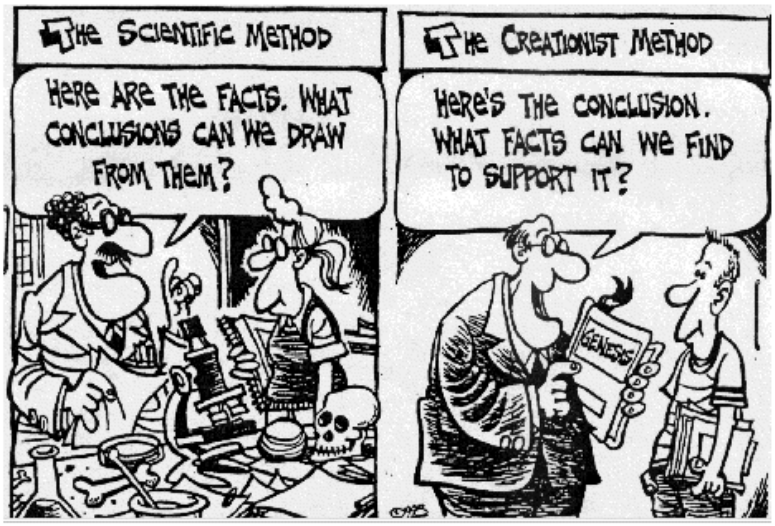
Book Review:
Alfred Tauber, Science and the Quest for Meaning

By Raymond Barglow

Published in Tikkun Magazine in November 2010

Science is sometimes seen as a cold, heartless enterprise that "disenchants" the world and destroys its mystery and wonder. In his most recent book, Alfred Tauber questions this view of science and seeks to understand the implications of Darwinian evolution for the humanities and religion. His inquiry covers the gamut of relationships that link science, spirituality, and ethics, deftly handling some complex and challenging issues.



Tauber recognizes that the story of the origin and development of the world that we find in Genesis and other creation narratives is at loggerheads with the history that biological science tells. Indeed, the "blind" materialism of the evolutionary account, invoking neither intention nor design, appears to be at odds with any worldview that regards "spirit" – however it is understood – as fundamental.

One way to arbitrate this apparent conflict between science and spirituality is to separate the contestants and declare each form of inquiry sovereign in its own domain. Tauber, however, refuses to settle glibly for such a two-state solution. Science, says Tauber, "cannot be given the status of some autonomous social activity. Instead science has become constitutive to our very selves, interpreting through its own refractions issues heretofore left to ethics, religion, and philosophy."

Early in his book, Tauber casts aside the notion that science aims merely to advance control and exploitation. Rather, says Tauber, "science began with the desire to master nature coupled to probing the wonder of nature's mysteries for human understanding." He is concerned with science not only as the driver of technological progress, but also as a world view. Science has

a "pervasive impact on existential and metaphysical formulations of the character of human nature, the place of humans in nature, and the nature of being." Hence science is right up there with spiritual inquiry as a source of profound insight: science has something to tell us in response to the perennial question "What does it all mean?"

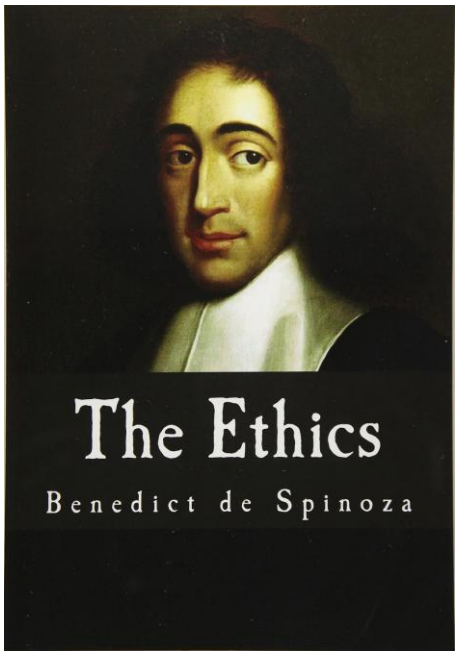
Scientific findings also bear, says Tauber, upon specific ethical dilemmas that we face. A number of today's raging controversies turn upon scientific issues. Consider for example the debate about global warming (Does it exist? What future for humanity does it portend? What can be done about it?) or the debates about abortion rights or stem cell research, where science is considered relevant to the question of when and how an embryo develops into a "person" with rights. In many such instances scientific perspectives and ethical issues are interwoven.

Tauber's integrative approach does not, however, drop all limits upon the range of scientific authority. He re-establishes a boundary when he seeks to insulate spiritual views from scientific critique. Science, he says, "does not, cannot consider religious claims. Since science makes no attempt to address or listen to God, the question of whether the divine exists or not is simply off the scientific agenda."

I find Tauber's reasoning here questionable. He agrees that creationism in any form, including "intelligent design," is incompatible with evolutionary science. But if design is not manifest in nature, then what other reason can be given for supposing divine purpose? The case against intelligent design diminishes the evidence for the existence of a Designer.

The challenge is this: it has become increasingly evident over the past century and a half, since Darwin formulated his evolution theory, that the "clockwork," so to speak, of the universe has no need of a "clock-maker" to explain its development or current motions. Divinity, then, like a disconnected wheel, appears to have no discernable role to play, beyond "presence," as Tauber calls it. In terms similar to those of

Tauber, Arthur Green, in his essay "Sacred Evolution" (Tikkun, March-April 2010) speaks of "an inward, mysterious sense of awesome presence." The word "presence" is well-chosen in this context – better than "existence," which carries the implication of being objective and publicly observable. I don't believe there's any question about whether the experience of "presence," in Tauber's or Green's sense, is real; it indisputably is. But what we are to make of that experience? How does such experience – or any deep encounter with wonder and mystery – intersect with the world that evidence-based empirical inquiry reveals to us?



It may be that when these authors speak of "presence," they mean to strip from the word any connotation of divine design or agency. Perhaps they agree with Spinoza, who writes in the first part of his Ethics that divine intention, purpose, and design are "mere human fictions," representing nothing more than imaginary projection onto G-d of our provincial, human ways of being in the world. But such a radical removal of intentionality from the world alters conventional views of the divine quite dramatically. The German poet Novalis called Spinoza "God intoxicated," but given Spinoza's belief that G-d is absolutely unknowable, it's no accident that he has often been deemed an atheist.

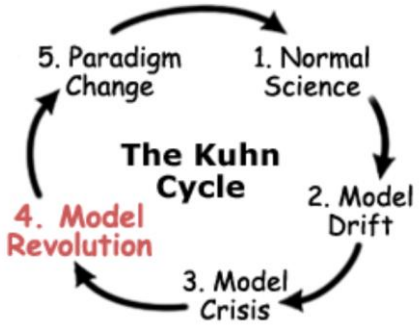
For Tauber, however, science (or, for that matter, any truth-seeking inquiry) is hardly in any position to criticize a spiritual perspective, since science itself has feet of clay: science rests, in his view, upon ultimate values as much as spiritual or ethical inquiry does. Therefore science occupies no privileged position regarding these other ways of knowing, and can provide no superior truth standard for them.

Tauber shifts his focus here from spirituality to ethics, and it is the relationships of science to ethics that preoccupy him from this point forward. Science's way of knowing, he submits, "is value-laden…. we have come to understand that facts are facts because of the values that confer a factual status." Near the end of the book, he reiterates that "science as practiced is not a free-standing enterprise, but is firmly based in the social and subject to the needs and values of its supporting culture."

Once again, Tauber's reasoning is problematic. Ethical values are relevant to the motivations and aims that drive scientific inquiry, but don't tell us whether a scientific hypothesis is credible or not. That is to say, ethical values (supporting our judgments of what is right and wrong) are fundamentally different from epistemic values (involved in scientific justification).

Epistemic values such as simplicity, consistency, predictive power, and agreement with observational data can themselves be justified: A hypothesis that is simple, yields confirmed predictions, agrees with observations, etc. is likely to represent reality more accurately than one that does not.

Ethical values cannot be authorized in this way; they rest upon human mutuality and consent in a manner that I'll elaborate below.



Of course scientists can disagree about the application of epistemic criteria to confirm or disprove a hypothesis or theory, but such disagreement proves to be more easily resolvable, both in practice and in principle, than disagreement about fundamental ethical norms. Even the famous historian Thomas Kuhn, whose work is critical of the idea of "the forward march of science," backed away from scientific relativism. In physics, for example, there is universal agreement that Einsteinian mechanics marks an advance over Newtonian mechanics: the former theory explains everything that the latter one does, explains some things that are inexplicable on a Newtonian account, and is in closer accord with observational data that were unavailable to Newton but have become scientifically ordinary today. Such advance over time in explanatory power is a commonly realized aim of the natural sciences.

I've suggested above that scientific judgment is more objective and securely established than Tauber allows. Ethical judgment, on the other hand, is more subjective than Tauber makes it out to be. Ethical judgment invokes human purpose and will in a unique way that has no scientific counterpart. In this sense, ethics "transcends" science. When scientists get together to assess the evidence for and against a hypothesis in physics or microbiology, their activity is different in form as well as content from what people are doing when they get together to evaluate, for example, a social policy. Consider these two statements, the first scientific and the second ethical:

> "All human beings have a susceptibility to bacterial infection."
>
> "All human beings ought to have adequate health care."

The first statement reports a factual state of affairs: certain one-celled micro-organisms are apt to attack a human body; its vulnerability is

something that has been discovered, not invented. It's true that the way that we respond to this vulnerability is variable and shaped by human priorities and sympathies. But the harm done to human bodies by certain bacteria is a fact of nature.

An ethical proposition, on the other hand, involves more than empirical discovery; it is irreducibly existential: we choose to treat one another well, or we choose – with varying degrees of self-awareness – to act otherwise.

This insight about the volitional character of ethical judgment informs a Jewish European tradition that runs from Spinoza through the German neo-Kantian school (e.g. Hermann Cohen) at the turn of the past century, and more recently Hannah Arendt.

Ethical will formation, Arendt believes, cannot rest solely upon any factual appraisal of ourselves or the world around us. Her view of ethical ideals such as social justice, freedom, and democracy is that they neither need nor admit of empirical proof. A statement such as "Adequate health care is a human right" or "We are stewards of planet earth" or "Undocumented workers should be treated with respect and decency" is not true in the same way that a factual statement is true. Rather, an ethical judgment expresses an invitation of a kind; it conveys resolve and hope – even faith, one might say.

Hannah Arendt cites Immanuel Kant's suggestion that value judgments amount to a courtship of a kind: we "woo" the consent of others. "Life is to be cherished," for example, means something like "Let us cherish life!" This value "follows" not from arguments or evidence, scientific or otherwise, but from dialogue, soul-searching, and commitment.

On this account, ethics has persuasive power only insofar as people regard themselves, in Arendt's words, as "human beings, living and dying in this world, on this earth that is a globe, which they inhabit in common, share in common, in the succession of generations."

This does not mean that facts have no bearing on our ethical judgments. We cannot evaluate global warming, for instance, without understanding its causes and consequences. Tauber presents a convincing case that social policy decisions will be enlightened only if the decision-makers are well-informed. He examines "ecological ethics" as a case study, submitting that "there is a seamless

joint between the findings [of environmental degradation] of ecologists as scientists and the values drawn from their studies."

But because ethical values, unlike the epistemic ones that govern science, rest finally upon chosen covenants and solidarity, ethical judgment cannot be as seamlessly integrated with scientific inquiry as Tauber suggests. Hence in seeking to live in an ecologically sustainable and humane way, we will travel in the company not only of Isaac Newton but also of his 17th-century contemporary Blaise Pascal: "The heart has reasons that reason cannot know." Ethical judgment needs to understand the world as it <u>is</u>, but relies fundamentally upon commitment to the world as it <u>ought to be</u>.