is not the kind of language that inspires people to take action. But the IPCC scientists say that action is necessary. "It is important to recognize, however, that some level of uncertainty is unavoidable and that at times the acquisition of knowledge can increase, not decrease, uncertainty. Decisions will nevertheless have to be made."²

Many ordinary people, especially those who place a high value on certitude, may mistakenly believe that when

“Climate Change” vs. “Global Warming”

People tend to use the terms “climate change” and “global warming” interchangeably. The IPCC has chosen to use “climate change” in its reports. The U. S. Environmental Protection Agency has chosen “global warming,” based on market studies finding that term more compelling to most people. There are those who feel that both of these terms are too benign. For instance, John Holdren, Director of the Woods Hole Research Center and Professor of Environmental Policy at Harvard University, said, “‘Global warming’ is a misnomer because it implies something gradual, uniform, & benign, none of which is true; ‘global climatic disruption’ is a more accurate description.” (See bibliography for reference.)

scientists speak in their accustomed manner, they are expressing lack of confidence in their conclusions. This is not an accurate reading of the message of the IPCC scientists. They are sufficiently certain of their conclusions that they say, without qualification, that we must regard adaptation to and mitigation of global warming as essential activities requiring immediate action.

The IPCC has analyzed extensively the complex economic, social and political factors that must be considered in designing and implementing policies for global warming mitigation and adaptation. They tell us that there is high agreement among climatologists that we should carefully manage the risks inherent in

operating in a situation of uncertainty.

Decision-making about the appropriate level of global mitigation over time involves an iterative risk management process that includes mitigation and adaptation, taking into account actual and avoided climate change damages, co-benefits, sustainability, equity, and attitudes to risk. Choices about the scale and timing of [greenhouse gas] mitigation involve balancing the economic costs of more rapid emission reductions now against the corresponding medium-term and long-term climate risks of delay.³

They summarize this message in another statement: “Learning is an integral part of the decision-making process. This is also referred to as ‘act then learn, then act again’.”⁴ They further advise us that we can’t make a few decisions now, and then stop being concerned about global warming.

Climate change decision-making is not a once-and-for-all event. Rather it is a process that will take place over decades and in many different geographic, institutional and political settings. Furthermore, it does not occur at discrete intervals but is driven by the pace of the scientific and political process.⁵

The Impact of Global Warming

The consequences of global warming are easily as complex as the causes. The IPCC presents the primary evidence in great detail. Some examples are: substantial melting of glaciers and the polar ice caps; increased frequency of heat waves and decreased frequency of extreme cold weather; sea level rise due to ice melt and thermal expansion of sea water; more intense and longer droughts in parts of Africa and southern Asia; significantly increased precipitation in the eastern parts of North and South America, northern Europe, and northern and central Asia; and warming of the oceans to a depth of 3000 meters (almost two miles).⁶

The consequences of these primary effects are already significant: earlier greening of vegetation in the spring; earlier bird migration and egg laying; shifts in ranges of land plants and animals to higher latitudes and higher elevations; changes in locations, migration and abundance of marine and fresh water species, ranging from algae to fish; effects of drought on crops; and shifts in the geographical incidences of diseases like malaria and cholera.⁷

Predicting the Future

Climate scientists use computer simulations of climate systems both to better understand past climate patterns and to predict future patterns. In these simulations, they include all natural and human-made factors that they understand to be relevant. The simulations that considered only natural influences on climate did not correspond well to the actual observations of the past few decades. The simulations that included human influences gave a close fit.⁸ Scientists have used these simulations to predict the course and effects of future global warming. Given what is known today and what can be predicted through computer simulations, what does the future look like?

The IPCC says that over a period of centuries or millennia, sea levels could rise as much as four to six meters (about thirteen to twenty feet). Sea levels have already started rising, and even if no more greenhouse gases were to be added to the atmosphere, they would continue to rise for many decades. By the 2080s, millions of people living in low-lying, densely populated areas, such as the mega-deltas of major rivers in Africa and Asia, will be at increased risk of being flooded every year due to increased runoff upstream and to tropical storms.

Scientists tell us that there will be significant impacts on both terrestrial and marine life and, consequently, on the food supplies of much of the world’s population. In many regions, the kinds of crops that can be grown will change, and in other regions it will no longer be possible to grow any crops at all. At minimum, this will cause economic disruption, which will result in political turmoil. Agricultural collapse has already contributed to destabilizing the societies of much of sub-Saharan Africa as the deserts there have expanded.

Although all of the world's population is affected by global warming, the risks are not distributed evenly. According to the IPCC, "Poor communities can be especially vulnerable.... They tend to have more limited adaptive capacities, and are more dependent on climate-sensitive resources such as local water and food supplies."⁹ The IPCC says further, "Climate change impacts spread from directly impacted areas and sectors to other areas and sectors through extensive and complex linkages."¹⁰ One of the impacts is the effect on the health status of millions of people through increases in occurrences of malnutrition, weather-related hazards and communicable diseases.¹¹

IPCC Approach to Ethics

The IPCC scientists, in addition to reporting scientific findings, have devoted a substantial effort to reporting studies dealing with the economic, social, political and ethical dimensions of global warming. Science can describe the issues and the impacts of various approaches, but scientific method does not provide a means of assigning social values. And here is a quandary, because values drive the choice of responses to global warming, yet there is no consensus on which value systems are applicable. According to the IPCC, "While there is consensus in the literature about how rules should be assessed in relation to specific moral criteria, there is much less agreement on what criteria should apply (e.g. should they be based on libertarian or egalitarian rights-based approaches, or on utilitarian approaches)."¹²

Secular ethical systems tend to focus exclusively on one or another aspect of human relationships, such as personal liberties and property rights (libertarian approach), outcomes of actions (utilitarian approach) and processes (conscience or rules). Secular approaches to ethics start with values based on human desires. These desires may be selfish or altruistic.

All of the world's major religions claim that their ethical teachings come from a transcendent Being Who is the Creator of the universe. In the English language, the name that we most commonly use for the Creator is "God."

Unfortunately, there is a general atmosphere of contention among religious communities about the fundamentals of religion. This contention is often a manifestation of sectarianism within each of the major world faiths, which makes it almost impossible for an outsider to determine what any one faith truly stands for. The picture is further complicated by biased translations of religious scriptures. The conflicts within and among religious communities have had the unfortunate consequence of diminishing the credibility of all religion in the eyes of many people.

The following discussion is predicated on the belief that the commonalities among religions are far more important than the differences between and within religions.

A Faith-Informed Approach to Ethics

The starting point for faith-based ethics is God's declaration of people's proper place in creation. Through faith, we know that all of creation belongs to God. We humans are part of creation and are stewards, not owners, of creation.

There are two complementary aspects of human relationship with creation. On the one hand, faith teaches that God has given us the blessings of creation for our prosperity. On the other hand, because we are inherently spiritual beings, we must avoid weighing ourselves down unnecessarily with the things of this world. It is only through Divine education that we are able to balance these complementary aspects and realize our true stations as spiritual beings.

When we recognize our true nature, we acknowledge that human contributions to global warming are not only a technological and economic concern, but also a spiritual concern. The human contributions to global warming, as well as to other forms of environmental degradation, derive from human preoccupation with materialism to the point of neglecting spirituality. The cures must address spiritual values head-on: unity, justice, non-exploitation, fair sharing of prosperity, narrowing the gap between rich and poor, equal opportunity for all, especially in the relationships between women and men, and the harmony of science and religion. We must acknowledge candidly that the amoral forces of the market place and the best intentioned designs of governments cannot adequately address the complex challenges of global warming. Altruism has to play a prominent role, and the primary motivator of altruism is faith in God.

Through faith, we learn that stewardship of creation implies respect for all of the natural world and appreciation of its beauty. People of all faiths, recognizing this commonality, are uniting to address the problems of environmental degradation, including global warming. As people around the world have become more aware that the condition of the environment and the economic conditions of people are inextricably intertwined, a faith-informed passion for justice has added greater impetus to this process of unification. We know that environmental degradation has been both a cause and a result of poverty. We know that pollution, climate disruption, extinctions, droughts and flooding are all interrelated. We know that health, economic and social justice, sustainable development and education are inextricably tied together. In short, no part of life on this planet can escape the consequences of irresponsible use of the blessings of God's creation.

If there is a bright spot to be found in the challenges that face us, perhaps it is the growing recognition that because all of humanity is threatened by the consequences of global warming, we need to work together to address the challenges successfully. We can remedy the harm that we have wrought through our disunity only if, going forward,

we act in unity. We can do this to the extent that we are willing to deem our commonalities more important than our differences. The unity that we seek is a unity in diversity, an explicit recognition of and respect for both the commonalities that unite humanity and the unique gifts that each culture and each faith brings to humanity. This is true globalization.

We all know through our respective faiths that we have an obligation to actively care for our fellow humans. Humility is perhaps the most important virtue that enables us to care effectively for others: humility in our relationships with all of our fellow humans, humility before the awesomeness of our responsibilities as stewards of creation, humility and contrition as we contemplate the harm that we collectively have caused and continue to cause to the earth, humility as we face our deficiencies of knowledge of how to repair that harm, humility as we contemplate the beautiful and intricately interwoven relationships among all aspects of God's creation.

What We Can Do

We can embrace moderation in our consumption of the earth's resources, thus reducing our contributions to global warming as individuals and as communities. Specifically, we can moderate our use of heating, lighting and transportation.

We can educate ourselves, so that we more fully appreciate how global warming is inextricably intertwined with a host of other dimensions of existence on this planet: pollution, economics, social justice, environmental degradation, health, war and peace, religious intolerance, to name some of the major ones. None of these significant world problems can be solved apart from all the others. Furthermore, we cannot solve these problems in just one region of the world apart from all other regions.

We can be concerned for posterity as well as for ourselves. Our obligation to love extends not only to the person in front of us, not only to the people on the other side of this planet, but also to those who will succeed us, generations yet unborn. Do they not deserve to enjoy the blessings of creation as much as we do?

We can work with social institutions, including governments and industry, to manage our communities for the good of all, and not just for the benefit of a select few. We can give all points of view a fair hearing, so that we learn the truth of the matters that come before us.

We can cease to indulge ourselves in all of the -isms with which humankind has fragmented itself. We are one people, and we all share this one planet. Our fortunes are inextricably intertwined, so that harm to one is harm to all, and benefit for one is truly a benefit only if it leads to prosperity for all.

About the author: Archie Abaire's multidisciplinary education spans a Bachelor of Science degree in chemistry, three years of Christian theology, and a Master of Social Work. Mr. Abaire is a member of the Bahá'í Faith.

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Endnotes

- ¹ IPCC, 2007a, pp. 2-3
- ² Halsnæs, K., et. al., 2007, p. 129
- ³ IPCC, 2007c, p. 18
- ⁴ Halsnæs, K., et. al., 2007, p. 129
- ⁵ Halsnæs, K., et. al., 2007, p. 129
- ⁶ IPCC, 2007a, pp. 5-9
- ⁷ IPCC, 2007b, pp. 8-10
- ⁸ IPCC, 2007b, p. 9
- ⁹ IPCC, 2007b, p. 12
- ¹⁰ IPCC, 2007b, p. 12
- ¹¹ IPCC, 2007b, pp. 11-18
- ¹² Halsnæs, K., et. al., 2007, p. 147