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Science, Religion, and The Missing Link

Sanctum: The Undergraduate Journal of Religion at Columbia University is a new student publication dedicated to the academic exploration of religion and expression of the individual religious experience on Columbia’s campus. Sanctum is managed by a dedicated editorial board, headed by editor-in-chief Stephanie Riederman (CC 2011) and recently published its second issue, which focuses on the intersection between science and religion. In the following article from Sanctum’s spring 2011 issue, staff writer Shira Poliak (BC 2013) sat down with professor and director of the CSSR, Robert Pollack, to discuss the Center’s mission and work as well as his personal take on the ethical and moral dimensions of science.

What prompted the founding of The Center for the Study of Science and Religion (CSSR)?

A push and a pull. The push came from the historical fact that I had been the dean of Columbia College from ’82 to ’89. A decade later I was the author of Signs of Life and asked to give a series of talks, which became Faith of Biology. I became aware that I was no longer satisfied with the fact that my best contribution to science was going to be running a government-funded lab. Consequently, I decided not to reapply for my grants once they ran out. That was the ultimate push. For me, the important questions no longer lay within the lab.

The pull was another historical fact: At that time, Columbia was receiving tens of millions of dollars a year in royalties from a patent held by a colleague at the Medical Center. That money, because it was patent money, had a limited extension in time before it would end. The trustees would not allow it to go into the base of the budget out of fear that upon its termination, there would be a deficit. Instead, they gave it to the university provost’s office to distribute for start-up enterprises that would have a chunk of money up front and would then have to find outside funding. I conceived of the CSSR as a justifiable use of that money and was able to get started with those funds. Jeff Sachs then arrived from Harvard and started a reinterpretation of the Earth Institute. In a wonderful conversation with Jeff Sachs, it became clear to us both that the obligations of global sustainable development were as much an ethical and moral obligation as a political or scientific one. We agreed that the CSSR should be one of the centers of the Earth Institute, which is anomalous.

Most places that are consortia of academic enterprises given over to global systems don’t have anything to do with established religion at any level. That’s why we’re in both places; that is to say that we’re, first of all, in the academic science and social science side of things. And, because the Center was set up that way, I discovered the great need, interest, and yearning of people working out of religious commitment for facts about the natural world presented in an unthreatening way. So I began a series of courses on DNA and on evolution, sustainability, and environmentalism, taught by me and my colleagues at the CSSR. Now there will be a new Earth Institute undergraduate major (sustainable development), and I expect that we will require an ethics course or two for that major.

What do you mean when you say that globalization demands us to explore these questions on a moral, ethical level?

Let me see if I can be concrete. Last year, China produced more CO2 into the atmosphere than the United States did and therefore became, in global systems terms, the biggest economy, not in terms of money, but in terms of its consequences on the planet. A rational person would say that it is a problem that China has now reached that point. Now a moral problem arises. A person says to himself, I meet myself as a Chinese person and I imagine myself as that person, the same as me but from China. That person tells me, “We are doing the same thing as other nations, but you are emitting five times more carbon dioxide per capita than I am, than my country is. Why should I not want to be where you are?” That is the moral question. We say that it’s bad for the planet, but we don’t want to do our part. If we are going to be honest about it, we need to say that we’ll meet China half-way. That means managing with half the carbon dioxide output as we now have. Try and find any politicians who say that. Why don’t they? Because they would lose their jobs. That’s the moral gap.

The easy solution isn’t doable. It isn’t doable, not because of ignorance, but because the facts are so terrifying that people try to avoid confronting the reality. Among the people who stably, reproducibly have the strength to confront this moral problem of our responsibility to the rest of the world are religious people. It’s not that scientists don’t care, but it is difficult for them to confront the problem. The religious path to that confrontation turns out, in my experience, to be a very useful thing to understand and most scientists don’t understand that religious path. They think of it as a
We cruise like billiard balls bumping off each other without reflecting that caring for another person without any return is prerequisite to our mental state of free will.

competition, but it's not. Two people can have completely different motivations even though they wish to see the same thing resolved, whether because it's an economic optimization and social choice issue or whether because it's the right thing to do.

What do you think can be gained by studying the interaction between science and religion?

I don't think we study the interaction. We use the insights of both to address the problems that are otherwise apparently insurmountable. We need the tool kits provided by both ways of thinking in order to get passed the paralysis of terror and denial.

According to the CSSR website, “questioners must be willing to accept the burden of sharing both objective knowledge and subjective experience with each other” in order to examine the “issues lying at the boundary of the scientific and religious ways of comprehending the world and our place in it.” How is this balance achieved?

By living a self-conscious life and trying to be honest with yourself about your limitations, your fears, your anxieties, your wishes, your competitive instincts, your terrified instincts, your happy instincts and just knowing yourself. That's a glib answer.

The larger answer would be that when looked at as a species, people are primates, and we share with primates an advanced, complicated social independence. In us primates, social independence is most marked by a period of extraordinarily delayed helpless infancy. Every one of us begins life with an adult dedicating a vast amount of resources to keeping us, not only alive, but socialized, engaged. The four-letter word for that is love. The same exact experience (of love) is what end-of-life care is about. How do you bring love into those last moments? The paradoxical observation I would make of us as a species is that our unique emergence through this delayed infancy of a self-aware consciousness has brought about the unintended consequence of a false abstraction: a non-biological, but real abstraction of total autonomous free will as an adult. We cruise like billiard balls bumping off each other without reflecting that caring for another person without any return is prerequisite to our mental state of free will. Consequently, you get the answer by remembering, realizing, and accepting the vulnerability that had to be part of your life for you to develop an open mind in the first place.

Do you think that we are trained to establish such a balance?

Training is not a good word. Any aspect of a person's life is a read-out of an enormously complicated set of emotional interactions starting with infancy and birth. What language you speak and what you think of as acceptable are historical factors – they are not inherited in DNA, nor are they biological. In terms of DNA, we are one species. Any two people differ in DNA sequence by no more than a tenth of a percent. But we don't think of each other in that way. If you don't know someone's language, and there are thousands of languages, then they are not quite you. All of that is the late-onset consequence of having the mental capacity for language. So how do you walk back through the maze of the success of the species? That's the work of the CSSR. How do you really understand yourself as a member of a species? Does anyone you know think of themselves as a member of a group of seven billion people? Not really.

In religious terms, a lovely, unexpected outcome is that any serious religion, however large or small, has the core belief that what it has to tell is worth everybody knowing. It means that once you get past the awkwardness of saying, “If two different religions both think everybody should believe what they say, and if they are different, then neither has anything to say,” you realize that they say to everybody that, “You may think of yourself as the most important person in the world because when you die you’re not there anymore, but nevertheless, mortality is an inherent condition of the species. You can’t get away from it. Therefore, if you don’t want it done to you, don’t do it to somebody else. You’re not special.” That may be believed by a billion plus Christians in the Sermon of the Mount, but it's not lived. It may be believed in Hillel-terms, but it's not lived. There's a Koranic equivalent, but it's not lived. Where's the gap? That's what I'm interested in. That's where developing a proper articulation of an ethics of sustainability and ethics of “enough” is a non-trivial job that requires data and knowledge of what religions have thought about this problem.

What issues or areas of study are you most presently engaged in?

What we will do in the next years is to try to make a public statement about the ethic of sustainability. There are, however, very many serious religious voices that say this may not be done. It is very interesting that in a major world religion there is a dispute about whether or not this problem is in fact solvable, whether there is a species-wide ethic of sustainability, or whether we are so diverse, that suggesting it
Remember the scene in *My Fair Lady* where Eliza Doolittle is hurrying down the street while venting at poor, hapless Freddy: “Words! Words! Words! I’m so sick of words! I get words all day through…Please don’t explain! Show me! Show me!.../ Don’t wait until wrinkles and lines/ Pop out all over my brow/ Show me now!”? I must admit I’m feeling very Eliza Doolittle-ish these days. This spring I’ve spent far too many hours at conferences in which experts of one stripe or another offer reheated information to a like-minded but less-than-rapt audience. Inevitably some brave soul will ask how this information can be used to change a person, community, or the wider world for the better. Mumbled answers usually include a call for “developing a new language” or “reframing the question” or “redefining the problem” or “reimagining our ethos”; and that’s precisely when I feel like exploding into an Eliza Doolittle routine.

Perhaps the last straw for me was when I attended an event during which Ron Soodalter gave a very moving presentation on his book *The Slave Next Door*. I think the majority of the twenty or so people in the room were shocked by the sheer number of slaves held in the United States today. During Q. and A. someone assured us that the problem would best be solved by moving from the language of history and sociology and redefining the issue in the language of the marketplace. I wondered (cynically, I admit) if thousands of enslaved human beings saw this as the most effective way to bring about their freedom.

I know I’m not the only one who feels overwhelmed by words and underwhelmed by action. Last year the CSSR brought together young scientists, theologians, social scientists, activists, and artists and asked them to cooperatively consider specific topics: consumption, urban ecology, water and peace, and the science/religion dialogue.

We wanted to know what they thought would be the most impressive (in the true sense of the word) way to teach these topics in a class on sustainable development. After two days of work our participants asked “Why haven’t we done this before? Why haven’t we crossed disciplines and community boundaries to find creative, lasting solutions?” They were more than clear when it came to teaching effectively—all learning, they insisted, should be interdisciplinary and experiential. They called for more community based internships, “field trips”, and team taught classes. As Ms. Doolittle would say, “Show me!”

This school year we were ever-mindful of our young colleagues’ admonishment to be cooperative, creative, and very “hands on.” We opened ourselves up to consortium building and community involvement and were very delighted (but not surprised) to find that our projects were infused with new enthusiasms, purpose, and even humor. For the next two years the CSSR’s work will fall under the overarching theme *Understanding Impediments to a Global Ethic*. The courses we teach, the seminars we host, the research we conduct, and our community advocacy and involvement will be dedicated to this topic. We hope to produce a whole lot more than just words. We encourage everyone to get in touch with us with ideas for collaborative, active, learning projects that might help us understand impediments to a global ethic. Show us!
Climate Change Ethics: Is There Such a Thing?
John C. Mutter

This article is developed from a paper delivered at the panel discussion Is There an Ethics of Climate Change? Missing Conversations, New Challenges April 15, 2010 at The Earth Institute at Columbia University

Ethics is the study of Moral Philosophy. It concerns itself with what is good and bad, what is right and wrong, what is just and unjust, and what is virtuous.

Climate change per se cannot have an ethical position; only people can do things that are just and unjust, right or wrong. Climate can't do right or wrong any more than an earthquake can even though it might cause enormous death and destruction, or an asteroid hurtling toward us about to wipe out all life as we know it can be said to be doing wrong. It's not the climate's fault. If there is a wrong being done here, we are doing it. Us. People.

That being the case it is very tempting to find the wrong doer and chastise them, to name and shame (in the language of human rights advocates) hoping that those named will feel such remorse that they will start to act differently. There is plenty of that going on, most of which I believe is a huge waste of energy. None of the wrong doers seem to be listening. Why would they? They have not listened to any arguments based on the best science or economics. Why would they listen to an argument based on ethics? Perhaps the greatest benefit to identifying the wrong doer is that we, by implication, identify ourselves as being the right-doer and establish a virtuous high ground from which to look down upon others. Scientists indulge in this a lot.

This is not going to get us anywhere. Personally, I don't need to feel virtuous or to find someone else lacking in virtue to think about how to deal with climate change. In fact, I think the notion of scientists as a virtuous elite is a dangerous one and may have lead scientists at East Anglia to feel that they had the right to suppress data and interfere with the publication of dissenting views. Clearly they thought they had right on their side and were justified.

But what they did, in my view, was unethical. You can say it makes no difference to the merit of the case for climate change, and that is probably true, but it was still unethical and has eroded public confidence in science while fueling the case of those who would contest evidence for climate change. If we are going to have a discussion of climate change ethics, we must state that up front. Just because we think we are right and they are wrong does not give us the right to suppress what they say. And it's foolish. The very best way to show that someone doesn't know what they're talking about is to let them talk.

How do I enter this discussion? Although I am a marine seismologist, I co-teach a course at Columbia University's School of International and Public Affairs titled Climate Change, Rights and Development. The course is really an exploration of the intersection between these three: it asks how climate change will (or might) alter the human condition and interact with the rightful aspirations of all people to improve their lives. I don't know the answer to that question and frankly I don't believe anyone does. All you can do is what Kofi Annan suggested to me a couple of years ago. He said that the thing to do is to look very carefully at the world the way it is now, and ask whether the changes that might plausibly take place will lead to a better world or a place that is not a better world. That's good advice.

If you look at the world the way it is now, what you see is a place that needs a lot of improvement. We live in a world with greater inequality than at any time in history. The disparity between those at the top of the development ladder and those at the bottom has never been greater. This is because those at the top are racing ahead while those at the bottom are staying in place. The world overall is increasing in wealth but the wealth disparities are growing at the same time. In ethical terms, the world therefore displays in sharp relief the injustice of poverty and inequality. As people who would claim to be virtuous, we can and should try to make the world a more equal place. Peter Singer, the moral philosopher, has made this point many times, and it is not a new thought. His defining essay on the subject is in the journal Philosophy and Public Affairs 1:1 (Spring 1972). He presented it first in 1971, almost 40 years ago. In it he states an important ethical principal that it would be good for us to keep in mind: “If it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally, to do it.” The global scandal of poverty and inequality is “bad,” no question. We have the moral obligation to do something about it. The question that is sometimes raised is whether it is in our power. Singer thinks it is and I have to agree.
What principals will guide us as the canvas of the Earth is slowly painted over with the brushstrokes of climate change but with its original political, ethnic, social and cultural boundaries showing right through?

I think that this approach gets us away from the name and shame problem and makes us think about what we should be doing (rather than who we should be blaming) and how to frame the climate change discussion in an ethical context.

First, think about this: how would climate change make things worse, how would it increase the bad thing of inequality and poverty? To answer that you must first establish that climate has something to do with the inequality in the first place. After all, if climate right now has little or no role in determining human well being, why would changing the climate change human well being? There is a quite clear broad-scale relationship between climate and well being that we all know but don't think about too much. Conjure up in your mind's eye a map of the world (I recommend and equal area projection, or just think of a globe). Place on that map the world's poorest people. You find that overwhelmingly they live in the tropics. Basically the world divides into three huge zones: the tropics where people live poorly, the temperate zones where we live well, and the polar regions where hardly anybody lives at all because it's too cold to grow food. I simplify of course; there are wealthy people in the tropics and poor in temperate zones, but mostly it is what I just said. To just what extent climate actually determines welfare is debated and estimates range from as much as 60% to as little as 30%, but no one argues that there are massive advantages to the temperate zones. So, climate can be blamed for some significant fraction of the current global inequality. Extending this simple thought, if climate gets warmer on average the tropics get larger and hence the place where it is hardest to live gets bigger and….

You fill in the rest. That means that in Singer’s terminology something bad will come about and we have a moral obligation to prevent it.

But maybe that’s not what will happen. If the tropics expand, maybe the temperate zones, where living is easy, will expand too, and the Polar regions, where we can hardly live at all now, will become much more livable and we can grow corn above the Arctic Circle. Perhaps food production overall will increase! We tend to talk about climate change benefits in a rather sotto voce tone, gloss over it quickly and then dwell on the harms that may come, and we shouldn’t do that. We do need to be open and discuss both the good and the bad that will come from changes in the climate. Maybe in some globally averaged way it will all work out for the best.

What you have to imagine is this thought experiment: we all pack up and leave the planet. Go somewhere else and wait. Wait until the planet has settled down into its new, warmer state. Then we all return, but not to the geographic location from which we departed, but to a place that has the ambient climate close to the same as the place you left. That will be a different place but mostly we would be able to find somewhere kind of the same. You have to suppose that no one from Manitoba, now living in Spitsbergen, will mind if all the New Yorkers take over their old homes, but we can hope that will work out too. We might find that there is a strip in the equatorial region that is truly unlivable but that is compensated by the fact that a piece of the Arctic is now balmy and Kerguelen Island in the deep southern Indian Ocean will become the new Hawaii. Coastal areas will flood, yes, but high altitude areas like mountain plateaus will become milder. It might all work out.

This thought experiment is not meant to be flippant. It seems to me that so many people think that things are just going to work out. There might be some harm, but it will be more than balanced by overall good. We might have to move around a bit to take advantage of the new good, but we do that a lot anyway. In fact, when people retire they tend to go to hot places like Arizona, places more like what we think a climate changed future might look like.

But we can’t leave, we are stuck with this planet and we will have to deal with things by staying where we are. And that’s very different and very much harder. That’s a real experiment much harder to conduct than my thought experiment. The newly productive lands will not be in the countries that have experienced coastal inundation. They might not want New Yorkers in Manitoba. The political figure of the Earth will remain even if the climate figure changes. If natural disasters like Hurricane Katrina are our guide and the people of New Orleans, stuck in their attics as the waters rose around them, are a stand-in for the people of the world stuck in their countries, what we can expect is that the inequalities that currently exist will increase. New Orleans, deeply divided by race and rank before the storm, has become even more divided along the very same fault lines but now with greater offset as the wealthy cope well and the poor cope poorly. Does Katrina portent a world under stress from climate change, an unjustly divided world more divided still, even more unjust?

What principals will guide us as the waters encroach, croplands dry up, rain comes either in torrents or not at all, as the canvas of the Earth is slowly painted over with the brushstrokes of climate change but with its original political, ethnic, social and cultural boundaries showing right through?

Here is where I think ethics and human rights will really matter and can have a positive role. Environmentalists have had their say and no one much has listened.
Evolutionary Morality

Eleni Nikitopoulos

How did humans become moral beings? The evolution of a complex trait, such as morality, emerges through the accumulation of multiple cognitive and behavioral elements. Cognitive elements of morality like intention, empathy, sympathy, honesty, and love are manifested through behaviors like altruism, cooperation, and collective action. While morality is arguably a uniquely human trait, individuals in many animal species manifest cooperation and even apparent altruism. Identifying the presence and nature of altruism and cooperation in our closest living relatives, the non-human primates, would elucidate moral traits in our hominid ancestors and further our understanding of the evolution of morality.

Altruistic and cooperative behaviors have piqued the interest of evolutionary biologists since Darwin. An evolutionary perspective on behavior necessarily dwells on the evolutionary mechanisms that may bring it about. Kin selection was originally identified as a mechanism to explain the evolution of altruistic behavior and has long been recognized as an important factor in explaining patterns of cooperative behavior. Kinship is important because of the concept of inclusive fitness, which recognizes the selective benefits of favoring relatives that share genes identical by descent.

A mechanism proposed to explain cooperative behavior between unrelated individuals is reciprocal altruism, and it might account for behavior between kin as well. Reciprocal altruism involves an exchange of individually altruistic acts that continues over time. Reciprocity is direct when individuals reciprocate beneficent acts to those from whom they have received them. Indirect reciprocity occurs when an individual who channels beneficence to others receives it in turn, but from an individual other than the one originally helped. A reputation or image score mediates the connection between giving and receiving benefits; helpers help those with good reputations, i.e., other helpers. Experiments with human players have established that humans engage in indirect reciprocity and it is suggested that selection for indirect reciprocity and language has greatly impacted the evolution of human intelligence.

Indirect reciprocity has also been shown to stabilize cooperation in collective action. Collective action (contributing to the public good) is problematic because of free riders, individuals who benefit from the public good but contribute nothing to its provision. If contributing to the public good is observable to others and influences an individual’s reputation, and if that reputation plays a role in a linked system of indirect reciprocity, then the potential cost of losing out in the reciprocity scenario can effectively maintain contributions to the public good. Studies of cleaner reef fish suggest that non-human animals may respond to reputations based on past behavioral exchange. It would be exciting to find evidence for the importance of reputation in non-human primates and a link to understanding cooperative behaviors of human ancestors. It is currently believed that modern human morality evolved from indirect reciprocity.

My current post-doctoral work investigates direct reciprocity and kin selection in blue monkeys, a small African species that spends most of its time in trees. I would like to broaden this work to consider the moral elements that blue monkeys manifest, whether an individual’s reputation influences how he/she is treated by group members; and how reputation relates to one’s social dominance rank within the group.

Eleni Nikitopoulos is a Frontiers of Science Fellow in Biology at Columbia University.
Could it Be Easy To Be “Green”?

Erin Lothes

Can’t we achieve our goals for a green earth and a new energy economy without sacrifice? Isn’t sacrifice an outdated, masochistic relic of primitive rituals and painfully distorted Christian symbolism? Well, sometimes! There is no question that a long history of glorifying suffering, powerfully rooted in Christian symbolism, has had a terrible cost on many who interpret spiritual growth as accepting pain. Ideally sustainable development occurs as a win-win of progress and efficiency for everyone. Ideally relationships flourish with the synergy of shared interests. Realistically, however, life is full of conflicts even when all share the best intentions. Finite time and finite energy mean that compromise is inevitable in virtually all human situations and a healthy understanding of sacrifice is necessary to guide hard decisions.

I wrote The Paradox of Christian Sacrifice: The Loss of Self, the Gift of Self (published by Herder and Herder, 2007) to explore these issues of sacrifice, self-giving, and identity. This book contributes to a major debate in contemporary Christian theology: Does the language of Christian sacrifice contribute to the subordination of women in the family, the religious realm, and society, or can it be refashioned to balance self-giving and self-realization? Isn’t there truth to the feeling that we often have, of growing and gaining the most personally by what we have committed and offered to others? If that is so, what guidelines and criteria should direct intentional sacrifice that wills the best of the self and the other. Critically engaging the scholarship of Paul Ricoeur and Edward Schillebeeckx, the volume explores the place of sacrifice and mutuality in the construction of Christian identity. It was reviewed in Theological Studies, June 2009.

Since delving into the dense theoretical thickets of Christian theologies of sacrifice, I have moved on to explore how religious symbols inspire action in another sphere of identity, that of the active and committed religious environmentalist. My current project with the CSSR is Green Blues, Green Hope: Reflections on Faith Communities and Ecological Sustainability (Herder and Herder, forthcoming). This will be a book-length theological and interdisciplinary critique of religious values and motivations that influence behavior vis-à-vis the environment.

Through fieldwork interviews with over 100 people, the book documents and interprets these experiences using interdisciplinary research drawn from social science, psychology, and philosophy. On the basis of focus group conversations with Baptists, Buddhists, Catholics, Episcopalians, megachurch Evangelicals, Hindus, Jains, Jews (Reconstructionist, Reform, and Conservative), Muslims, Native Americans (Navajo and Gwich’in), Reformed Christians, Presbyterians, Unitarian-Universalists, migrant workers, and urban environmental justice advocates across the United States, the project reflects theologically on the struggle toward sustainable living. A key resource is Paul Ricoeur’s interpretation of fallibility as humanity’s finite, disproportionate openness to the world. I am exploring how this concept illuminates my fieldwork and what people have attested to as the gaps in knowledge, concern, and motivation that they see in their own advocacy. More specifically, the philosophical humanism of Paul Ricoeur analyzes human fallibility as a fundamental disproportion, a “non-coincidence of self to self” (Fallible Man, 1986). He proposes that human responses to the world through knowing, acting, and loving are marked by a disproportion between the plenitude of options and one’s finite perspective. Human fallibility proceeds from this disproportion between finite ways of knowing, acting, and feeling, and the inexhaustibility of the world presented to our choices. Perspectival knowledge, clashing motivations, and the variable intensity of love for the earth thus form the borders of ecological fallibility. For my conversation partners, these disproportions emerge as a lack of certainty regarding the state of our planet and its future, the lack of proven roadmaps and ethics for guiding action, and the priorities that compete for individual and church energy. Green Blues explores how this concept illuminates the gaps in knowledge, concern, and motivation attested in participants’ experience, in order to validate or revise his model. The social science perspectives of social goals theory and behavioral psychology developed at the Center for Research on Environmental Decisions at Columbia is also an important source.

Erin Lothes is Earth Institute Fellow with the Center for the Study of Science and Religion. In addition to her research and writing, Dr. Lothes has spoken at several Earth Day-related events in the New York area this spring, including:


Understanding Impediments to a Global Ethic of Sustainability

The human species is unique in nature for many reasons, including our shared capacity to imagine constantly changing and novel ways of understanding the world we live in. Science and religion are perhaps the most established ways of giving meaning to our lives and the world. Our astonishing success as a species, growing in numbers and in authority over the other species with which we share this planet, is a product of both scientific and religious thinking and planning. That they do not easily form a single coherent view is perhaps not surprising, but it should be disturbing.

As the sciences and many of the world's largest religious communities come to see that our species' unprecedented success brings with it risks to the future of the planet of the same unprecedented magnitude, it becomes that much more disturbing to find that these two separate and independent globally distributed social structures seldom try to even speak to each other. Indeed, there is currently no language with which to express their common concerns. Absent a common language the "two magisteria" are unlikely to bring about a shared agenda for global action.

This lack of a common language for describing the current global crisis and choosing coordinate plans of action to deal with it is not merely a problem of translation. It is the expression of deep differences among the many languages, cultures, religions and nations of the world, and also of the difficulty each of us face as members of more than one of these categories of self-definition. In particular, the problem is not easily solved by an appeal to rationality. Simply put, “right and wrong” are not categories that can be derived from experiment, nor from reason alone.

This impediment is only one of many. What would it look like if the CSSR were to take up the challenge to understand the impediments to a global ethic?

What the CSSR proposes to do

To begin with, we propose to adapt all our current programs so that they address this single concern for the next two years. This academic year’s CSSR activities provide the baseline for our plans. In the past year, CSSR activities have gained the support of the Earth Institute, the Ford Foundation, the Fetzer Institute, Portales Partners, and many friends of the CSSR. The FY10 programs of the CSSR are briefly outlined below.

Curricula

Continued to teach the popular course “DNA, Evolution and the Soul” at UTS for Seminary students planning careers as clergy or as leaders in NGO/non-profit activism

Created a new capstone college course for Columbia College seniors and Columbia Law School students, “Human Identity”

Publications and Faculty activities

Columbia University Faculty Seminar on Memory and Slavery
http://www.columbia.edu/cu/seminars/seminars/history/seminar-folder/memory-slavery.html

Initiated collaboration with the Center for Research on Environmental Decisions (CRED) on statistical analysis of motivations for sustainable action

The AY10-11 work of the CSSR will be entirely given over to the largest problem we have identified in our decade as a Center.

Public programs

Public CSSR lecture series
http://www.columbia.edu/cu/cssr/

Streaming videos of these lectures available at
http://www.columbia.edu/cu/cssr/event_webcasts.html

Collaborative public events with Communion and Liberation, Jewish Theological Seminary, The Monuments Conservancy, Faith Leaders for Environmental Justice, and the University Seminars

Internships and experience-based learning

Summer internship for undergraduates at Terrance Cardinal Cooke Hospital, working with terminally ill patients and their families
http://www.columbia.edu/cu/cssr/CSSR-TCC/about.html

Field education internships for UTS Divinity students

Semester-long independent laboratory and hospital research courses

Internships and joint programs with the undergraduate Green Borough residential life program
http://www.studentaffairs.columbia.edu/resprograms/special_interest/gallery/greenborough09.php

In the next two years we hope to open an intense interdisciplinary, inter-community conversation on understanding the impediments to a global ethic of sustainability. We know from experience that people are ready and willing to work collaboratively for a hopeful future; we will give voice to their cooperative efforts through the programs outlined over the following pages.

Curricula AY10-11

Developing a 3000-level undergraduate course on “An Ethics of Sustainability” to be taught to students of all undergraduate schools at Columbia, within the Earth Institute’s major in sustainable development.

Dr. Adela Gondek, School of International and Public Affairs, MPA ESP Program, Dr. Eliza Woo, Columbia Science Fellow in the Department of Biological Sciences, and Cynthia Peabody, Director of The Center for the Study of Science and Religion, have begun work on an interdisciplinary course on the ethics of sustainability. The course will emphasize experiential learning, using the myriad of resources available within the Earth Institute as well as the NYC metropolitan area. Calling upon Dr. Gondek’s experience teaching environmental ethics at SIPA, Dr. Woo’s practice based knowledge of experiential teaching methods, and Ms. Peabody’s dedication to interdisciplinary team teaching, our curriculum development team will produce a cutting edge course aimed at preparing our students to be ethical leaders in the world.

Continued offering of College Core course “Human Identity.”

Collaboration with the School of Continuing Education and the Department of Ecology, Evolution and Environmental Biology (E3B) on the creation of K-12 curricula in sustainability.
Publications and Faculty activities AY10-11

Guest editing the Fall 2010 Union Seminary Quarterly Review (USQR) the theme of which will be science and religion working together for a global ethic.

Union Theological Seminary has invited Dr. Pollack, Ms. Peabody, and Dr. Erin Lothes to guest edit the Fall 2010 issue of their prestigious Union Seminary Quarterly Journal. The theme of the issue will be religion and science together for a global ethic. Renowned theologians and scientists have already made inquiries into being included in this special issue.

University Seminar on pedagogic issues in the ethics of sustainability, to be organized by a CSSR postdoctoral fellow.

Research project on biology of altruism in primates, Dr. Eleni Nikitopoulos, postdoctoral Fellow (see page 8).

Honoring speaking and teaching commitments to ngo’s, academic institutions, and houses of faith throughout the tri-state area and beyond.

CSSR faculty and staff regularly lecture outside Columbia’s campus. Lecture topics range from genetics and race to religious responses to slavery. CSSR employees also represent Columbia and the Earth Institute at conventions and conferences throughout the United States.

Public programs AY10-11


Dr. Shiva is a world-renowned eco-feminist and author of Earth Democracy; Stolen Harvest: The Hijacking of the Global Food Supply, and Soil Not Oil. The CSSR has worked tirelessly to build a consortium of activists, scholars, and religious leaders from the tri-state area to host a day of learning and cooperative problem solving around eco-justice issues. To date, plans for the event have been met with great enthusiasm; activists, scholars, and administrators alike are becoming fully aware of the need for collaborative work in the world.

Continuing our popular seminar series. Invited speakers will be asked to speak to our overarching theme from their own disciplines. The Earth Institute has asked to co-sponsor our 2010-2011 series.

The CSSR’s Seminar Series’ reputation is now such that speakers come to us for the opportunity to present a seminar. The entire 2010-2011 series will be given over to lectures on “Understanding the Impediments to a Global Ethic.” Lecturers will represent natural sciences, social sciences, public health, theology, peacekeeping, and humanitarian aid.

Planning a large-scale symposium on “Understanding the Impediments to a Global Ethic,” in collaboration with The Earth Institute, The United Nations, The Cathedral of St. John the Divine, The Riverside Church New York, and others.

Internships and experience-based learning AY10-11

Continuing to bring the resources of the CSSR and Earth Institute to the metropolitan community through our cooperative involvement with Faith Leaders for Environmental Justice, The Riverside Church, The Cathedral of St. John the Divine, and West Harlem Environmental Action.

The CSSR is very proud of our presence in the neighborhoods of West Harlem as well as Morningside Heights. We have made significant inroads in establishing trust within local religious communities, ngo’s, and community organizers.

Expansion of current internship link to Terrance Cardinal Cooke Hospital. With Medical Director Anthony Lechich, MD, CSSR plans to convert the product of past years’ work by students into a training program for students and all staff at the Hospital, and to provide a template for nursing homes and other facilities for the terminally-ill among us.
At one time the music of communication was the sound of a sharpened tip dragging ink across heavy sheets of paper. Today it is the sound of soft forefingers fluttering across computer keyboards, conducting the flow of letters that slink steadily across the monitor's illuminated screen. As communication technology evolves, the tempo of the keyboard's opus increases exponentially alongside it. News flows from fingertips in a deluge, threatening to drown those who have not been keeping time with the beat of society's current preferred mode of communication, the Internet. We at the CSSR have decided that now, in our tenth year of being, is not the time to surrender to the flood. Instead, we have dived into the waves and created a blog.

Now, let us step back for a moment and consider the variables that we are facing: science, religion, and internet communication. By combining these three variables we are integrating two of society's oldest concepts with one of the newest. When faced with these seemingly polar concepts, an inquisitive mind might raise the important questions: why and how? Ironically, these are the same questions that are at the foundations of science and religion. The CSSR's mission statement asserts that, "sciences respond to a felt need to understand the world, and religions respond to a felt need for the world to have meaning." We turn to science and religion to explain our place in the world to ourselves, physically and spiritually. At this current moment in our history, our world is one of bytes and pixels. In starting a blog, we have created a medium where our world can be discussed through these bytes and pixels, reconciling new technology with long-established systems of understanding. Yet, as important as contrasts are in the relationship between science, religion and technology, it is imperative that we also recognize similarities. Not one of these fields is static. Each relies on constant communication in order to generate progress.

Science relies on the language of nature, religion on the language of belief, and technology on the language of codes. Within and among these particular languages lies the opportunity for dispute and discovery, the parents of progress.

The CSSR blog is a space where discussions of beliefs and questions, new and old, are presented in the media of the times. With our blog we hope to instigate conversations that will become a part of the progress inherent to science and religion. Therefore we invite you, each and every one of you, to flutter your fingertips across your keyboards and find your way through the jungle of URLs to our own, http://thecssr.wordpress.com. There you will find articles, news, information on our own and others' events, and whatever else you choose to add through your comments and suggestions. The CSSR has taken the leap into the blogosphere, and we hope you'll join us here soon.

Some recent posts on the CSSR blog:

Earth Democracy:
A lecture by Vandana Shiva

Healthy Living Harlem:
Green-map Tour

Racing To Save the Planet:
Conservation Efforts in the Gulf Region

Through the Looking Glass:
A Science Art Exhibit

For these and more, please visit http://thecssr.wordpress.com

Annie Tickell is a Sophomore at Columbia College.
Welcome to GreenBorough House

Lauren Alpert

GreenBorough House, a community of thirteen undergraduate students dedicated to sustainable living, is proud to join forces with the CSSR to investigate the impediments to a global ethic of sustainability. We aim to model ways in which values of environmental awareness and conservation can be practiced in all aspects of our lives as students and citizens, even in an urban setting and with busy schedules. In order to best serve our neighbors and peers, CSSR co-director and GreenBorough faculty advisor Robert Pollack has encouraged us to recognize that we don't have all the solutions to environmental problems, and to understand that the strongest support we can offer our communities on campus, in the city, and across the globe comes from listening to and learning from the perspectives and experiences of the people around us. We look forward to enhancing our understanding of many of those perspectives by taking part in CSSR seminars, public events, educational resources, and academic offerings, and in turn, GreenBorough is excited to share its creativity, curiosity, enthusiasm, and space in its brownstone building on Columbia's Morningside campus for collaborative events and activities throughout the year.

Lauren Alpert is a Junior at Columbia College

What a Greenmap Can Teach

Gaelle Affiany

I find it interesting that someone can live in a neighborhood and never really get to know their neighbors. I have not been living in Harlem long, but I now understand the danger of ignoring one's neighbors.

I am a student at Union Theological Seminary, and in spring of 2008 I found myself taking a course entitled “DNA Evolution and the Soul.” Close to the end of the class, our professor, Dr. Pollack, offered an opportunity to gain experience in the field of Science and Religion. I already had a strong passion for both God and Science, and so I accepted the call.

I became part of the process to envision and create an online “greenmap” and a physical version of the map we could distribute to our constituents – fellow Harlem community members and greater Columbia University community members. I was excited about the opportunities this project presented: to sit and interview Harlem pastors, to meet community organizers and activists, to witness the dedication, work and love that went into community organizing. I was able to walk the streets of Harlem and discover a community that was and is very passionate about its members, its businesses, and the organizations that operate within it.

How does creating a greenmap of Harlem connect with the danger of not knowing your neighbors? The CSSR brought me into the awareness that the debate between science and religion was not a fruitful, but academics and theologians now needed to be in mutual dialogue about sustainability, so that we could start saving lives. All this energy towards an ethic of sustainability became manifest in the CSSR’s green-mapping project.

The greenmap was not to be a research project nor was it to be a condescending advocacy project. The soul of it was the dialogue and information gathering that myself and Cynthia Peabody did on foot as we journeyed all over Harlem and

Gaelle Affiany is a Masters of Divinity Student at Union Theological Seminary.

On Earth Day 2010, the CSSR and fellow Green Map enthusiasts celebrated the grand unveiling of their “Healthy Living Harlem: Green Mapping for Eco-justice” map with a green tour of Harlem. The event began with a breakfast hosted by Faith Leaders for Environmental Justice, at which Cynthia Peabody gave a brief history of our Green Map project. After breakfast, the group set out with maps in hand for a “toxics and treasures” tour Harlem led by Charles Callaway and Anhthu Hoang of West Harlem Environmental Action (WeAct). As we walked through West Harlem, we learned about the remediation of waste sewage overflow, public parks threatened by city budget cuts, and bus depot emissions issues. The tour was attended by NYC faith leaders, city and national officials, university students, and environmental activists, all of whom were given the unique opportunity to learn together. EPA administrator Lisa Jackson made an appearance at Jenny Benitez’s community garden. Attendees left the tour eager and inspired to advocate for environmental justice. Here a a few pictures from the Earth Day tour.
In May 2010 I will walk away from Columbia with not only a double major in music and biology but also a strong foundation in Western philosophy and art, unique gifts of this university. In addition to my formal education, I am extremely grateful for the experience of working at the Center for the Study of Science and Religion throughout my undergraduate career.

My four years at the CSSR have been a nurturing sounding board for my philosophical ideas as well as a launching ground for developing my professional skills. The beauty of the CSSR’s philosophy lies in the trust granted to the team of undergraduate staff members as they contribute their unique voice to the established mission of the center. Consequently, both online communications and faculty-level seminars are planned and coordinated by undergraduates. This environment has been invaluable for me to learn to communicate professionally with our distinguished speakers, to collaborate on projects with our affiliates, and to spearhead initiatives of my own such as the upcoming science and art exhibit at Columbia. I currently serve as CSSR’s webmaster—a position I never thought I would be capable of if it were not for the encouragement and support of the CSSR’s staff.

Central to the warmth and intellectual acuity of the people at CSSR is the earnest belief in a responsible society that combines religious meaning with a scientific worldview. This value has resonated deeply with me through my exposure to the wealth of interdisciplinary topics offered by CSSR, and will continue to influence my views as I begin to pursue a career in genetic counseling. From these talks and events I have gained a greater understanding of the ethical challenges I may face in the field of genetics. A 2009 conference on race and genetics sponsored by the Council for Responsible Genetics, at which Professor Pollack presented, brought to my attention the need to correct dangerous misconceptions about genetic determinism and its connection (or lack thereof) to race. In addition, medical geneticist Dr. Wendy Chung highlighted the serious gap between the rapid outpouring of genomic technologies and the development of bioethical standards around them.

Already there are genetic testing companies akin to Navigenics sprouting up across my native country China: United Gene High-Tech Group, Ltd. established the first center for genetic testing in the ChineseprovinceofGuangzhouin late 2009. The challenge, however, is that there are virtually no certified genetic counselors in China and very little research literature regarding Chinese reaction to genetic technologies. The impact of genetic testing on a culture that restricts a family to one child will be a daunting task for this generation. It is my hope to eventually be part of a mission to collect this needed information and to bring better quality genetics education and healthcare to clinics in China.

The best opportunities for intellectual growth are often found outside the classroom. My years here interacting with the thoughtful staff and brilliant speakers have provided me with a framework for understanding and contributing to this complex world. I am immensely thankful for the tremendous opportunity to grow as a thoughtful and responsible individual, and I am excited to see the evolution of the CSSR in the years to come.

Weiyi Mu graduated from Columbia College this Spring. All of us at CSSR wish her the best, and will sorely miss her energy, dedication and expertise.
There's no love in it, there can't be. An orphanage is good parenting human feeling. While science is experimental objects and there goes all yourself what the difference is between On the other hand, you have to ask where it plays out. System through science, I don't see over another. But inside a laboratory, should be of one line of questioning to say about what the overall priority hand, I think that a religious life has a lot to do next to see if we are right? “What do these data mean and what do we have to do next to see if we are right?” Since the natural world is shared by everybody, I don't think that a religious life has much to say about what the next experiment should be. On the other hand, I think that a religious life has a lot to say about what the overall priority should be of one line of questioning over another. But inside a laboratory, inside an agreed-upon question/answer system through science, I don't see where it plays out.

On the other hand, you have to ask yourself what the difference is between medicine and science. If you make medicine into science, then we are the experimental objects and there goes all human feeling. While science is necessary for rational medicine, medicine is not science anymore than an orphanage is good parenting there’s no love in it, there can't be.

So we are stuck with free will for the time being, and for that we need each other…. And that is a very handy thing to lean back on.

But you need love in medicine. I know the peer review group for science (I was in it and I decided to leave it), and I know exactly how well it works in science, but not for the rest of life. When you face an end-of-life issue, who’s the peer review group? It should be dying people, not doctors. I would be very happy to see a structure in which the scientific invention of a peer review group goes to rationalize medical treatment, but I think that it is the people in need of the treatment, not the people who give it, who are the peers. Medicine is the treatment of the sick person, not doing an experiment.

As someone knowledgeable in both religion and science, how do you think the fact that religious beliefs can't be tested or justified scientifically affects their credibility or the way in which they are received?

Credibility and way of reception are a matter of people’s inner lives and what it is that they think is most important to them. How they receive religion depends on what they can bear to hear and what it is they are most concerned about. It has nothing to do with provability; it has to do with insight and help. Religion is much closer to medicine than it is to science, and the validity of the insight depends on the response of the person, not anything else. It's not testable because people are different from one another, and it shouldn't be testable because then a person who feels better would be deprived of free will if you had a pill to take in place of the insight. You help someone decide to rethink their situation, and that’s not an experiment – there is no hypothesis there. It's simply accepting your vulnerability, someone else's vulnerability, and your capacity to alleviate that suffering from that vulnerability. What's the hypothesis? Nothing is being tested, nothing is being disproven.

Let me put it this way: A serious scientist is happy to acknowledge in his or her mortal state that there are aspects of his or her life which cannot be dealt with through science, for which you need other people, as people, as fellow humans. That human-to-human interaction is not subject to testability, unless you want to attempt to build a robot to take the place of human interaction. Let's say you could, and the robot had no feelings, and yet the person receiving the feelings felt that the robot did have emotions. Is it right to do? But that's not where we are right now. Right now neurobiology is not at a point where it can do disprovable hypothesis-testing on what a thought is, on what a memory or feeling is. So we are stuck with free will for the time being, and for that we need each other, and religions predicate that needing each other is an obligation, not a problem. And that is a very handy thing to lean back on.

Many people have a serious distrust of environmentalists and can too easily associate those who think carefully and rationally with those who would chain themselves to trees to save a tiny bird. Economists too have had their say and that has lead to yet another debate among prominent economists holding polar opposite views. Neither of these voices has given much useful guidance or lead us to an ethics of climate change, nor should we expect that – neither field has ethics as a substrate. We need a new compass to point the way and tell us how to act in a new climate world so that we can properly deal with the changes we can expect. That should be a moral compass.

...The rights of all individuals and their individual good must be preserved no matter what.

The main difference between an approach based on ethics compared to one based on a benefit-cost economic analysis, say, or one that has so-called environmental sustainability as a goal, is a focus on the rights of the individual. Economics will give us an aggregate benefit but there is no guarantee that it will reduce inequality – rather the opposite. Environmental approaches can sacrifice human welfare in favor of non-human welfare. A rights-based approach, or one based in ethics, would argue that the rights of all individuals and their individual good must be preserved no matter what we do (or don't do). That helps to ensure that we do not violate Singer’s constraint of not “sacrificing anything of comparable moral importance” as we act to “prevent something bad from happening.” For me, the thing of greatest moral importance is the rights of the individual, and that is where our conversation on the ethics of climate change should begin.

John Mutter is Deputy Director of the Earth Institute, and a Professor in the Department of Earth and Environmental Sciences.
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