

Life Is a Miracle

Wendell Berry

It is clearly bad for the sciences and the arts to be divided into "two cultures. . . ." It is bad for both of these cultures to be operating strictly according to "professional standards," without local affection or community responsibility, much less any vision of an eternal order to which we all are subordinate and under obligation. It is even worse that we are actually confronting, not just "two cultures," but a whole ragbag of disciplines and professions, each with its own jargon more or less unintelligible to the others, and all saying of the rest of the world, "That is not my field."

Reductionism

Reductionism, like materialism, has uses that are appropriate, and it also can be used inappropriately. It is appropriately used as a way (one way) of understanding what is empirically known or empirically knowable. When it becomes merely an intellectual

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"position" confronting what is not empirically known or knowable, then it becomes very quickly absurd, and also grossly desensitizing and false. Like materialism, reductionism belongs legitimately to science; as an article of belief, it causes trouble.

According to Edward Wilson, "Science . . . is the *organized, systematic enterprise that gathers knowledge about the world and condenses the knowledge into testable laws and principles.*"¹ He says further that "The cutting edge of science is reductionism, the breaking apart of nature into its natural constituents" (54). And reductionism has "a deeper agenda," which is "to fold the laws and principles of each level of organization into those at more general, hence more fundamental levels. Its strong form is total consilience, which holds that nature is organized by simple universal laws of physics to which all other laws and principles can eventually be reduced" (55). Toward the end of his book, Mr. Wilson adds the following: "There is abundant evidence to support and none absolutely to refute the proposition that consilient explanations are congenial to the entirety of the great branches of learning" (266).

Mr. Wilson's definitions of science and reductionism, granting him his prejudices, seem to me perfectly appropriate. His definition of consilience, however, like his exposition of it, becomes more contestable the farther it goes.

There obviously is a necessary usefulness in the processes of reduction. They are indispensable to scientists—and to the rest of us as well. It is valuable (sometimes) to know the parts of a thing and how they are joined together, to know what things do and do not have in common, and to know the laws or principles by which things cohere, live, and act. Such inquiries are native to human thought and work.

But reductionism also has one inherent limitation that is paramount, and that is abstraction: its tendency to allow the particular to be absorbed or obscured by the general. It is a curious paradox of science that its empirical knowledge of the material world gives rise to abstractions such as statistical averages which have no materiality and exist only as ideas. There is, empirically speaking, no average and no type. Between the species and the specimen the creature itself, the individual creature, is lost. Having been classified, dissected, and explained, the creature has disappeared into its class, anatomy, and explanation. The tendency is to

¹Edward O. Wilson, *Consilience: The Unity of Knowledge* (Westminster, MD: Knopf, 1998), 53 (his italics).

equate the creature (or its habitat) with one's formalized knowledge of it. Mr. Wilson is somewhat aware of this problem for he insists upon the importance of "synthesis and integration" (54). But he does not acknowledge that synthesis and integration are merely parts of an explanation, which is invariably and inevitably less than the thing explained. The synthesizing and integrating scientist is only ordering and making sense of as much as he knows. He is not making whole that which he has taken apart, and he should not claim credit for putting together what was already together.

The uniqueness of an individual creature is inherent, not in its physical or behavioral anomalies, but in its *life*. Its life is not its "life history," the typical cycle of members of its species from conception to reproduction to death. Its life is all that happens to it in its place. Its wholeness is inherent in its life, not in its physiology or biology. This wholeness of creatures and places together is never going to be apparent to an intelligence coldly determined to be empirical or objective. It shows itself to affection and familiarity.

The frequent insultingness of modern (scientific-technological-industrial) medicine is precisely its inclination to regard individual patients apart from their lives, as representatives or specimens of their age, sex, pathology, economic status, or some other category. The specialist to whom you have been "referred" may never have seen you before, may know nothing about you, and may never see you again, and yet he (or she) presumes to know exactly what is wrong with you. The same insultingness is now also a commonplace of politics, which treats individuals as representatives of racial, sexual, geographic, economic, ideological, and other categories, each with typical faults, complaints, rights, or virtues.

Science speaks properly a language of abstraction and abstract categories when it is properly trying to sort out and put in order the things it knows. But it often assumes improperly that it has said—or known—enough when it has spoken of "the cell" or "the organism," "the genome," or "the ecosystem" and given the correct scientific classification and name. Carried too far, this is a language of false specification and pretentious exactitude, never escaping either abstraction or the cold-heartedness of abstraction.

The giveaway is that even scientists do not speak of their loved ones in categorical terms as "a woman," "a man," "a child," or "a case." Affection requires us to break out of the abstractions, the categories, and confront the creature itself in its life in its

place. The importance of this for Mr. Wilson's (and my) cause of conservation can hardly be overstated. For things cannot survive as categories but only as individual creatures living uniquely where they live.

We know enough of our own history by now to be aware that people *exploit* what they have merely concluded to be of value, but they *defend* what they love. To defend what we love we need a particularizing language, for we love what we particularly know. The abstract, "objective," impersonal, dispassionate language of science can, in fact, help us to know certain things, and to know some things with certainty. It can help us, for instance, to know the value of species and of species diversity. But it cannot replace, and it cannot become, the language of familiarity, reverence, and affection by which things of value ultimately are protected.

The abstractions of science are too readily assimilable to the abstractions of industry and commerce, which see everything as interchangeable with or replaceable by something else. There is a kind of egalitarianism which holds that any two things equal in price are equal in value, and that nothing is better than anything that may profitably or fashionably replace it. Forest = field = parking lot; if the price of alteration is right, then there is no point in quibbling over differences. One place is as good as another, one use is as good as another, one life is as good as another—if the price is right. Thus political sentimentality metamorphoses into commercial indifference or aggression. This is the industrial doctrine of the interchangeability of parts, and we apply it to places, to creatures, and to our fellow humans as if it were the law of the world, using all the while a sort of middling language, imitated from the sciences, that cannot speak of heaven or earth, but only of concepts. This is a rhetoric of nowhere, which forbids a passionate interest in, let alone a love of, anything in particular.

Directly opposed to this reduction or abstraction of things is the idea of the preciousness of individual lives and places. This does not come from science, but from our cultural and religious traditions. It is not derived, and it is not derivable, from any notion of egalitarianism. If all are equal, none can be precious. (And perhaps it is necessary to stop here to say that this ancient delight in the individuality of creatures is not the same thing as what we now mean by "individualism." It is the opposite. Individualism, in present practice, refers to the supposed "right" of an individual to act alone, in disregard of other individuals.)

We now have the phenomenon of "mitigation banking" by which a developer may purchase the "right" to spoil one place by preserving another. Science can measure and balance acreages in this way just as cold-heartedly as commerce; developers involved in such trading undoubtedly have the assistance of ecologists. Nothing insists that one place is not interchangeable with another except affection. If the people who live in such places and love them cannot protect them, nobody can.

It is not quite imaginable that people will exert themselves greatly to defend creatures and places that they have dispassionately studied. It is altogether imaginable that they will greatly exert themselves to defend creatures and places that they have involved in their lives and invested their lives in—and of course I know that many scientists make this sort of commitment.

I have been working this morning in front of a window where I have been at work on many mornings for thirty-seven years. Though I have been busy, today as always I have been aware of what has been happening beyond the window. The ground is whitened by patches of melting snow. The river, swollen with the runoff, is swift and muddy. I saw four wood ducks riding the current, apparently for fun. A great blue heron was fishing, standing in water up to his belly feathers. Through binoculars I saw him stoop forward, catch, and swallow a fish. At the feeder on the window sill, goldfinches, titmice, chickadees, nuthatches, and cardinals have been busy at a heap of free (to them) sunflower seeds. A flock of crows has found something newsworthy in the cornfield across the river. The woodpeckers are at work, and so are the squirrels. Sometimes from this outlook I have seen wonders: deer swimming across, wild turkeys feeding, a pair of newly fledged owls, otters at play, a coyote taking a stroll, a hummingbird feeding her young, a peregrine falcon eating a snake. When the trees are not in leaf, I can see the wooded slopes on both sides of the valley. I have known this place all my life. I long to protect it and the creatures who belong to it. During the thirty-seven years I have been at work here, I have been thinking a good part of the time about how to protect it. This is a small, fragile place, a slender strip of woodland between the river and the road. I know that in two hours a bulldozer could make it unrecognizable to me, and perfectly recognizable to every "developer."

The one thing that I know above all is that even to hope to protect it, I have got to break out of all the categories and confront it as it is; I must be present in its presence. I know at least some of the categories and value them and have found them

useful. But here I am in my life, and I know I am not here as a representative white male American human, nor are the birds and animals and plants here as representatives of their sex or species. We all have our ways, forms, and habits. We all are what we are partly because we are here and not in another place. Some of us are mobile; some of us (such as the trees) have to be content merely to be flexible. All of us who are mobile are required by happenstance and circumstance and accident to make choices that are not instinctive, and that forces us out of categories into our lives here and now. Even the trees are under this particularizing influence of place and time. Each one, responding to happenstance and circumstance and accident, has assumed a shape not quite like that of any other tree of its kind. The trees stand rooted in their mysteriously determined places, no place quite like any other, in strange finality. The birds and animals have their nests in holes and burrows and crotches, each one's place a little unlike any other in the world—and so is the nest my mate and I have made.

In all of the thirty-seven years I have worked here, I have been trying to learn a language particular enough to speak of this place as it is and of my being here as I am. My success, as I well know, has been poor enough, and yet I am glad of the effort, for it has helped me to make, and to remember always, the distinction between reduction and the thing reduced. I know the usefulness of reductive language. To know that I am "a white male American human," that a red bird with black wings is "a scarlet tanager," that a tree with white bark is "a sycamore," that this is "a riparian plant community"—all that is helpful to a necessary kind of thought. But when I try to make my language more particular, I see that the life of this place is always emerging beyond expectation or prediction or typicality, that it is unique, given to the world minute by minute, only once, never to be repeated. And then is when I see that this life is a miracle, absolutely worth having, absolutely worth saving.

We are alive within mystery, by miracle. "Life," wrote Erwin Chargaff, "is the continual intervention of the inexplicable."² We have more than we can know. We know more than we can say. The constructions of language (which is to say the constructions of thought) are formed *within* experience, not the other way around. Finally we live beyond words, as also we live

²Erwin Chargaff, *Heraclitean Fire* (New York, NY: Rockefeller University Press, 1978), 20.

beyond computation and beyond theory. There is no reason whatever to assume that the languages of science are less limited than other languages. Perhaps we should wish that after the processes of reduction, scientists would return, not to the processes of synthesis and integration, but to the world of our creatureliness and affection, our joy and grief, that precedes and (so far) survives all of our processes.

Reduction and Religion

It is clearly bad for the sciences and the arts to be divided into "two cultures." It is bad for scientists to be working without a sense of obligation to cultural tradition. It is bad for artists and scholars in the humanities to be working without a sense of obligation to the world beyond the artifacts of culture. It is bad for both of these cultures to be operating strictly according to "professional standards," without local affection or community responsibility, much less any vision of an eternal order to which we all are subordinate and under obligation. It is even worse that we are actually confronting, not just "two cultures," but a whole ragbag of disciplines and professions, each with its own jargon more or less unintelligible to the others, and all saying of the rest of the world, "That is not my field."

The badness of all this is manifested first in the loss even of the pretense of intellectual or academic community. This is a loss increasingly ominous because intellectual engagement among the disciplines, across the lines of the specializations—that is to say *real* conversation—would enlarge the context of work; it would press thought toward a just complexity; it would work as a system of checks and balances, introducing criticism that would reach beyond the professional standards. Without such a vigorous conversation originating in the universities and emanating from them, we get what we've got: sciences that spread their effects upon the world as if the world were no more than an experimental laboratory; arts and "humanities" as unmindful of their influence as if the world did not exist; institutions of learning whose chief purpose is to acquire funds and be administered by administrators; governments whose chief purpose is to provide offices to members of political parties.

The ultimate manifestation of this incoherence is loss of trust—loss, moreover, of the entire cultural pattern by which we understand what it means to give and receive trust. The general assumption now is that everybody is working in his or her own

interest and will continue to do so until checked by somebody whose self-interest is more powerful. That nobody now trusts the politicians or their governments is probably the noisiest of present facts. More quietly, people are withdrawing their trust from the professions, the corporations, the education system, the religious institutions, the medical industry. Perhaps no expert has yet assigned a quantitative value to trust; it is nonetheless certain that when we have finished subtracting trust from all we think we have gained, not much will be left.

And so it certainly is desirable—it probably is necessary—that the arts and the sciences should cease to be “two cultures” and become fully communicating, if not always fully cooperating, parts of one culture. (I believe, as I will show, that this culture when it comes will be in fact a mosaic of cultures, based upon every community’s recognition that all its members have a common ground, and that this *ground* is the ground under their feet.) I have, therefore, not the slightest inclination to disagree with Mr. Wilson’s wish for a “linkage of the arts and humanities.” With his goal of “consilience,” though I sympathize, I do not agree.

I do not agree because I do not think it is possible. I do not think it is possible because, as he defines it, it would impose the scientific methodology of reductionism upon cultural properties, such as religion and the arts, that are inherently alien to it, and that are often expressly resistant to reduction of any kind. Consilience, Mr. Wilson says, is “literally a ‘jumping together’ of knowledge by the linking of facts and fact-based theory across disciplines to create a common groundwork of explanation” (8). And: “The only way either to establish or to refute consilience is by methods developed in the natural sciences—not . . . an effort led by scientists, or frozen in mathematical abstraction, but rather one allegiant to the habits of thought that have worked so well in exploring the material universe” (9). The project of consilience, then, is not for scientists only, but it is only for science.

Whether or not science, religion, and the arts can be linked on “a common groundwork of explanation” depends upon a further question: Can religion and the arts be explained in the same way that science can be, or can they, in any comprehensive way, be explained at all? And this, it seems to me, depends upon another question that is even more important: Is knowledge by definition explainable, or is there such a thing as unexplainable knowledge?

I have in mind three statements that seem to me to test this issue of knowledge and explainability:

At the end of *King Lear*, the broken-hearted old king comes in with his faithful daughter Cordelia dead in his arms. He says: “Thou’lt come no more,/ Never never never never” (5.3.308–9).

In 2 Samuel 18:33, David the king has just been told that his son, who has been his enemy, is dead. The king says: “O my son Absalom, my son, my son Absalom! would God I had died for thee, O Absalom, my son, my son!”

After the battle of Gettysburg, General Lee was overheard saying to himself, “Too bad! Too bad! Oh, too bad!”³

These outcries “out of the depths” certainly express knowledge, and precisely too. They communicate knowledge. But the knowledge they convey cannot be proved, demonstrated, or explained; it cannot be taught or learned. These utterances are not “self-explanatory.” They are as far as possible unlike what we now call “information.” One either does or does not know what they mean. The idea of explaining them to someone who does not know is merely laughable.

Statements of religious faith seem to me to be of the same general kind. Job says: “I know that my redeemer liveth, and that he shall stand at the latter day upon the earth: And though . . . worms destroy this body, yet in my flesh shall I see God . . .” (19:25–26). This statement rests upon 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 have known that this is so.

The “empiricist” in Mr. Wilson’s chapter on “Ethics and Religion” would find Job’s knowledge readily explainable as a “beneficent” falsehood, supported by no “objective evidence” or “statistical proofs” (243–45). Mr. Wilson himself understands it as a genetically implanted “urge”: “Perhaps . . . it can all eventually be explained as brain circuitry and deep, genetic history” (261). People follow religion, he says, because it is “easier” than empiricism (262), the lab evidently being harder to bear than the cross. Mr. Wilson forgets, in calling attention to religion’s want of statistical proofs, that empiricism can supply no statistical disproofs. His explanation of religion rather tends to prove that it is not explainable. God and the devices of human understanding are not the same subject.

³Lee, an abridgement by Richard Harwell of the four-volume *R. E. Lee* by Douglas Southall (Freeman, Scribner, 1961), 341.

Suppose, granting the hopelessness of empirical proof, that you took Job's statement of faith as seriously as Mr. Wilson wishes you to take empiricism; how, then, could you explain it to Mr. Wilson? It seems to me that you would have to concede—and here empirical proof is available—that it could not be done.

His statement of his own "position" brings no clarification; though it is a statement of a faith somewhat less than scientific, for it has no proofs, it carefully does not touch the issue of religious faith: "I am an empiricist. On religion I lean toward deism but consider its proof largely a *problem* in astrophysics. The existence of a cosmological God who created the universe (as envisioned by deism) is *possible*, and *may eventually* be settled, *perhaps* by forms of material evidence *not yet* imagined. Or the matter *may* be forever beyond human reach. In contrast . . . the existence of a biological God, one who directs organic evolution and intervenes in human affairs (as envisioned by theism) is *increasingly* contravened by biology and the brain sciences" (240–41). My italics call attention to the extreme tentativeness of the thought. Mr. Wilson concedes on the same page, "I may be wrong," but that very concession exposes the hopelessness of the argument that he is proposing to settle by consilience. How could he be "proven" wrong? The faith of an empirical deist will probably have to wait a good while for proof or disproof by astrophysics. About as long, I imagine, as it will take the "increasing" evidence of biology and the brain sciences to culminate in empirical disproof of theism.

What is the difference between an "empirical" faith so hedged about and religious faith? One difference, to use Edwin Muir's terms, is that whereas religious faith is old, the empirical faith is merely new. A second difference is that religious faith has lived to grow old because to hundreds of generations it has appeared to rest upon a knowledge that is not empirical, whereas the empirical faith, as its language shows, rests only upon speculation.

There is no reason, as I hope and believe, that science and religion might not live together in amity and peace, so long as they both acknowledge their real differences and each remains within its own competence. Religion, that is, should not attempt to dispute what science has actually proved; and science should not claim to know what it does not know, it should not confuse theory and knowledge, and it should disavow any claim on what is empirically unknowable.

The two cannot be reconciled by Mr. Wilson's consilience because consilience requires the acceptance of empiricism as a

ruling dogma or orthodoxy, denying standing or consideration to any thought not subject to empirical proof. His proposed consilience, by attempting to impose on art and religion the methods and values of reductive science, would prolong the disunity and disintegration it is meant to heal. Like a naive politician, Mr. Wilson thinks he has found a way to reconcile two sides without realizing that his way is one of the sides. There is simply no reason for any person of faith to discuss consilience with Mr. Wilson. One cannot, in honesty, propose to reconcile Heaven and Earth by denying the existence of Heaven.

The danger of this sort of reconciliation, as twentieth century politics has shown, is that whatever proposes to invalidate or abolish religion (and this is what consilience pretty openly proposes) is in fact attempting to put itself in religion's place. Science-as-religion is clearly a potent threat to freedom. Beyond that, it endangers real science. Science can function as religion only by making two unscientific claims: that it will *eventually* know everything, and that it will *eventually* solve all human problems. And here it is enough to note that at times Mr. Wilson allows the term "science" to become altogether too elastic.

Religion, as empiricists must finally grant, deals with a reality beyond the reach of empiricism. This larger reality does not manifest itself in the manner of laboratory results or in the manner of a newspaper front page. Christ does not come down from the cross and confound his tormentors, as good a movie as that would make. God does not speak loudly from Heaven in the most popular modern languages for all to hear. (If He did, we would have no need for science, or religion either.) It is nevertheless true that people believe in the existence of this larger reality, and accept religious truth as knowledge, because of their *experience*. John Milton, to whom Mr. Wilson so easily condescends, is only one of many poets in our tradition who wrote of an unevident reality, and who invoked the muse for aid in so great a task. The walls of the rational, empirical world are famously porous. What come through are imaginings, inspirations, visions, revelations. There is no use in stooping over these with a magnifying lens. Beyond any earthly reason we experience beauty in excess of use, justice in excess of anger, mercy in excess of justice, love in excess of deserving or fulfillment. We have known evil beyond imagining and seemingly beyond intention. We have known compassion and forgiveness beyond measure. And all of this is in excess of what Mr. Wilson means by "religion" and of what he means by "ethics."

Religion, it seems to me, has dealt with this reality clumsily enough, and that is why the history of a religion and its organizations is so frequently a blight on its teachings. But religion at least attempts to deal with religious experience on its own terms; it does not try to explain it by terms that are fundamentally alien to it. For thousands of years, for example, people (who were not dummies) have supposed that dreams come from outside the waking world, speaking to us at least some of the time, and however unclearly, of a reality beyond that world. Hamlet speaks for a lot of people, and very much to my point, when he says, "I could be bounded in a nutshell and count myself a king of infinite space were it not that I have bad dreams" (2.2.260–62). Mr. Wilson says, typically, that "dreaming is a kind of insanity, a rush of visions, largely unconnected to reality . . . arbitrary in content . . . very likely a side effect of the reorganization and editing of information in the memory banks of the brain" (75). Something of the sort, of course, may be said of inspiration, imagination, beauty, justice, mercy, and love—which consilience would require us to understand as mere strategies of survival encoded in our genes. But this kind of reduction is sufficiently answered by the fact that these things, thus explained, are no longer even conceptually what they were. Reduction does not necessarily limit itself to compacting and organizing knowledge; it also has the power to change what is known.

But biblical religion (which is the only religion that Mr. Wilson talks about) is also explicitly against reductionism. Mr. Wilson's spokesman, the empiricist, hauls out, as if he had thought of it himself, the most popular "environmental" cliché about Christianity: "With a second life waiting, suffering can be endured—especially in other people. The natural environment can be used up" (245). This little platitude has passed from mouth to mouth for years, chewable but not swallowable. It is untrue. Nobody who has actually read the Gospels could believe it. It ignores the very point of the Incarnation. It ignores Christ's unflinching compassion for sufferers, whom he healed, one by one, as they came or were carried to him. And there is nowhere in the Bible a single line that gives or implies a permission to "use up" the "natural environment."

On the contrary, the Bible says that between all creatures and God there is an absolute intimacy. All flesh lives by the spirit and breath of God (Job 34:14–15). We "live, and move, and have our being" in God (Acts 17:28). In the Gospels it is a principle of faith that God's love for the world includes *every* creature individually, not just races or species. God knows of the fall of

every sparrow; he has numbered "the very hairs of your head" (Mt 10:29–30). Edgar was being perfectly scriptural when he said to his father, "Thy life's a miracle," and so was William Blake when he said that "everything that lives is holy."⁴ Julian of Norwich also was following scripture when she said that God "wants us to know that not only does he care for great and noble things, but equally for little and small, lowly and simple things as well."⁵ Stephanie Mills is witness to the survival of this tradition when she writes: "*A Sand County Almanac* is suffused with affection for distinct beings. . . ."⁶

No attentive reader of the Bible can fail to see the writers' alertness to the individuality of things. The characters of humans are sharply observed and are appreciated for their unique qualities. And surely nobody, having read of him once, can forget the warhorse in Job 39:25, who "saith among the trumpets, Ha, ha." I don't know where you could find characterizations more deft and astute than those in the story of the resurrection in John 20:1–17. And again and again the biblical writers write of their pleasure and wonder in the "manifold" works of God, all keenly observed.

People who blame the Bible for the modern destruction of nature have failed to see its delight in the variety and individuality of creatures and its insistence upon their holiness. But that delight—in, say, the final chapters of Job or the 104th psalm—is far more useful to the cause of conservation than the undifferentiating abstractions of science. Empiricists fail to see how the language of religion (and I mean such language as I have quoted, not pulpit clichés) can speak of a non-empirical reality and convey knowledge, and how it can instruct those who use it in good faith. Reverence gives standing to creatures, and to our perception of them, just as the law gives standing to a citizen. Certain things appear only in certain lights. "The gods' presence in the world," Herakleitos said, "goes unnoticed by men who do not believe in the gods."⁷ To define knowledge as merely empirical

⁴*The Complete Writings of William Blake*, ed. Geoffrey L. Keynes (Oxford University Press, 2d ed., 1971), 160.

⁵Julian of Norwich, *Revelations of Divine Love* (New York, NY: Viking Penguin: 1982), chap. 32.

⁶Stephanie Mills, *In Service of the Wild: Restoring and Reinhabiting Damaged Land* (Boston: Beacon Press, 1996), 94.

⁷*Herakleitos and Diogenes*, trans. Guy Davenport (San Francisco: Grey Fox Press), 21.

is to limit one's ability to know; it enfeebles one's ability to feel and think.

We have come face to face with a paradox that we had better notice. Mr. Wilson's materialism is theoretical and reductionistic, tending, in his idea of consilience, toward "unity" (8). People of faith, on the other hand, have always believed in the unity of truth in God, whose works are endlessly and countlessly various. There is a world of difference between this humanly unknowable unity of truth and Mr. Wilson's theoretical unity of knowledge, which supposes that mere humans can know, in some definitive or final way, the truth. And the results are wonderfully different: Acceptance of the mystery of unitary truth in God leads to glorification of the multiplicity of his works, whereas Mr. Wilson's goal of a cognitive unity produced by science leads to abstraction and reduction, the opposite of which is not synthesis. The principle that is opposite to reduction—and, when necessary, its sufficient answer—is God's love for all things, for each thing for its own sake and not for its category.

Conclusion

In speaking of the reductionism of modern science, we should not forget that the primary reductionism is in the assumption that human experience or human meaning can be adequately represented in any human language. This assumption is false.

To show what I mean, I will give the example that is most immediate to my mind: My grandson, who is four years old, is now following his father and me over some of the same countryside that I followed my father and grandfather over. When his time comes, my grandson will choose as he must, but so far all of us have been farmers. I know from my grandfather that when he was a child he too followed his father in this way, hearing and seeing, not knowing yet that the most essential part of his education had begun.

And so in this familiar spectacle of a small boy tagging along behind his father across the fields, we are part of a long procession, five generations of which I have seen, issuing out of generations lost to memory, going back, for all I know, across previous landscapes and the whole history of farming.

Modern humans tend to believe that whatever is known can be recorded in books or on tapes or on computer discs and then again learned by those artificial means.

But it is increasingly plain to me that the meaning, the cultural significance, even the practical value, of this sort of family procession across a landscape can be known but not told. These things, though they have a public value, do not have a public meaning; they are too specific to a particular small place and its history. This is exactly the tragedy in the modern displacement of people and cultures.

That such things can be known but not told can be shown by answering a simple question: *Who* knows the meaning, the cultural significance, and the practical value of this rural family's generational procession across its native landscape? The answer is not so simple as the question: No one person ever will know all the answer. My grandson certainly does not know it. And my son does not, though he has positioned himself to learn some of it, should he be so blessed.

I am the one who (to some extent) knows, though I know also that I cannot tell it to anyone living. I am in the middle now between my grandfather and my father, who are alive in my memory, and my son and my grandson, who are alive in my sight.

If my son, after thirty more years have passed, has the good pleasure of seeing his own child and grandchild in that procession, then he will know something like what I now know.

This living procession through time in a place *is* the record by which such knowledge survives and is conveyed. When the procession ends, so does the knowledge. □

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