

**Environment: Scientific Knowledge and Ethical Action**  
**Spring Environmental Lectures 2007**

By Christina Heisser

ZCRS co-sponsored two extremely well-attended environmental lectures this spring. Ray Pierrehumbert, a professor of geophysical sciences at the University of Chicago, presented the inaugural Religion and Ecology Lecture in March, speaking on the topic "Global Climate Change: What is Happening and What We Can Do About It." Dwight Hopkins, a theology professor in the University of Chicago Divinity School, delivered the Earth Week Lecture, "Ecological Justice/Environmental Racism." Each lecture drew approximately 100 listeners from the Lutheran School of Theology at Chicago (LSTC), the University of Chicago, and the Hyde Park community. Dr. David Rhoads, Professor of New Testament at LSTC, coordinated the initiative, a collaborative effort including ZCRS, LSTC, McCormick Theological Seminary (MTS), the Hyde Park Religion and Science Society, and the University of Chicago Religion and Environment Initiative.

**Problem: Global Climate Change**

Dr. Pierrehumbert is a scientist who is practiced in speaking to non-academics. He presented scientific information to the public as lead author on the Intergovernmental Panel on Climate Change Third Assessment Report. He works on developing solutions to climate change locally as a member of Mayor Daly's Task Force on Climate Change. He also contributes to the award-winning RealClimate.org climate science blog.

Dr. Pierrehumbert explained that global climate change is a product of rising levels of carbon dioxide in the atmosphere. Carbon dioxide is the most important warming gas in the earth's atmosphere. While carbon cycles in and out of the atmosphere naturally, human activity also contributes to carbon dioxide levels. As humans burn fossil fuels, carbon dioxide is released as a byproduct. Carbon dioxide levels since the Industrial Revolution are much higher than the previous million years, and they have been growing at much faster than natural rates. This translates into a warmer climate. Human contributions to increased carbon dioxide create a warming effect that is fourteen to twenty times greater than would be caused by the natural system. If we continue to burn fossil fuels at this rate, Pierrehumbert said, the results could be cataclysmic. At current rates of warming, a hot summer day in Chicago in the year 2100 will be 35°F warmer than today. While 130°F temperatures will not kill everyone, they will be deadly to some, particularly the poorer and more vulnerable sectors of the population.

While current rates of climate change pose serious dangers to human life, Pierrehumbert emphasized that people can make a difference by changing their behavior. He suggested that one way to do this on a personal level is to attempt to reduce your "carbon footprint," or the amount of carbon dioxide released by your activities. Some of that reduction can be made through simple choices: to reduce consumption, to drive less often, to be conscious of energy used in food production, to replace standard light bulbs with compact fluorescent bulbs.

Pierrehumbert noted that some changes need to occur on the policy level as well if Americans will reduce carbon output enough. A mild carbon reduction goal would allow CO<sub>2</sub> levels to double over the next 100 years. In order to make that happen, we would need to reduce carbon output to 1.2 tons per person per year. For Americans, that would be a drastic reduction, as Americans currently produce 5.5 tons of carbon per person per year. Pierrehumbert argued that it is possible to reduce carbon use sufficiently and still live well. He used the example of the French, who currently output 1.5 tons carbon per person per year, in order to illustrate the way policy differences and infrastructure choices (often also decided by policymakers) make low carbon output possible. France makes intensive use of nuclear power, and French people predominantly use speedy trains rather than planes to travel. Cities are compact, and food is grown close to them. Of these factors, Pierrehumbert underscored power plants as the single most important. He argued that coal-fired energy poses the biggest threat for the future of the climate. Since 1980, the United States has doubled its use of coal. As coal is a cheap and abundant source of energy, it will be natural to continue to increase coal use. Pierrehumbert suggested that the government should monetize the environmental and health costs of coal mining, which would temper some of coal's attraction.

Pierrehumbert closed his lecture with a passionate call to change. Pierrehumbert argued that Americans are wreaking ecological destruction for meager payoffs. He said, “We’re selling our heritage for junk – for the ability to live in distant suburbs where you don’t know your neighbor, for the ability to drive vastly excessive vehicles.... It’s the abundance of possessions, possessions that don’t contribute to the life of the spirit, that are causing us to put out so much carbon.”

### **Problem: Environmental Racism**

Dwight Hopkins, a professor of theology at the University of Chicago Divinity School, spoke on the problem of environmental racism. Hopkins argued that the traditional environmental movement has historically excluded people of color and poor people. Its focus on conservation has neglected issues of justice, while poor people and people of color have fought for equal access to environmental resources and equal protection from contaminants. Environmental racism is widespread. The injuries it has caused require a holistic healing response that articulates a vision of justice and organizes grassroots efforts to fight for justice. In short, Hopkins argued, environmental racism requires an environmental liberation theology.

Although the environmental justice movement was formally founded in the late 1980s, environmental racism is not a new problem, said Hopkins. The struggle for environmental justice played a major part in civil rights struggles in modern America. African Americans fought for access to clean environments and recreational spaces such as swimming pools and public parks throughout the twentieth century. In the 1960s and 1970s, Chicano labor activists in the United Farm Workers fought for protection from pesticides and Native Americans struggled to win land rights. Many struggles for civil rights have had environmental components, particularly regarding access to resources.

Despite the efforts of grassroots movements for environmental justice, environmental racism persists. The statistics are striking. Fifty percent of children suffering from lead poisoning are black. Two-thirds of all uranium in the U.S. is located in Native American territories. Ninety-two percent of people suffering from pesticide-related skin diseases are from a Latino background. Three out of five African Americans and Hispanics live in areas with uncontrolled toxic waste sites. Approximately half of all Asian Americans, Pacific Islanders, and Native Americans live in places with uncontrolled toxic waste sites.

Hopkins proposed that a black environmental liberation theology might be an effective tool for healing some of the damage caused by environmental racism. He quoted James H. Cone, the father of black liberation theology, “Justice fighters for blacks and the defenders of the earth have tended to ignore each other with their public discourse and practice... Their separation from each other is unfortunate because they are actually fighting the same enemy: human beings’ domination of one another and nature.” Hopkins pointed out that the Bible also links justice issues and creation-care. Romans 8:19-23 links the freedom of creation with the freedom of God’s children. Ephesians 1:1-10 speaks of Christ kneading together and unifying all that is in heaven and earth. Matthew 25:31 reminds us that we achieve redemption by serving the least of God’s people. Hopkins concluded that the Bible illustrates a unity between the hope for the liberation of the children of God and hope for the liberation of the creation. “It is a sin to monopolize environmental wealth and resources from earth [that have been] bequeathed to all creation.”

Hopkins suggested that a black environmental liberation theology formulated by Diane Glave may answer the need for healing occasioned by environmental racism. Glave bases her black environmental liberation theology in three main sources: the Bible, history, and grassroots organizing. She argues that theology must incorporate praxis as well as reflection. Dr. Glave summarizes her vision in the following: “Black environmental liberation theology is both a theology and an ideology that is actualized by shielding contemporary African Americans exposed to toxins and pollution from landfills, garbage dumps, and auto mechanic shops or sewage plants.”

Hopkins argued that Glave’s theology is a model for holistic healing that seeks to heal body, mind, and spirit. He emphasized the importance of action in her model, concluding: “In response to African Americans being inequitably exposed to toxic chemicals and waste, the church is called to further expand grassroots and national reform....”

Dr. Hopkins and Dr. Pierrehumbert both argued for the necessity of change in our responses to environmental degradation. Pierrehumbert urged a combination of individual action and pressure on

policymakers in response to the scientific problem of global climate change. Hopkins suggested that grassroots organizing and community healing were both necessary to redress the injustices of environmental racism. Both lectures sought to raise consciousness and inspire action on environmental problems in order to alleviate current human suffering and minimize it in the future.