

A scientist's search for comprehensive knowledge

by [Stephen J. Pope](#) in the [November 4, 1998](#) issue

*By Edward O. Wilson, Consilience: The Unity of Knowledge. (Knopf, 352 pp.)*

The subtitle of this book, "the unity of knowledge," will strike some readers as abstruse, yet it directs us to important questions: Can we think about the world and ourselves in anything resembling an integrated manner? Do our moral convictions connect in a reasonable way with what we think about human origins? Is the way we think about the physical world consonant with the way we think about human conduct? Is our view of human nature compatible with our religious convictions? Wilson thinks that the answer to these and similar questions is no, primarily because of scientific illiteracy, but also because of a widespread failure to live up to the intellectual, religious and moral implications of science.

"Consilience" is a 19th-century term connoting a "jumping together" of knowledge "by the linking of fact and fact-based theory across the disciplines to create a common groundwork of explanation." Wilson's "consilience" aims to provide a comprehensive framework for relating all the various disciplines of knowledge under the banner of natural science. Wilson is well qualified to take on this task. He is a distinguished Harvard biologist and popular teacher, Pulitzer Prize-winning writer, sociobiologist, naturalist, authority on entomology and outspoken advocate for environmental responsibility and species diversity.

For our survival and well-being, Wilson says, we need a consensus about our origins, our nature as human beings, our place in the natural world and our purpose, or what it is that makes life worth living. The most credible foundation for this consensus, he insists, is natural science. And the biggest threats to this enterprise come from completely opposite directions--postmodernist denial of scientific objectivity and religious obscurantism and dogmatism.

Wilson believes that evolutionary biology, strategically situated as the bridge between the natural and the human sciences, should replace theology as the "queen of the sciences." "The legacy of the Enlightenment is the belief that entirely on our own we can know, and in knowing, and in understanding, choose wisely."

To a great extent, Enlightenment hope has been realized by 20th-century "hard science." The challenge remaining is to extend well-tested scientific principles into the domain of the social sciences and the humanities. Eventually, Wilson predicts, science will provide a synthesis of all knowledge from all fields of inquiry, from philosophy and literature to art and architecture.

We humans have a tendency to think of ourselves as different from all other animals, as special, noble and created in the "image of God." But like Stephen Jay Gould and Richard Dawkins, Wilson rejects anthropocentrism. Since human nature has evolved throughout millions of years of natural selection, he says, the most appropriate science for examining the meaning of human behavior is evolutionary biology and its allied disciplines. Wilson has dedicated his life to persuading us to think of ourselves as animals who, by dint of luck and natural selection, have evolved to possess highly complex brains. For all our intelligence when compared with gorillas and chimpanzees, we are still primates. We should, therefore, not be under the illusion that when anatomically modern human beings emerged 100,000 or so years ago, after millions of years of evolutionary change, they ceased to be influenced significantly by their evolutionary past. We cannot climb up a ladder and kick it away while standing on the top rung.

Wilson takes a "no holds barred" evolutionary view of religion. Religion is the bastion of superstition, dogmatism, fanaticism, tribalism and other atavistic impulses. Whereas Hegel viewed religion as the poor man's philosophy, Wilson regards religion as the poor man's science. Religion was once the only way preliterate people could comprehend the natural world and deal with human suffering. But now we have science, so religion is no longer needed by those who want to know the truth about human life--indeed, it frustrates such a quest. Yet Wilson does not want to extinguish all religion. For the time being, at least, we must keep it in place as an emotional crutch for the weak and as a civic religion that can bind us together in political community. Some day, Wilson hopes, the "evolutionary epic" will replace the biblical mythology as our core religious narrative.

Wilson also believes that religion and ethics can be "explained" in terms of evolved "epigenetic rules" that serve to promote human survival and reproduction. Epigenetic rules are "hereditary regularities of mental development" that "animate and channel the acquisition of culture." A smile, for example, signifies happiness across all cultures because smiles are genetically encoded responses common to all human beings. Fear of snakes is also universal: Native Americans may fear

rattlesnakes and Indians fear cobras, but both fears express the evolved epigenetic rule that instinctively recognizes the potential lethality of snakes. Controversially, Wilson stretches this notion to embrace other behavioral phenomena--many quite broad and all substantially influenced by culture, including incest taboos, status seeking, care for children, sexual behavior, the morality of cooperation and cheating, and altruism. In Wilson's view the Christian ethic of self-sacrifice has functioned to encourage loyalty to the group, thereby tacitly promoting the selfish interests of the individuals who belong to these groups and promoting human survival.

Wilson adamantly rejects theism or belief in a personal God who loves us as individuals and requires obedient love in response. He believes that there is no evidence whatsoever for a transcendent deity who creates, governs and redeems the world. There has been no revelation from on high: the moral requirements of Christianity are not divine commands, but human constructs generated from epigenetic rules for the purpose of securing survival and reproduction. All human communities teach systems of morality in order to encourage conformity and cooperation and to discourage and punish nonconformity and cheating. For Wilson, individuals who are thought of as "good" are usually given rewards by society, such as power, status and health, that in turn contribute to greater longevity and more secure families; those who are "bad" are punished in the same currency.

Yet Wilson is not an amoral Machiavellian. He writes with moral passion about intellectual honesty, freedom of inquiry and ecological responsibility. He has no problem with the Darwinian function of morality, which he thinks ought to promote survival and reproduction. (How he moves from "is" to that "ought" is never clearly explicated.) The problem behind our interminable moral conflicts, Wilson thinks, is that ethics has been too closely identified with religion. Like a number of 19th-century forebears, he wants to sever ethics from its religious base and reconstruct it on the new, more objective foundation of scientific knowledge. The result will be to free morality from a host of evils--parochialism, bias, tribalism, xenophobia, nepotism and other forms of excessive in-group bias (including irrational bias toward members of our own species in exclusion of all other species). Social interactions will then be regulated by a less oppressive and backward moral code, one that is truly objective, democratic and fair to all people. Science thus provides the key not only to greater intellectual coherence, but also to personal and collective moral development.

Contrary to what Wilson himself claims, his interpretation of religion is not the product of a neutral, detached and "objective" standpoint. It is crucial to recognize that as a child Wilson was raised in Alabama as a strict fundamentalist--a perspective he adamantly rejected in college, where he turned away from revelation and embraced science as the best means for understanding the world. After all these years, Wilson seems to continue to identify "religion" with the fundamentalism of his childhood. Indeed, one might wonder whether the moral passion and craving for certainty that he initially learned in fundamentalist circles hasn't been transferred, in a secularized form, to evolutionary theory.

It is thus no coincidence that Wilson always regards religion as the archenemy of evolutionary theory. It is disappointing that, with all the capaciousness of his learning, Wilson has done only casual and ad hoc reading of theology and religion. Christian evolutionary theism, for example, is simply not on his map. To this reviewer, it seems that Wilson's scientific distinction and publishing fame have encouraged a wildly inordinate confidence in his own judgments about religion and ethics.

We should admire his ambition and breadth of vision. Few scientists have sufficient courage and public concern to write a serious book to a popular audience on such an expansive range of subjects. And he is correct to be concerned about the fragmentation of knowledge and the intellectual incoherence that it breeds. The desire for coherence lies deep in the human mind and finds little satisfaction in contemporary society. Information multiplies geometrically, but wisdom and vision seem to recede at the same rate.

It might be helpful to recall some reflections from Karl Barth. Three years after the end of World War II, Barth's work in theological anthropology led him to take up the challenge of evaluating naturalistic examinations of human nature. Science, particularly medical science, had been put to terrible use under the Nazis. Yet Barth was not antiscientific. Instead, he believed that the scientific investigation of human behavior was valuable and should not in any way be opposed by Christians as long as it did not pretend to provide a comprehensive worldview or a "pseudo-theology."

Barth's observations were aimed at naturalism in their day, but they clearly pertain to our day as well. As James M. Gustafson has observed, Wilson offers not just an explanatory scientific analysis of human conduct, but the "secular equivalent" of a comprehensive systematic theology. In *Consilience*, Wilson asks:

Could Holy Writ be just the first literate attempt to explain the universe and make ourselves significant within it? Perhaps science is a continuation on new and better-tested ground to attain the same end. If so, then in that sense science is religion liberated and writ large.

This approach is flawed in several ways. First, Wilson seeks to unify knowledge by construing all knowledge as the kind of objective, empirically verifiable information intended by the natural sciences. This project rides on the dubious assumption that there is only one kind of truth, the kind of empirically established explanations attained by scientists.

Certainly the music of Mozart can be "explained" by graphing sound waves, and the paintings of Rembrandt can be "explained" through a chemical analysis of their pigmentation. But how far do these explanations get us in really comprehending the deeper human truths communicated in the music of Mozart or the art of Rembrandt? The same holds for the deeper truths communicated in scripture, doctrine and sacrament. What counts as "knowledge" for Wilson is in effect only one kind of knowledge, not all human knowledge. It ignores what Pascal knew as the "reasons of the heart" that inform the Christian tradition.

Second, Wilson's epigenetic rules deserve critical scrutiny. Of course fear of snakes or of heights can plausibly be regarded as biologically based emotions. Yet most of Wilson's epigenetic rules are only vaguely related to genetics and seem much more the product of culture than biology.

Nature, to be sure, encourages all of us to channel our caregiving more in the direction of blood relatives and reciprocating friends than in the direction of strangers and enemies, so perhaps there is a universally human epigenetic rule to this effect. But this "channeling" assumes radically different shapes in different cultures, ranging from urban to agrarian settings, ancient to modern families, polygamous to monogamous marriages and so forth.

The epigenetic rule is much too general to be very helpful in understanding human behavior. For this reason, Wilson never provides any substantive content to what he calls "innate epigenetic rules of moral reasoning."

The weakest aspect of *Consilience* is its impoverished and ill-informed treatment of religion. Wilson gives full play to his prejudices and preconceptions in a way that he

would find preposterous if indulged in by a scientific colleague writing about science. His proposals regarding religion amount to assertions concocted on the basis of evolutionary hunches rather than conclusions proceeding from carefully constructed arguments.

Wilson rips Christian beliefs from their contexts, simplistically characterizes them and simplistically rejects them. Belief in the afterlife, according to Wilson, justifies indifference to others, exploitation of nature, extermination of infidels and "suicidal martyrdom." While many Christians have been guilty of these faults and others, many other Christians who believe in eternal life have exhibited compassion, justice and stewardship. Wilson never entertains even this kind of simple objection to his position.

He lumps together complex positions within theology under grossly misleading titles like "empiricist" and "transcendentalist." Thomas Aquinas, the great medieval synthesist of faith and reason, is depicted as an exponent of divine-command morality. In order to force Thomas Aquinas into the "transcendentalist" position, Wilson mangles and amputates his thought beyond recognition.

Wilson's book is more significant for the cast of mind that it represents than for its arguments. *Consilience* represents the increased tendency of the educated mind in our society to feel alienated from religion (if at the same time a bit nostalgic for it), to be suspicious of religious authority, and to find theism implausible. Wilson's interest for us, then, may lie in the fact that he articulates, at least in the "disenchanted" and secularistic tenor of his thought, what many educated people of our society increasingly suspect to be the case: matter and genes really are all that there is or ever will be.

How well are the churches addressing the tensions felt in the minds of many educated Christians who internally hear two choruses: on the one hand, the voices of their pastor and Sunday school, the scriptures and tradition; on the other, the voices of their high school science teacher, their college biology professor and the science section of the *New York Times*? Perhaps not very well.

Wilson at least shows us what the world looks like from the point of view of a secular, scientifically educated person who recognizes the need for intellectual integration and moral integrity.