EDWARD WILSON IS ONE OF THOSE DAUNTING SCIENTISTS who know several fields deeply, have been educated in the humanities during a bygone era in which culture meant more than the tawdry pages of the Sunday *Times* Arts and Leisure section, and who write extremely well. Immersed in biology, entomology, ecology, he is nonetheless familiar with literature and the arts, philosophy and literary theory, the social sciences, and much else. His book on sociobiology, recently reissued in a twentieth-fifth anniversary edition, caused much dissension and resistance when it first appeared but has since become naturalized as a founding text in the burgeoning field of evolutionary biology. His most recent book, *Consilience: The Unity of Knowledge*, pulls together much of his earlier thinking in order to promote a new synthetical direction for all the knowledge disciplines, a bold venture that has rubbed some people the wrong way.

Starting out with an extended account of Enlightenment thinkers, Wilson remarks:

The assumptions they made of a lawful material world, the intrinsic unity of knowledge, and the potential of indefinite human progress are the ones we still take most readily into our hearts. . . . The greatest enterprise of the mind has always been and always will be the attempted linkage of the sciences and the humanities. The ongoing fragmentation of knowledge and resulting chaos in philosophy are not reflections of the real world but artifacts of scholarship. The propositions of the original Enlightenment are increasingly favored by objective evidence, especially from the natural sciences.

Although all of these sometimes controversial claims are fleshed out over and over again throughout the rest of the book, one can infer from this passage alone the foundational mindset that undergirds Wilson’s thinking: conservative in the best sense of that term, Wilson believes in Truth, a Real World, human mindpower, and the preeminence of the sciences. For him, the astonishing feats of the mind are not ultimately explainable as metaphysical intuition, faith, grace, or Platonic reminiscence but, rather, are the hard-won achievements of a material

organ—the brain—that evolved along with all other forms of matter and organic life. This is a knowledge from below unaided by nightly visits from a Miltonic Urania.

The fragmentation of this knowledge, with each specialty operating according to its own rules and worldview, militates against any sort of coherent management of the problems of mankind. The split between the sciences and the humanities prevents “a clear view of the world as it really is, not as seen through the lenses of ideologies and religious dogmas or commanded by response to immediate needs.” Political leaders as well as public intellectuals are trained principally in the social sciences and humanities and know next to nothing about the material bases of life as described by the sciences. Natural Selection “built the brain to survive in the world and only incidentally to understand it at a depth greater than is needed to survive. The proper task of scientists is to diagnose and correct the misalignment.” Wilson recognizes the vulnerability of his confidence in the abilities of the sciences but is willing to hedge his bets in favor of humankind’s best hope. “Better to steer by a lodestar than to drift across a meaningless sea.”

Consilience, or the jumping together of the various branches of knowledge, is a concept that Wilson derives from his overall thesis about human understanding as a product of evolution. “The central idea of the consilience world view is that all tangible phenomena, from the birth of the stars to the workings of social institutions, are based on material processes that are ultimately reducible, however long and tortuous the sequences, to the laws of physics.” This means that to treat human faculties as special creations from above rather than growths from below is to ignore the facts of evolutionary history and the development of species to survive in congenial environments. Wilson’s characterization of the field of economics can serve as a global critique of the knowledge professions in general. Speaking of the nature of classical economic theory, he remarks: “Its models, while elegant cabinet specimens of applied mathematics, largely ignore human behavior as understood by contemporary psychology and biology. Lacking such a foundation, the conclusions often describe abstract worlds that do not exist.” Unsurprisingly, with a critique like this, all sorts of cherished but unwarranted beliefs about humanity get swept into the refuse bin. If, for example, the mind is a function of the innumerable circuits of the brain, an immaterial “self” that makes “free” choices becomes an unintelligible concept if it entails “freedom from the constraints imposed by the physiochemical states of one’s own body and mind.” These conditions “consolidate certain memories and delete others, bias connections and analogies, and reinforce the neurohormonal loops that regulate subsequent emotional response. Before the curtain is drawn and the play unfolds, the stage has already been partly set and much of the script written.”

Even for those of us without such knowledge of the materiality of the brain, what could the notion of “free will” ever have meant— unmotivated behavior? If motivated behavior seems constraining, unmotivated behavior would be akin to insanity and madness. Certainly
we are free to weigh alternatives and can be said to have “free will” in that sense, but we are hardly free to choose how much weight the alternatives will have on our constitutions, which are the products of our biological, cultural, and personal histories. Or as Wilson puts it, “Behavior is guided by epigenetic rules,” which are rules of thumb produced under the joint influence of heredity and environment. They are predisposing rather than absolutely constraining, causing us to see rainbows in four colors (rather than in a continuum of light frequencies), to avoid mating with a sibling, to speak in grammatical sentences, and to fear strangers, “but they leave open the potential generation of an immense array of cultural variations and combinations.” And interestingly, their influence is not always benignly survival-oriented, as when they clash with social conventions.

Sociobiology regards social customs and behaviors as offshoots of our biological needs, as a cross between genetics and psychology, between the history of the species and the history of the individual, and Wilson, in turn, sees natural selection as being more and more influenced by social, psychological, and intellectual developments, therefore only part of a reciprocal relationship rather than a sole determinant. With the development of genetic manipulation, human beings are taking more and more control over their evolutionary paths, but Wilson is not receptive to open-ended genetic tinkering to create superbeings. If, as he devotes his ecological manifesto, The Diversity of Life, to explaining, human beings need the rain forests, earth’s microorganisms, and the variety of creatures in order to survive on this particular planet, so (I infer) the human nature that took millions of years to develop cannot just be broken into with foreign supergenes without the risk of destroying a human ecology that makes us the species we are. Although at times he comes off as perhaps too assured about the power of the sciences, Wilson is far from being a monomaniacal hubris-driven science tyrant out of a Hawthorne short story like “Rappacini’s Daughter.”

When it comes to the arts, to which Wilson is far from insensitive, he shares the principles of Frederick Turner, whose “natural classicism” finds human preferences regarding meter, symmetry, regularity, balance and so forth to be triggered by our constitutions—or, as Wilson would put it, guided by the epigenetic rules that formed us during the Paleolithic period. He has little that is favorable to say about academic or postmodern uses of the arts, or about postmodern nihilism and solipsism altogether, most of which he attributes to the professional needs of the various disciplines rather than any insights into our autochthonous origins and our primal sympathies with mud (so to speak). The arts are not “solely shaped by errant genius out of historical circumstances and idiosyncratic personal experience.” The roots of their inspiration date back in deep history to the genetic origins of the human brain, and are permanent.” But because “homo sapiens is the only species to suffer psychological exile,” the arts have developed to “impose order on the confusion caused by intelligence.”

As for ethics and religion, the key to their history would not be found
in a retrospective metaphysics or philosophy but, more likely, in physics, biology, and psychology. Wilson’s case for the aboriginal, sociobiological roots of ethical, social, and religious practices seems just as plausible as the claim of nutritionists that our proper food is still the diet of hunter-gathers, since “it would be surprising to find that modern humans had managed to erase the old mammalian genetic programs.” Even though the sciences have gradually destroyed beliefs in primitive divinities and supernatural events, the ancient needs that produced these beliefs in the first place—like the needs that produced our dietary requirements—have not disappeared. (Witness the latest surge of fundamentalism.) “Science faces in ethics and religion its most interesting and possibly humbling challenge, while religion must somehow find the way to incorporate the discoveries of science in order to retain credibility. Religion will possess strength to the extent that it codifies and puts into enduring, poetic form the highest values of humanity consistent with empirical knowledge.”

Wilson’s book concludes with what might be considered its very best chapter—on ecology and humankind’s need to come to terms with the earth. Almost everything he has to say on that subject is endorsed by Wendell Berry, whose latest book, *Life Is a Miracle,* is otherwise—alas—an almost unmitigated trashing of both Wilson and *Consilience.*

Berry’s prolific output of ecologically thematic poems, fiction, and essays—such as *The Unsettling of America* and *A Continuous Harmony*—is a major body of work by a Kentucky farmer and sometime academic who loathes what academia has become over the past twenty-five years. Indeed, he loathes what many things have become under the pressure of our global economy, and much of this animosity is well justified as he develops it anew in *Life Is a Miracle.* Yet there is an insidious worm that eats away at the virtues of this book and leads me to believe that Berry’s eminence as a cultural guide has peaked. A voice may cry in and for the wilderness, as Berry has excellently done for many years, but no icon has a purchase on immortal wisdom, and what constituted strengths in 1975 can very well turn out to be fatally compromising in the year 2000, however valid some of his critique still remains. This was driven home to me in June of 1999 at a talk Berry gave in Kalamazoo at the third biennial conference of the Association for the Study of Literature and Environment (ASLE). To my astonishment (since he was a venerated wise man much sought-after as a speaker), when his talk was done, he was unrestrainedly attacked by the young graduate students and assistant professors who comprised a good part of the audience. Among other things, his positions on abortion, religion, and tobacco farming struck them as shockingly retro, and they laced into him for hypocrisy.

Berry’s book is essentially an attack on what he regards as Wilson’s scientific hubris, his reduction of everything to biology, physics, and chemistry, his failure to pay more than lip service to a world of spirit that
somehow, Berry believes, escapes the founding in materiality that generates everything else. Berry objects to Wilson's faith in science, but not to faith in general, certainly not to his own religious faith, and it is this extraordinary blindness that prevents Berry from seeing that he and Wilson, who appear to be mighty opposites, are essentially very similar indeed—except for their doctrines. But Wilson has the upper hand by far, because faiths, like everything else, come and go—whether in Greek gods, geocentric universes, unquestioned virtues (e.g., chastity in women but not men), or Judeo-Christian "words of God." Not even the Boy Scouts are invulnerable.

The burden of Berry's book is that science presumes to understand life and reduces it to a machine, that it has reverence for nothing, that its confidence in the powers of understanding is unfounded and, worst of all, that it does not acknowledge the mystery that lies behind phenomena, a mystery that is somehow to be understood as our interface with the sacred. Most strenuously, he objects to the "religionization and evangelizing of science" and its willingness to occupy "the place once occupied by the prophets and priests of religion." As for the idea of consilience, he finds Wilson's book to be "written to confirm the popular belief that science is entirely good, that it leads to unlimited progress, and that it has (or will have) all the answers." Although the early pages of Berry's book manage to keep his own religious presuppositions slightly under wraps, their force gradually becomes too great to control and by the halfway mark they burst forth in a language of defiance against the very protocols of public intellectual discourse. Even before that point is reached, however, one wants to ask him why contemporary science should not assume a prophetic role, as opposed to the anachronistic views of an ancient nomadic desert population whose perspectives were shaped by their own needs no less than ours are shaped by ours. And as for the balance between theoretical and applied science, is that ethical track record any worse than the record of esoteric theology vis-à-vis the churches that claim to put its principles into action? If applied science has—as Berry rightly complains—aliied itself with corporate capitalism and produced extraordinary damage to the environment (putting aside for the moment the stunning amelioration of human life it has also produced), is the record of the churches any better? Does one really have moral confidence in Southern Baptists who apologize 150 years too late for slavery, or a mealy-mouthed pope who plays with the truth regarding the relationship between the Church and the Holocaust and engages in doubletalk about homosexuals? (Garry Wills has been especially devastating on this subject.)

Berry goes on to complain that "a theoretical materialism so strictly principled as Mr. Wilson's is inescapably deterministic. We and our works and acts, he holds, are determined by our genes, which are determined by the laws of biology, which are determined ultimately by the laws of physics." But beyond his generalized distaste for such a view, Berry has little to add that makes the notion of free will any less obscure,
any less a verbal game. Even worse, “[Wilson] understands mystery as attributable entirely to human ignorance. . . . He has no ability to confront mystery (or even the unknown) as such, and therefore has learned none of the lessons that humans have always learned when they have confronted mystery as such. His book is an exercise in a sort of academic hubris.” But what else is mystery but a limited state of knowledge? Things in themselves are not mysterious—they are what they are, even if we don’t know what they are. The worship of mystery summons up visions of grade B movies in which the “savages” prostrate themselves in front of some phenomenon they don’t understand. Of course Berry is right that everything can’t be known—there isn’t world enough and time—but does that confer on the residue an aura of the sacred to justify mindless idolatry, as if what can’t be known differed in its quality of being from what can be? The “can’t” is in the limitations of the knower, not in any intrinsic unknowability of some putatively sacred substance.

Berry criticizes Wilson’s demand for evidence for religious claims while attacking him for providing insufficient evidence for his scientific optimism. “His writing about consilience is always under the sway of conditional verbs, of protestations of faith, of ‘if’ and ‘until’ and ‘likely’ and ‘perhaps.’” And then he exhibits his own hubris by telling us (in scare quotes) that religious faith doesn’t require any “evidence.” But why should Wilson’s failure to exhibit omniscience and his acknowledgment that understanding develops over time be held against him as hubris? And why should Wilson’s own “faith” be disallowed for insufficient evidence when Berry’s requires no evidence at all? At least Wilson attempts to provide evidence, which partakes of the ground rules for public discourse. “Scrupulous minds,” Berry goes on to tell us, “must continue to live with the old proposition that some things are not knowable.” And yet, in the section of Life Is a Miracle in which he holds forth on religious faith, he confounds the possibility of public conversation by alluding to Job’s “I know that my redeemer liveth” and remarking: “This statement rests on no evidence, no proof. It is not in any respectable sense a theory. Job calls it knowledge. He ‘knows’ that what he says is true. A great many people who have read these verses have agreed: they too know that this is so.” But a position of this sort—this hurling of a crucifix in the teeth of Dracula—is a confession of bankruptcy, not a surety of knowledge. For a public intellectual, it is a complete abandonment of the responsibilities of the playing field. Berry “knows” as well as I do that Job’s “know” means nothing more than “believe.” And if Berry really thinks otherwise, he pretty much has closed the book on his bona fides as a spokesman for anything except a narcissistic antinomianism.

Behind this retrograde display is a genuine truth: there are other types of knowledge besides the scientific: I know how I feel, I know that music gives me pleasure and so forth. There is personal subjective knowing—but that this kind of knowing exists does not go very far in
refuting Wilson’s central claim that we have been produced out of the materials of the earth and can never cut ourselves loose from our terrestrial underpinnings, no matter how sublime our thoughts. That nurture, in other words, is nature. For Berry to think there are categories of thought that don’t arise from below but that are handed to him directly by “God” is, for Wilson, just another atavistic earthly survival stratagem of evolution. It would involve much less hubris if we were to give up the notion that billions of years of planetary existence and the coming and going of billions of creatures have all taken place in order to enable a congeries of smug believers to feel good about their puny little self-regarding souls.

And indeed, there is a good deal of self-involvement on display in this book as a whole, whose constant theme is that local communities and customs, as well as the families and occupations that characterize them, most particularly farming and farmers, are being destroyed by the global economy, a product of applied sciences and the multinational corporations that fund them. “One of the most significant costs of the economic destruction of farm populations is the loss of local memory, local history, and local names.” Berry has written movingly elsewhere about the gradual destruction of the Kentucky farmlands in which he has dwelled for many decades and their takeover by faceless and exploitive corporations that care only for the bottom line. It is impossible not to read his remarks with sympathy regarding the obliteration of an entire culture that has powerful daily knowledge of and emotional ties to the land. But the cumulative effect of repeated references to this vanishing world throughout Life Is a Miracle is that of a parti pris jeremiad against the entire contemporary world for destroying Berry’s lifelong habitat. And his one and only allusion to tobacco-growing can only be described as chilling: “The anti-smoking campaign, by its insistent reference to the expensiveness to government and society of death by smoking, has raised a question that it has not answered: What is the best and cheapest disease to die from, and how can the best and cheapest disease best be promoted?” A misfiring ironic sentiment like this one does not encourage much readerly confidence in the disinterest of Berry’s overall social critique. His losses, moreover, are hardly unique: everyone has seen the institutions, customs, and habitat of their formative years being destroyed by contemporary corporate forces: it is the old story of social change that has been experienced since Day One. In a word, it’s Mortality. The proper response to this may not be supine quietude—but it’s not a ragbag of eternal verities either.

And yet, having said this, I concur with Berry’s views on professionalism, academia, and the erosion of most deeper values by money. The professions in general, and academia and the sciences in particular, have as their ends not the welfare of humankind—or even one’s locality—but the interests of the professions themselves. The sciences are too often in effect “science-technology-and-industry,” and as for academia, Berry asks, “If a tree falls in the absence of a refereed journal
or a foundation, does it make a sound?” The modern university “enforces obedience, not to the academic ideal of learning and teaching what is true, as a community of teachers and scholars passing on to the young the knowledge of the old, but obedience rather to the industrial economic ideals of high productivity and constant innovation.” And worst of all, “The cult of progress and the new, along with the pressure to originate, innovate, publish, and attract students, has made the English department as nervously susceptible to fashion as a flock of teenagers.” These critiques—provoked by Berry’s reaction to Wilson’s “science”—are devastatingly apposite, but I am not sure that they differ so totally from Wilson’s own point of view. For Wilson also excoriates the academic professions for their insularity, self-interest, and radical ignorance of the ecological roots of all earthly existence. But what Berry would justify as the will of God is explained by Wilson as the physico-chemical-biological nature of all existent things. And what Wilson, as a scientist, attempts to support with evidence as the real nature of things, Berry, as a true believer speaking de haut en bas, simply “knows,” along with Job, to be the truth.