Science & Spirit

Tutu & Moran vs. Christian Zionism & The Israel Lobby
Chanukah: the Liberatory Versions of Opportunity | Anti-Bush Humor?

St. Paul, Glen Stassen, Tony Campolo
Editorial

Are we Exaggerating the Power of the Israel Lobby?
by Michael Lerner

That's a hard case to make when you review the influence of Christian Zionists, the attack on Archbishop Tutu and Congressman Moran, and the Lobby's support for military rather than diplomatic responses to Iran.

Politics and Society

Science and Spirit by David Belden

Tikkun and the NSP have been holding series of meetings with scientists and spiritual leaders to explore how both groups can work together to heal the world. Tikkun Managing Editor Dave Belden wonders what changes in thought are needed to remove the stumbling blocks to this dialogue. This is the first in a series of articles exploring related issues.

Jina: A Missed Opportunity for Healing by Sheldon H. Laskin

What the school board could have done.

Network Of Spiritual Progressives Update by Nichola Torbett

Ever wonder what the NSP is actually doing? Here's the first in a series of reports from our National Director of Outreach.

Let's Act Together On Global Warming by Bill McKibben

Focus the Universities on Global Warming by Scott P. Lewis

Israel

The Israel Lobby by Stephen Zunes

Critiquing Mearsheimer and Walt, Zunes argues that exaggerating the Israel Lobby's influence lets the U.S. ruling elites off the hook.

A Zionist Changes His Mind a conversation with Avrum Burg

The former chair of the Jewish Agency and former Speaker of the Knesset, Avrum Burg, has now challenged Zionist and Jewish nationalist thinking in a move that has sent shock waves through Israeli culture. He discusses his ideas with Tikkun.

Anti-Bush Humor?

Take This President...Somebody, Please! by Paul Lewis

Laughing at our leaders can be liberating.

Response To Paul Lewis by Michael Nagler

Ridicule is always counterproductive.

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an interfaith dialogue on
religion
VIOLENCE
untangling the roots of conflict

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Science and Spirit

One reality, two kinds of knowledge. How can they work together to save the world?

By David Belden

Is science saving us from religion gone bad, or what will save us from science gone bad?

Scientists used to have a very powerful argument when challenged by religious people. They pointed to the huge advance in the material wellbeing of people that has been accomplished since the scientific paradigm took over a few hundred years ago. That argument, however, has been put in doubt in the past several decades by environmentalists who have shown that the production of material goods, chemicals and electronics made possible by science has simultaneously been poisoning our air, land and water. Our complex and relatively fragile economic systems may not be able to weather the massive climate changes now in the works. Our civilization is in peril. Moreover, social scientists tell us that depression is rising in rich countries and that extra wealth does not make us happier. Spiritual people have been saying for a good fifty years that we already have “enough” and don’t need to continue scientific progress geared heavily to practical application and research paid for and guided by the profit needs of major corporations.

You may think that good science is all we need to save ourselves from the misuse of science. It is scientists who are now telling us of the damage our scientific-technological society is wreaking on global climate, on numerous species, and on our health. Perhaps these same scientists will come up with scientific solutions?
Science vs Spirit vs the Religion of Scientism

SOME OF OUR LEADING SPIRITUAL PROGRESSIVES HAVE SERIOUS SOURCES THAT SCIENTISTS CAN CARRY ON. THEY DISTINGUISH BETWEEN "SCIENCE" AND "SCIENTISM." SCIENCE IS VALUABLE. SCIENTISM IS NOT.

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goods are being produced and what the total income of a society is.

How do we decide? Science and rationality can tell us much about the possible consequences of our decisions but it can't make the ethical decisions for us. The decisions are made by political and market processes; they are made by powerful elites and the individual choices and actions of each of us as we buy things, use things, give power to the elites, or organize ourselves to take power and so on. We are all guided, often unconscious, by our own ethics, and by those of others.

How do we move from Mastery over Nature to Interdependence with it?

The general view among educated liberals is that science provides knowledge, but our ethical opinions are necessarily just opinions. Our ethics may derive from spiritual insights and religious traditions, but we moderns "know" that despite all the claims of religions to having truth, these claims are really just opinions. We know this because we believe there is no way to arrive at spiritual truths that all people can agree on the way people can agree on scientific truths. So there is no alternative to battling these opinions out in the political and commercial arenas. That seems so obviously true to us that it would be nonsensical to argue otherwise.

But spiritual progressives say that there is another kind of knowledge that we can come to: the knowledge of what is truly sacred. This is as potentially universal as scientific knowledge, but it is acquired through a different methodology. How shocking or ridiculous this idea is to educated people today is a measure of the triumph of scientism.

As scientism becomes increasingly powerful as the dominant religion, every sphere of thought and action has been affected. Every traditional discipline in academic life has felt defensive in the face of the power of science to contribute to mastery and control over the world, and the religion of scientism, which scoffs at any other approach to the world that does not give obedience to science. As a result, over the course of the past 120 years intellectual and cultural life has increasingly become a mirror of the dominant capitalist values verifiable through scientism. Fields like philosophy, literature, and the arts, once seen as an alternative take on reality, have found themselves increasingly dominated by those who can somehow show that their field has the structure and feel of a more intellectually coherent (but is to say, scientific) enterprise. And sociology, political science, psychology all try to mimic the sciences that underline and give credence to the alleged science of economics.

The problem for spiritual progressives is that they have watched for the past century as Marxism, progressivism, liberalism, environmentalism, feminism, and almost every other significant contribution to social transformation have attempted to present themselves to the world as intellectually respectable by showing how scientific their ideas or programs are or can be. In so doing, the social movements, the vast array of non-profit organizations and NGOs, the political parties advocating an alternative to the globalization of capital, and the struggles for human rights and social justice persistently attempt to present themselves in a language that fits the dominant religion of scientism, with its bias toward quantitative analysis and "objective" verification or falsification. This tends to marginalize what Letter calls "the spiritual values of love, generosity, awe and wonder at the wonder of the universe, recognition of the other as sacred and as a mystery, and aesthetic and spiritual wisdom" that are often the core of what spiritual progressives understand to be the path to achieve social justice, peace and ecological sanity on our planet. The triumph of scientism in the liberal and progressive world, and in the larger society, makes it extremely difficult to build the one kind of movement that could actually be effective in challenging what spiritual progressives call "the globalization of elites" - namely, a movement explicitly committed to "the globalization of love, generosity, caring for others, kindness, humility, awe and wonder, celebration, and thanksgiving."

Moreover, spiritual progressives argue that achieving these values will require a different methodology in politics, one that not only affirms love and caring as a goal but also employs them as the means. To do so means to recognize that there really are values worth fighting for, even when doing so involves fighting against the interests of the established order. Most of us...
understand this in talking about, for example, the "property rights of share owners" and why it was ethically correct to override their interests and "rob them" of their property because it was wrong in the first place to own human beings. The wrongness of slavery is now an almost universally accepted (though not universally practiced) item of ethical and spiritual knowledge. But it was not obvious to everyone at the time, nor was it obvious to those struggling for the right of workers to organize themselves in unions that they had the right to demand collective bargaining with their employers.

Similarly, today, spiritual progressives assert that the only way to save the environment is to abandon the "ownership" model in relationship to nature, stop thinking of it as material that we can possess and over which we have unlimited rights to exercise mastery, and instead become aware of ourselves as interdependent with all life and with the earth and the rest of the universe. To get that recognition, spiritual progressives argue, we must experience ourselves as so deeply connected to nature that the extinction of species feels to us to violate our humanity, and the possible destruction of the planet for future generations feels to us like a ripping apart of our fundamental being. Experiencing the world this way requires a massive leap of consciousness beyond the ways of experiencing that have been ingrained on us by the religion of science and its partners in the world of material domination and the ethos of accumulation for the purpose of maximizing individual satisfactions. Learning how to see other human beings and nature as deserving of caring and respect is not something that has been fostered by science, and it has been systematically undermined by the ethos of capitalism to which science is closely allied.

But if this is so, then what can the Network of Spiritual Progressives (NSP) say to the many scientists who have themselves come to understand that the world needs a fundamental transformation, and that the Spiritual Covenant with America developed by the NSP provides a framework for that transformation far more compelling than anything they see emerging from the secular left?

**Affirm Science, Reject Scientism**

**ON THE ONE HAND, THE ANSWER SEEMS EASY: AFFIRM SCIENCE, REJECT SCIENTISM.** That is the position of the NSP.

But when Michael Lerner and Peter Gabel, two of the primary thesists of the NSP, invited spiritual theorists to meet with a group of progressive scientists, they found that disentangling even the most progressive scientists from scientism was not as straightforward and easy a task as they had hoped it could be.

Michael Lerner says of these Roundtables (for participants see the box above and stay tuned to www.tikkun.org for a transcript of the third Roundtable):

"We are an organization that includes both secular spiritual people like Peter Gabel and religious people like me. We are aware of the big attack on religion and spirituality today from secularists who think that that is the best way to protect the society from the assault of the Religious Right. We think that's a big mistake.

"The best way, we believe, is to provide a form of spiritual experience and religion that is not connected to what I call Right Hand of God consciousness (the scene that we live in a dangerous world and must do everything in our power to dominate it militarily, politically and culturally, or else we will find ourselves dominated by others). This consciousness can be found just as profoundly in secular groups as well—from the
Our Place in the Universe by Joel Primack and Nancy Abrams

By the "spiritual" we mean the relationship between a conscious mind and the cosmos. It's not the study of the cosmos—that's science. It's the way we relate to it. Things from the size of the universe to the size of human experience, and we have intuitions about how they work. But things larger than about 10⁷ cm or smaller than about 10⁻³⁰ cm can only be known through science and only experienced, if at all, spiritually. This includes most of the universe.

We illustrate the total range of sizes in the universe in terms of "The Cosmic Uruboros." The tip of the tail represents the smallest size permitted by quantum mechanics and relativity, called the Planck length (10⁻³⁵ cm). The head represents the largest size we can get any direct knowledge about, the horizon of the visible universe (10⁰⁰ cm). The serpent swallows its tail because different physical laws control events on different size scales, but the laws controlling the largest scale may also control the smallest. The tips pointed along the serpent are representative of their size scales.

In their book The View From the Center of the Universe (from which the quotes in this box are taken) Primack and Abrams summarize recent cosmological research, which leads them to claim:

We humans are at the center of the principle that underlies the modern universe, and one generation is the first to know it. We've made the rarest material in the universe—steadfast; our Galaxy is the center of the visible universe; we're living at the midpoint of time in four different eras; and our bodies are at the center of all possible sizes.

Not everyone agrees. Some excellent scientists and other scientifically literate people today look at recent discoveries and reach quite a different conclusion—that in the expanding universe "human" is a small, even pathetic identity. We will refer to the attitude they collectively express as the "existential" view of scientific cosmology.

We both started in the existential camp ourselves...[But] When we started teaching the Cosmic Uruboros, we realized that it might matter that humans are at the center of all possible sizes. We realized further that this standstill could be seen as central, not peripheral. In fact, the entire existential façade of despair and stickiness falls inside-out if we simply view the universe from the inside, where we indistinguishably are. Once we made this mental shift and opened our eyes to the view from the center of the universe, we not only kept discovering more ways that we are central: we found that doing so evolved the opposite reactions from the existential stance—not despair but hope, not resignation but excitement. They may be equally arbitrary emotions, but they lead to non-arbitrary actions...

This kind of integration of science and meaning is considered by many scientists to be a danger to science, but a science that doesn't consider its own meaning can be a danger to everyone else...Big changes are happening on our planet, and shepherding ourselves through them successfully is going to require tremendous creativity. An essential ingredient may be a cosmic perspective, and such a perspective is just beginning to become available. Not a moment too soon.
Science / Spirit Roundtable
Can progressive religious and scientific people committed to creating a compassionate and functional world bypass the science/religion wars and find a mutual platform?

Agreed: We need science’s help to combat global warming and species loss. Spiritual religion is against scientism not science.

Fundamentalist Spirituality
Humility, compassion. All humans and all life are interdependent and sacred.

Fundamentalist Science or ‘Scientism’
Rigid adherence to refuted counter-factual beliefs. Demonize non-believers.

Mature Science
Humility. Science cannot prescribe ethics. Science knowledge has its limits.

Legitimate criticism of ‘Science’;
The sacred aura of ‘Science’ has destroyed rival claims to sacredness. Result: runaway technology (e.g. weapons, chemicals, genetic engineering) leads to atomic war, pollution, cruelty to animals, extinctions, global warming.

Agreed: You will only save what you love. Scientists must lead in ethical and political efforts to save the globe.

Legitimate criticism of ‘Religion’;
Crusades, wars, pogroms,quisitions, racism, sexism with burnings, “pie in the sky”, strict fathers, God, Christian Platonism/dualism, opposition to science, inability of many holdouts of revealed truth to revise ideas.

An attempt to capture the Science vs. Religion Wars and the Science + Spirituality Alliance.

(continued from page 36)

Marxists and Freidians of late nineteenth century to the contemporary militarists in both the Republican and Democratic Parties, and sometimes even in the anti-war movement and among other social change movements. I contrast this ‘reality’ or ‘domination world view’ with a Left Hand of God, ecumenicism that sees far greater possibilities to build safety and security through mutual cooperation, love, and caring for others, or what I now call the Generosity Strategy, with its Global Marshall Plan as one specific (details at www.spiritualprogression.org).

We are trying to unite secular and religious in a powerful alternative to the Right and the Religious Right. We want to build a movement that is welcoming to progressive scientists, but we don’t want to do that at the expense of legitimating a spirit-dampening scientism. So we convened this discussion to see what ways we could find for a common discourse. We are not finished—this is a step on the way and an invitation to other scientists and other religious leaders to join the conversation.

Talking in Different Universes of Thought
When, as the new Managing Editor of this magazine, I decided to write an article based on these Roundtables, I ran into a problem. I didn’t want to assume that there were two sides in the room, because those were scientists who were very sympathetic to spiritual concerns, and Michael Lerner describes himself as “a passionate advocate of science.” But the more I listened to the tapes and worked with the transcripts, the more it appeared to me that there were indeed two sides or at least two universes of thought that were not really intersecting. In particular I felt that the scientists did not fully understand what Gabor and Lerner meant by spiritual knowledge, or knowledge gained by an intuitive, euphoric “intensity.” But did I myself? I began to think I had made assumptions about them that were wrong, just as the scientists might be doing. And perhaps I had to rethink the very notion of knowledge, which itself had been shaped, according to the spiritual progressives, by scientific assumptions that needed to be questioned.

Joel Primack, the well-known cosmologist at the University of California Santa Cruz, early on gave his opinion that:
What you are calling scientism is the philosophy that was put forward by a group known as the Vienna Circle in the 1930s, which was widely called logical positivism, and of which I believe there are essentially no proponents in modern philosophy; it's thoroughly discredited. So philosophically it doesn't have any adherents. There are a number of scientists now who are arguing a case not for evolution, but against religion, and they have a number of books out, Dawkins in particular, and Dennett, and Harris, though they're not scientists. So I'm questioning whether you really want to talk about scientism or whether you want to talk about atheism or militant atheism in the hands of scientists.

Lorenz and Gabel were clear that it was scientism that concerned them, that they supported the scientific enterprise, but when critiquing scientism they meant something much broader than logical positivism. Their concern was that scientists in general look at life and the universe from the "outside," which means they always fail ultimately to understand them. Moreover, they argued that contemporary scientists often reject scientism, but the larger culture has shaped a popular scientism that impacts the major opinion shapers, institution builders, legislators, media, and even those seeking social change. In doing so, they argued, the dominant scientism was actually successful (and had been for at least a few hundred years) in impressing (sometimes into unconsciousness) the joys and feelings of spiritual connection and integration with others and with the spiritual dimension of all reality that had been the common inheritance of the human race for most of its history, albeit a connection that had been so missed by ruling elites in the ancient and feudal world when it was appropriated into status-quo-serving religions that it had lost much of its authority to shape daily life. In part, then, the task of spiritual progressives is to help clear away these levels of distortion, caused by scientism and the capitalist culture as well as by the oppressive role that religions have played in misusing spiritual consciousness as a club to validate unjust social orders.

"Yet there were times in the discussion when it appeared that Peter Gabel was asking science itself to incorporate into its approach a deeper understanding of "spirit" and its role in shaping the world. In his essay "Creationism and the Spirit of Nature" (from his book The Born-Teller and Other Essays on the Politics of Meaning) that the Third Roundtable participants read before their discussion, Gabel writes of the sensuous way that a plant bends towards the sun, and the sense we have of its life force, its desire to live and grow with which we, as living beings, can empathize. This is the most important thing about the plant. But the scientist's way of looking, writes Gabel, turns the plant into an object, a thing.

First of all, the scientist begins his or her inquiry by taking the position of a detached observer who treats the plant as an object. From this position of detachment, the scientist cannot "sense" anything about the meaning of the plant's movements because he or she "something" this way requires the opposite of detachment—it requires engagement with the plant's life through a kind of empathy or intuition. The "nature" of the plant, its capacity to sprout from a decaying seed and the produce the green life of "chlorophyll" and to lean toward the sun and, for that matter, its capacity to wilt and die—all of these things are inaccessible to science, and science can never hope to explain them.

Scienists' Objections to Intuitive Spiritual Knowledge

It was this language of "inside/outside" that led to most of the scientists' objections at the Roundtable.

They spent a lot of time making the point that Platonic and Cartesian dualism is dead: there is no ideal realm, no God or supernatural force outside of the material universe. But Lorenz and Gabel agreed: for them there is a spiritual resonance to the whole universe as it is and to every living thing in it. Matthew Fox, the priest best known for his work on Creation Spirituality, told the Roundtable about those medieval Christians who were not Platonists. They did not believe in original sin but did believe in that Fox called "original blessing." They saw the universe as in the process of continuous creation, and every creature as participating in creation, all of which Fox finds compatible with modern scientific views.

This issue of a God outside of Creation is clearly a huge one in our society's wider debate between religion and science but it was not an issue here.

November/December 2007
The story of evolution is not as simple as it used to be. Michelangelo's beautiful painting shows God awakening Adam with the touch of His finger. Now Darwin, and his diverse followers such as the fiercely atheistic Richard Dawkins (above, embraced by God?), the Jewish agnostic Stephen Jay Gould and the spiritual Jane Goodall, have revealed to us the secret of our primate ancestry. But what touched our ancestors with that desire for connection and meaning, that in us is manifested both as religious awe and scientific curiosity? Image by David Bjorret with homage to Michelangelo.

Gabel's description of scientists as “detached” from their objects of study provoked major objections. George Lakoff, the cognitive neuroscientist and linguist, spoke of scientists' passionate engagement with their topics. Joel Priskin said that he was taught intuition as the “first moral principle” of physics by John Wheeler, a great professor and one of Feynman's teachers. Because “your brain is far more powerful than the little rational part that has to deal with following trains of logical arguments,” you have to train your intuition to access your brain's full power.

But fascinating though these insights into the lives of scientists were, they clearly missed Gabel's point. He responded:

The spiritual critique that I hold, and that I think is the essence of a spiritual critique, is that you can't understand reality by looking at it from—what I call “detached.” I don't mean “indifferent.” I don't mean a lack of caring or passion or fascination. I mean that it's an intellectual and moral stance that one takes towards the world in which one is outside looking at it.

This was what was truly controversial: the idea that we can access the inner meaning of the universe or of a living being like a plant through intuitive knowledge, gained by empathically going “inside” in a way science can't. In his essay Gabel wrote of a green plant reaching towards the sunlight, and of:

...the unity that one senses in the plant, the sense of pleasure that seems so manifest in the bend of the upper stem and the stretch of the highest leaves and that seems to contrast so strikingly with the troop of plants denied access to the same sunlight. To the scientist, this may sound “merely subjective” and like a species-centered projection, but that’s what we have (and I claim we have) that the meaning of the plant's living movement exceeds the photosynthesis explanation.

He was right—to the scientists it did sound merely subjective. George Lakoff said:

You submit a dichotomy of insides and outsides and that is false. What we know is that all of our knowledge is based on interaction, not on outside stance or an internal stance, and that says that the argument that science is coming from the outside is just false. It's not true.... Your notion of desire is something that comes out of your interaction with the world, and other people's interaction with the world, but it may not be in that world independent of human beings or other beings. That is where that difference is going to come down.

The news from the front lines of cognitive science is that we now know, neurologically, that reason and emotion are not separate. Lakoff explained that we actually reason, in neurological terms, through empathy. The mirror neurons in our brains fire when we perform actions, and also when we see someone else perform the same actions. There are close connections between those actions and the emotional regions where we feel empathy for others and so we are able to guess what others will do. Rationality is built right into these areas. Basic reasoning about other people, and basic universal metaphors about the world (such as the association of warmth with love and coldness with lack of love, or of “up” with more and “down” with less) are actually wired into our brains by our early experiences. So rationality is not a universal capacity, as thought in the Enlightenment, but a variable capacity depending most likely on how well our capacities for empathy were nourished in our earliest years. Reason is built upon empathy.

This provides a powerful argument for family-friendly public policies of a kind that the “family values” crowd do not oppose, such as plenty of paid parental leave to give parents time to nurture their babies and toddlers, universal, high-quality daycare for all working parents, and so on. But it did not assuage Peter Gabel’s concern that scientific knowledge was still being privileged over spiritual knowledge. In fact, the entire argument, from Lakoff’s point of view, was an argument against the validity of intuitive knowledge uncorrected by science. Lakoff said:

If you look at what Dasein says in Descartes' Error, you cannot be rational without being emotional.... The idea that desire is in the world is your interaction with the world and your projection on it and you have to understand the world as having desire. There's no other biological possibility. And that doesn't mean that desire exists independent of beings
outside of you but it says that you must always under-
stand it and every other being will understand it that
way.
The only analogy to projecting our ideas onto the world,
Lakoff explained, is the practice of science, which accumulates
convergent evidence from many different fields of enquiry.
This business of imposing human meanings onto non-
human things is perhaps the biggest taboo in science. Resist-
ance to the age-old human tendency to do it has been at the
heart of science's success. Think Galileo vs. the Church and all
the other traumatic conflicts from which science has emerged
victorious. The latest was in Dover, Pennsylvania where the
teaching of creationism in science class was ruled out of
order.
At every point in modern history there have been religious
people, often in positions of influence but including a vast
number of ordinary people, who have said that the explana-
tion for some great mystery in the natural world—from disas-
ters and diseases to the astonishing complexity of the human
eye—must be supernatural intervention: typically by a God
who is outside the whole machine and devices to intervene,
reward or punish, or for inexplicable goals of His own. At
every point scientists who bravely refused to accept divine in-
tervention found natural explanations instead. That is the his-
tory of science.
But in science, this necessary mistrust of theories of di-
vine intervention in nature has led to mistrust of the very idea
of spiritual knowledge.
Neither Lerner nor Gabel believe that there is a divine "intervention" in nature, but
rather that nature is already and always permeated by and part of a larger spiritual reality,
and that science has tools which can only pick up part of that reality. "That's fine, and often
useful for the purpose of controlling nature," Lerner contends, "and in no way do we want
to do away with science and its tools. But things get astray when scientists think they have
the only possible understanding, knowledge, or plausible account of what is happening in
the world, because the world is far more than what can be caught by the scientists' tools and
methodology."

Unintended Consequences of Scientism

A large part of today's Scientism consists of highly intelligent and spir-
ituolly sensitive scientists explaining to Gabel and Lerner the ways in which were mistak-
en about the reality of an intuitive spiritual view. Gabel felt that this was their scientism
coming out, and that their view bore some responsibility for the rise of religions funda-
mentalism in our time:
At a certain point, surrounded by this denial of an aspect of reality that is held in
deo- difficult to explain to the ordinary person who has a strong sense of beauty, of mean-
ing, of purpose, of unfolding, of feeling that the very essence of my life is to be
connected to that impulse, if you can't even talk about it in the room because you are tre-
atued like some sort of idiot, unrealist, or not "connecting with the complexity of the
convergent interdependent knowledge that we have." Then at some point they are just going to pick up the bible and sing, "The bell with this, 6,000 years ago
God created the earth and all its creatures. And that's it." And there are a lot of peo-
ple who are going to agree with me because of the religious traditions that say that is
ture. In fact, more people than you can imagine in your liberal universities.
Gabel, of course, was not contending that the world had been created 6,000 years ago.
But he was insisting that the world was more complex and multi-dimensional than scientists
have tools to understand. The spiritual, aesthetic, emotional, and intuitive grasp of reality
promotes far more multi-leveled account of reality, and there should be no reason why
these dimensions of human experience should be ignored or given less value because they
are not even in principle the subject of scientific knowledge. Gabel was also making a more
subtle point—if one of the reason scientists gives for insisting on the superiority of scien-
The baby's ability to reason well as an adult depends on its nurturance now, for reason is built neurally on the structures that enable empathy. But empathy, compassion and connectedness with all humans and with nature—spiritual understandings that go beyond the purely rational—must guide both our lives and our science.

to know knowledge to all other forms of human discourse is that it is universal knowledge to which everyone can affirm, then there is even wider and more universal agreement on various forms of the ethical and spiritual wisdom that permeates most if not all ethical and spiritual traditions.

Here Lerner raises another interesting possibility: some scientific types (not scientists, but scientists) may simply lack the almost universal capacity to intuit ethical and aesthetic dimensions of reality or to be attuned to the spiritual. There is a story of the "Valley of the Blind" into which, an unfortunate pilot parachuted to escape his failing airplane. He learns their language and begins to talk about seeing things, but the blind not only can't understand what he is talking about, but are quite angry that he insists that there is this other level of perception. Finally, the community of the blind became convinced that the aboriginal discourse of this man is a form of nonsense, and that it comes from these two world-pictures on his face on either side of his nose—what we call eyes—and so, as an act of mercy, to try to help him overcome his creeping insensitivity, they decide to quicken him out. At times, Gabel and Lerner talk about the experience of the scientists as comparable—not only can they not experience spiritual reality, but they have enough social power that they have convinced most people to keep their mouths closed about their own spiritual experiences, so much so that many people imagine that it is only their own personal experience, and possibly even an aberration, so they suppress their spiritual wisdom, or else try to nearly codify it into weekend religious communities that are accepted and tame in the society as long as they don't seek to bring their spiritual knowledge into the public sphere and into the rest of the week. Here, in Western capitalist societies, the spiritually blind are always giving off the message that those who have spiritual experiences are in danger of being treated as crazy unless they keep their mouths shut and follow the dominant scientific religion.

Towards a Sustaining Worldview

Gabel appreciated what he saw as a "great, loving spirit of inquiry" in the conversation at the Roundtable. But there was no doubt that worldviews were clashing. I felt that I was saving in at the beginning of a major evolution of the Enlightenment.

Of course these Roundtables are not what it was like for Valtiers when he began, challenging the religious views of his contemporaries, because it put his life in danger and he had to flee France. But what if a century or two from now, people look back at the origins of their worldview and see Roundtables like these as significant? Would people like Gabel and Lerner then be seen as Valtiers of the new paradigm? (continued on page 63)
Would their history books recount that first there were the millennia of religious worldviews, then the Enlightenment, and then, starting in the twenty-first century, a synthesis that incorporated the best of both but was a radical revision of both that was essential to creating a sustainable and enjoyable civilization? This synthesis would be one that abandoned the untroubled anditaneous aspects of religion, and the dogmatic and diminishing aspects of science. But as religions wars have led people to disrupt the secular world, as global warming, massive species loss, and a horrifyingly unequal world may now lead people to disrupt a culture where our interdependence with each other and all life is privileged over our mastery of nature and of each other. That is the primitive inhere in the NNP's, the 'root line.'

This is not a wholesale rejection of either religion or science. Vitilaeology and religious wars is not inherent in all religion, but is a desecration of nature inherent in science. The way many people have practiced and understood religion has led to intolerance, authoritarianism, and even war. And the way many people have practiced and used science is leading to massive destruction of nature, and to unsatisfying human relationships.

We need a worldview that corrects the dysfunctional aspects of both the religious and scientific worldviews. Is there something in common with both the failed religious worldviews and the failing scientific worldviews? Rabo and Lenor say yes, there is: the Achilles heel in both is seen in their exclusive claim to knowledge. We need a different and more mature approach to knowledge.

This contradicted the understanding of the scientists at the Roundtable of the word "knowledge." They have already, in their lifetimes, lived through a huge change in the scientific worldview: the shift from the Newtonian mechanical universe, the great clockwork mechanism wound up at the start of time and running incalculably ever since, to a quantum, fluid, inherently unpredictable, self-organizing universe. This has been mind-boggling enough. They were convinced to explain this-shock to Lenor and Rabo. But the latter felt that, thoroughly welcome though that shift is, it still doesn't touch address the shift to the worldview they think is needed.

Why is it so hard for our society to deal with our greatest problems of world poverty, global warming, and alienation? What if it would actually take a radically different worldview to solve the problems created by the current worldview?

The View from the Center of the Universe

ONE OF THE BEST BOOKS ON THE CRITICAL IMPORTANCE OF WORLDVIEWS FOR SOLVING OUR PROBLEMS HAS BEEN WRITTEN BY TWO OF THE SCIENTIST AT THESE ROUNDTABLES, LEO PRINMACK, ASTROPHYSICIST AND COSMOLOGIST, AND NANCY ELLEN ADAMS, LAWYER, POET, AND PHILOSOPHER OF SCIENCE, HAVE WRITTEN IN THE VIEW FROM THE CENTER OF THE UNIVERSE THAT THE WAY WE SEE THE UNIVERSE, AND THE CREATION STORIES WE BELIEVE ABOUT IT, DETERMINE WHAT WE CAN ACTUALLY SEE IN IT, WHICH GREATLY INFLUENCES HOW WE ACT. NATURALLY, IF YOU THINK GOD IS GOING TO BRING THIS WORLD TO AN END YOU WON'T SEE SOMETHING LIKE GLOBAL WARMING AS A PROBLEM. BUT THEY ALSO ARGUE THAT IF YOU ARE STUCK IN A NEWTONIAN VIEW OF THE UNIVERSE AS A VAST CLOCKWORK MECHANISM AND HAVE BOUGHT THE IMPLICATION THAT HUMANS ARE OF VARIOUS SIGNIFICANCE IN IT, YOU MAY ALSO NOT BE CONCERNED AS TO WHETHER OUR CIVILIZATION SURVIVES OR NOT, OR AT LEAST YOU MAY NOT FEEL PASSIONATE ENOUGH TO SAVE IT, LET ALONE THE MANY SPECIES IT IS ENDANGERING. THEIR INSIGHT IS THAT CURRENT COSMOLOGY CAN ACTUALLY BE SEEN AS PARTITIONING NATURE AND THE EARTH'S WHOLE BIOSPHERE BACK AT THE CENTER OF THE UNIVERSE—ALONG WITH ANY OTHER PLANETS SUPPORTING COMPLEX LIFE THAT MAY EXIST.

Prinmack and Adams argue that this perspective can inspire us to solve our problems in a global way inclusive of all life on the planet. Given our human tendency to see an "us" and a "them," it is only this kind of cosmic perspective that can lead us to see all life on earth as "us." They admit this interpretation goes beyond the purely scientific, but write, "This kind of integration of science and meaning is considered by many scientists to be a danger to science, but a science that doesn't consider its own meaning can be a danger to everyone else."

They understand that we need inspiration. They embrance using those poetic and even religious metaphors that are consistent with the science, because they understand that humans are moved by metaphor. In fact, current cognitive science tells us that all the ideas we construct about the world, including the scientific ones, are expressed through metaphor. The right metaphors can help us feel and celebrate our connections to each other and all life and the whole cosmos.

But for Prinmack and Adams, as for Lakoff, the value of a metaphor does depend on its consistency with the scientific research. They write, "Once convinced, however, as well as our inspiration, must always be scientific knowledge. That's what guarantees that if we experience a connection, it's the real universe and not to some disembodied fantasy rattling around in our minds."

Here is the point of difference about what knowledge is. In the Roundtable discussion, the scientists were deeply concerned that those speaking from a spiritual perspective were indeed trying to establish their "disembodied fantasies" as truth. The spiritual leaders could not get to the point where what they considered completely obvious universal truths were understood as such by the scientists. They were talking in quite different universes of thought.

Prisif Capra's The Tao of Physics provides a bridge between physics and mysticism that has appealed to many scientists. At the Roundtables he talked about the new biology that sees cognition (thought) as consciousness on all life, and evolution as "art of life self-organization." This is a very different idea from living beings understood as "things" on which a mechanistic natural selection does work. Biologists see now that life has agency in its own evolution. In similar vein Prinmack pointed out that sexual selection is critical to evolution, and the role of love and desire in sexual selection is starting to inform our understanding especially of early human evolution. Capra again, "People today who study consciousnes from a scientific point of view talk about the necessity of including first person experience in the data. Cognitive scientists are doing that...

However, even these moves by the scientists towards understanding the agency of desire and cognition in living beings were still advances within the
mode of scientific knowledge. When empathetic acts and expressions of spiritual insight become the dominant discourse, that is fine, but it is still a world of thought away from spiritual knowledge.

What particularly frustrated Peter Gabel, he told me later, was that for him, the central problem is about the pain and suffering in the world and why some forms of scientific discourse make it extremely difficult for people to develop a language that can help them develop the mutual love and trust needed to build an effective social change movement. Ordinary people, and especially those who have been intimidated by our education system into doubting their own ideas, have to have confidence in their ability to follow their hearts and recognize each other’s longings, each other’s deepest selves. They had to be able to choose out of systems of domination and alienation we live in. The scientific worldview was a significant part of what was preventing that! I had been off in intellectual appreciation land, trying to grasp what Cartesian dualism, random mutations, mirror neurons and systems theory had to do with spiritual metaphors. Gabel’s outburst brought me back to the pain of the world.

Is There a Universal Spiritual Knowledge?

At the Third Roundtable, Michael Lerner laid out the way he sees the universe. It is not the Platonistic view that sees this material world is but a poor copy of some ideal world; it is not the related dualistic religious view that sees God acting from outside the universe. Instead:

I would like to articulate a unified vision rather than a dualistic vision.... From the beginning the universe has been an integrated physical and spiritual consciousness reality. Not from the emergence of brains but from the very, very beginning of everything. That unified reality didn’t suddenly appear at a configuration of complexity but was always there.... There was never a time when the universe wasn’t equally as conscious as it was physical. These two categories are simply human impositions, the best categories that we have—physical/consciousness/spiritual. They are a way of perceiving or choosing...
up an integrated totality that has al-
ways been there from the start and has evolved in more and more com-
plex ways that have involved its complexity more and more mani-
 festations of consciousness connec-
tion, love, empathy, generosity, etc.
In response Nancy Abrams said, "The idea that consciousness and the spirit has been there since the beginning is in my opinion an opinion. I don't have it." Later she said:

I don't agree with a lot of people at this table about what religion or the spirit is. For me the spirit's how I personally relate to the cosmos. It has nothing to do with the reality of what's out there. I don't know what's out there. I don't really think there's something spiritual out there without me feeling it or some-
body feeling it. I think if all intelli-
gent life were gone there would be no spirit. That's how I feel. But it's my opinion and everybody's enti-
tled to their opinion on this issue. Some people like to think of the spirit as something real and objec-
tive and that's fine, let them think that, as long as they feel connected to it. I'm happy. I just want people to not kill each other [over it].

Peter Gohl said:

...the belief that scientific meth-
ods are "hard" and therefore yield knowledge while intuitive methods are "soft" and therefore yield only opinions both expresses and rein-
forces an underlying feeling that there can be no objective basis for political or ethical judgments, that "no one has the right to speak for anyone else," and so forth. The de-

cial, implicit in the scientific method, that one can achieve direct intuitive knowledge of the "within of things" and the ethical relativism that springs from it may help to ex-
plain the creationists' insistence that the Bible must be read as liter-
ally true in every respect.

The central question of what consti-
tutes knowledge is: how do we get to a true description of anything and every-
thing? The claim for a universal spiritual knowledge is that there is a sacredness and inner meaning to the universe and every living being that is discovered out-
side of the scientific discourse, but within the discourses of poetry, spirituality, intu-
ition and heart connection. This is not a static knowledge, evolved once or twice, but one that all people can come to when they engage with each other. It is not a sin-
gle, monolithic knowledge. There is not one single way to jettison the meaning of a flower or a forest of a galaxy or what your and my deepest needs are. It takes train-

ing and practice. It may take meditation for me, poetry for you, the mystical prac-
tices of different religions, prayer in the chapel, or life in the woods. It takes prac-
tice in nonviolent communication, to learn how to talk across the barriers of cul-
ture and pain, to share our intuitive spirit-
ual insights with others and get connections to fix our insights are skewed by our partial experiences. This kind of communication takes a great deal of learning and practice to do well, though it can be also experienced as an instant of real reaching out of one heart to another. But how many universities teach it, prior-
tise it?

You might object that it is not knowl-
edge in the way that scientific knowledge i.e. But was the Newtonian "knowledge" that the universe was a vast clockwork mechanism actually knowledge? Yes it was, in that it was the best anyone knew at the time. No it was not, it was pro-

visional and was later proved inadequate. But the same would be true of spiritual knowledge; it is always under review be-
cause it is the experiences and disciplines of empathetic connection that inform and create it.

So, in terms of their status as "knowledge", the two kinds of knowledge are ac-
tually not that different. There is just as much convergent evidence involved in spiritual knowledge as in scientific, be-
cause it depends on engaging with all kinds of people in many different ways. The fact that neuroscientists can re-
port what is going on in a neurological level or you I sense that life on earth is sacred is pretty interesting. But it is not a full description. As Andrew Kimbrell, the Earth lover, said at the Roundtable:

Take the first flat major chord of the Eroica symphony of Beethoven. Now think of all the sci-
ence you could find in that. Think of all the music movements you could analyze of all the 108 symphony players, of the conductor, all the synapses, mirrored or non-mir-
rored, I don't understand all that basic stuff. I'm sure it's all going on.

And then all the audience. The neural

nerves and everything that's going on.

But you could spend 100 years with twenty scientists spending their entire lives analyzing what's going on scientifically in the first

cue of Beethoven's Eroica sym-
phony and you would understand nothing important about that sym-
phony. And I would say that might be a metaphor for what we're trying to do with nature. So I think that there is a danger here, and not to take a position on the hegemony and the dictatorship of efficiency principles, market principles, and certain views of technological and scientific progress that are winning the day, would be a mistake for spir-

itual progressives. If we don't take a position on that that is the fundamental evil that is de-

stroying the things we love the most, then I don't know what we're doing as a coalition.

The musicians' knowledge of Beethoven's knowledge, it can be shared, revised as more musicians' understand-

ings are brought in, and as the experiences of audiences are shared. It will never stop developing.

You can equally share and develop spiritual knowledge about nature, the uni-
verse, and other people. Though it is dif-

ferent from scientific knowledge, there is no inherent reason why the scientists at the Roundtable couldn't have agreed with that. After all, there they are living it themselves. As Abrams and Primack said, "a science that doesn't consider its own nothingness can be a danger to everyone." The meaning needs to be consistent with the science but not is dictated by the science. At some point we lead with our hearts and make a leap towards the meaning that seems right, usually in conjunction with others whose hearts we trust. And should our spiritual intuition be consistent with the science if the science is wrong? Was it wrong for spiritual people to save "that the universe was more than a great New-
tonian mechanism when scientists know that it was that mechanism? Who had the better knowledge?

Spiritual and scientific knowledge are both provisional, both based on conver-
gent evidence, both as true as it can be in its own sphere. It is just that spiritual knowledge is more important for certain purposes because it is not only real,
The Holy Trinity of Science

By Andrew Kimbrell in a combination of quotes from the Science and Spirit Roundtables:

We haven’t talked about the unconscious here; the idea that scientists are free of unconscious ideas. Notice that the eschatology of Christianity has been completely adopted by secular science. We are in progress to heaven on earth. If we just do enough science we will cure all diseases, cure the blind. Now we have genetic engineering. They say, “Andy what is the matter with you, look at the world we are going to create with all of that Progisors?” So they’ve taken a “heaven-on-earth” eschatology with science becoming Yahweh, incarnating in the miracle Son of technology, influenced by the daily Spirit of consumerism in the market.

In other words, Christ said: you know, I’m a little worried to leave you guys without me. I’m a little worried that you aren’t going to participate in me fully. So I’m going to have the Holy Spirit come down every day—to bring you—to participate in me fully. How do we buy into technology? By buying, by consuming. That’s how we buy a new TV set. How we buy a new car, which I am actually. My car broke down, By doing that, I get the spirit. And I feel the excitement. I’m not immune from this.

Unconsciously, I would argue, we have created a mirror religion to Christianity, the same eschatology; science is the Omniscient, incarnates in the Son that creates the daily miracles of flight. Christ walked on water, but we have jet skis, much better. And then the Holy Spirit, what gets us to fly into the Son, is advertising, that’s the Pentecostal moment. So they’re unconsciously created a mirror Christianity, same metaphors, but new environment in the physical world. And when they fight each other they are both fighting on the basis of transcendental principles, but it’s unconscious. The only danger is I’m not sure scientists realize they are embodying an unconscious religion. So from the depth psychological point of view we need a lot more work.

But, Jung says that in every Trinity there’s a shadow fourth: in Christianity it’s the devil. And was the feminine before the Mary—and the shadow fourth here [in the Science Trinity] is nature. She, who brings us the limits. Those limits are ontologically evil and the whole process of heaven on earth and immortality is to defeat those limits. Literally, unconsciously, we’ve created the entire dogma of the Christian Church in a concretized version and if you’re a heretic to that, that’s the problem. The fundamentalists and the scientists hate each other so much because they are actually, theologically fighting over the same ground. Literally, the same ground.

TY CASHMAN: Herman Kahn and Julian Simon came out and said, “technology breaks us out of limits to growth.” Limits to growth is the evil.

KIMBRELL: Technology is salvation!

CASHMAN: Because every resource is substitutable, substitutable, substitutable...

KIMBRELL: I believe! Believe! Believe! There’s no limits!
The Religion of Science

Andrew Kimbrell spoke vigorously and colorfully at the Roundtables. He argued that Galileo should indeed have been imprisoned, along with Isaac Newton and all their ilk, not because they said the earth went round the sun, but because:

A murder took place about 400 years ago. It was not a murder created by Judaism or the Catholic Church or even Islam. It was a murder created by a certain group of secular thinkers during the Protestant Reformation. They created the world we live in now, in my view. Like it or not, that’s the way it is. The dogma is of efficiency, competition, objectification, and the privileging of data over experience.

When Nancy Abrams objected that accurate data is desperately needed, he agreed but stressed he was talking about what it is that we value: the measurable data or the qualitative aspects of life. In another part of the conversation he told us what we need to do:

Go out and experience animals, go to the river and look at the stream. You’re only going to protect what you fall in love with. You’re not going to have people protect nature because they’re told about facts on nature or resource allocation or even that we have 20 percent less fish or 50 percent less birds. They will go out to the river and say, ‘I love this river’ and they’ll defend that river. So we don’t defend data, we defend actual experience. Not that data isn’t true, it’s just too unimportant.

I thought that long ago I had left the religious worldview of my upbringing for a scientific worldview, but I had to wonder when I heard Kimbrell argue that our culture has created a substitute for the Christian Trinity of Father, Son and Holy Spirit out of science itself. (See box on page 69.)

Summary

Have I made too much of the fact that Lakoff said that “You submit a dichotomy of inside and outside and that is false,” or that Nancy Abrams, who is fully and creatively committed to a spiritual approach to the cosmos, said that spirit “has nothing to do with the reality of what’s out there” and is therefore opinion rather than knowledge? Is this obsession with the status of spiritual intuitive empathic understanding as knowledge misplaced?

Or is there a deep difference here that gets to the core of the radical shift in worldview that we need, and that is possible for us to make?

The worldview shift is that spiritual knowledge gives a truer picture of the whole than science can give, because it includes the sense data from science but goes beyond it to intuital value and meaning, and it has a higher claim than scientific knowledge as a guide for action in the world. But is there anything in that formulation that the scientists at the Roundtables would really object to? Perhaps the objections really were misunderstanding, triggered by the use of words like “detached,” “inside/ outside” and “spiritual” which raised the trauma of past and present religious assaults on science.

Just Imagine

One can imagine a human civilization that prioritizes taking care of each other, all of us, all humans and all living creatures and plants. We have the science and technology to do it now. Our physical needs could be met without destroying ecosystems and driving species to extinction, and our psychological and spiritual needs could be met if we prioritized them. The resurgence of the old religious worldview in the shape of new militant fundamentalisms is merely a passing phase, an inevitable reaction to the failures of science. The failures educated liberals may be most aware of concerning species loss and global warming. But the failures other people are most aware of is overeating their loss of sacred value in the world, their being treated as numbers, as expendable by the gods of corporate and economic efficiency. In fact the West itself, including educated and well-off liberals, is prone to loneliness, depression, and the loss of meaning. One can imagine a world that wonders why spiritual knowledge was ever considered less valid than scientific knowledge, why it was ever considered an individualistic thing, rather a communal and authoritative form of knowledge like science. We need both kinds of knowledge, but right now, we need to privilege the spiritual.