FOR MY FATHER AND MOTHER

EARTH IN MIND

On Education, Environment, and the Human Prospect

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CHAPTER TWO

The Dangers of Education

WE ARE currently preparing to launch yet another of our periodic national crusades to improve education. I am in favor of improving education, but what does it mean to improve education and what great ends will that improved education serve? The answer now offered from high places is that we must equip our youths to compete in the world economy. The great fear is that we will not be able to produce as many automobiles, VCRs, digital TVs, or supercomputers as the Japanese or Europeans. In contrast, I worry that we *will* compete all too effectively on an earth already seriously overstressed by the production of things economists count and too little production of things that are not easily countable such as well-loved children, good cities, healthy forests, stable climate, healthy rural communities, sustainable family farms, and diversity of all sorts. Many of the educational reforms now being proposed have little to do with the goals of personal wholeness, or the pursuit of truth and understanding, and even less to do with the great issues of how we might live within the limits of the earth. The reformers aim to produce people whose purposes and outlook are narrowly economic, not to educate citizens and certainly not "citizens of the biotic community."

The important facts of our time have more to do with too much economic activity of the wrong kind than they have to do with too little. Our means of livelihood are implicated everywhere in the sharp decline of the vital signs of the earth. Because of our fossil fuel–based economies and transportation systems, we are now conducting a risky and irreversible experiment with global climate. The same systems have badly damaged the ozone layer. The way we produce food and fiber is responsible for the loss of 24 billion tons of soil each year, the sharp decline in biological diversity, and the spread of deserts worldwide. The blind pursuit of national security has left a legacy of debt, toxicity, and radioactivity that will threaten the health and well-being of those purportedly defended for a long time to come. In addition, we continue to issue forth a stream of technologies and systems of technology that do not fit the ecological dimensions of the earth.

Most of this was not done by the unschooled. Rather it is the work of people who, in Gary Snyder's (1990) words,

> make unimaginably large sums of money, people impeccably groomed, excellently educated at the best universities—male and female alike—eating fine foods and reading classy literature, while orchestrating the investment and legislation that ruin the world. (p. 119)

Education, in other words, can be a dangerous thing. Accordingly, I intend to focus on the problem *of* education, not problems *in* education. It is time, I believe, for an educational "perestroika," by which I mean a general rethinking of the process and substance of education at all levels, beginning with the admission that much of what has gone wrong with the world is the result of education that alienates us from life in the name of human domination, fragments instead of unifies, overemphasizes success and careers, separates feeling from intellect and the practical from the theoretical, and unleashes on the world minds ignorant of their own ignorance. As a result, an increasing percentage of the human intelligence must attempt to undo a large part of what mere intellectual cleverness has done carelessly and greedily.

❖ Anticipations ❖

Most ancient civilizations knew what we have apparently forgotten: that knowledge is a fearful thing. To know the name of something was to hold power over it. Misused, that power would break the sacred order and wreak havoc. Ancient myths and legends are full of tales of people who believed that they were smarter than the gods and immune from divine punishment. But in whatever form, eating from the tree of knowledge meant banishment from one garden or another. In the modern world this Janus-like quality of knowledge has been forgotten. Descartes, for example, reached the conclusion that "the more I sought to inform myself, the more I realized how ignorant I was." Instead of taking this as a prope conclusion of a good education, Descartes set about to find certain truths through a process of radical skepticism. Francis Bacon went even further, to propose an alliance between science and power, which reached fruition in the Manhattan Project and the first atomic bomb.

There were warnings, however. Displaced tribal peoples commonly regarded Europeans as crazy. In 1744, for example, the Chiefs of the Six Nations declined an offer to send their sons to the College of William and Mary in these words:

> Several of our young people were formerly brought up at the colleges of the northern provinces: they were instructed in your sciences; but when they came back to us, they were bad runners, ignorant of every means of living in the woods . . . neither fit [to be] hunters, warriors, nor counsellors, they were totally good for nothing. (McLuhan, 1971, p. 57)

Native Americans detected the lack of connectedness and rootedness that Europeans, with all of their advancements, could not see in themselves. European education incapacitated whites in ways visible only through the eyes of people whose minds still participated in the creation and for whom the created order was still enchanted. In other words, European minds were not prepared for the encounter with wilderness nor were they prepared to understand those who could live in it. One had to step out of the dominant Eurocentrism and see things from the outside looking in. A century later Ralph Waldo Emerson was moving toward a similar conclusion:

> We are shut up in schools and college recitation rooms for ten or fifteen years, and come out at least with a bellyful of words and do not know a thing. We cannot use our hands, or our legs, or our eyes or our arms. We do not know an edible root in the woods. We cannot tell our course by the stars, nor the hour of the day by the sun. (p. 136)

These and other warnings were forebodings of a much more serious problem that would gain momentum in the century to come. I think this becomes clearer in a comparison of two prominent but contrary figures of the middle years of the twentieth century.

One, Albert Speer, was born in Germany in 1905 to a well-to-do upper-middle-class family. His father was one of the busiest architects in the booming industrial city of Mannheim. Speer attended a distinguished private school and later various institutes of technology in Karlsruhe, Munich, and Berlin. At the age of 23, Speer became a licensed architect He is not known to us for his architecture, however, but for his organizational genius as Hitler's Minister of Armaments. In that role he kep World War II going far longer than it otherwise would have by keepin German arms production rising under the onslaught of Allied bombin until the final months. For his part in extending the war and for usin slave labor to do so, Speer was condemned by the Nuremburg Tribuna to serve 20 years at Spandau Prison.

I think Speer's teachers and professors should share some of th blame. For example, in his memoirs Speer (1970) described his educatio as apolitical:

> [Our education] impressed upon us that the distribution of power in society and the traditional authorities were part of the God-given order of things. . . . It never occurred to us to doubt the order of things. (p. 8)

The result was a "generation without defenses" for the seductions of Hitler and the new technologies of political persuasion. The best educate nation in Europe had no civic education when it most needed it. Spee was not appreciably different from millions of others swept along by th current of Nazism.

The purge of June 30, 1934, was a moral turning point after whic Speer silenced all doubts about his role in the Nazi hierarchy:

> I saw a large pool of dried blood on the floor. There on June 30 Herbert Von Bose, one of Papen's assistants, had been shot. I looked away and from then on avoided the room. But the incident did not affect me more deeply than that. (p. 53)

Speer had found his Mephistopheles:

> After years of frustrated efforts I was wild to accomplish things—and twenty-eight years old. For the commission to do a great building, I would have sold my soul like Faust. Now I had found my Mephistopheles. He seemed no less engaging than Goethe's. (p. 31)

In looking back over his life near its end, Speer made the followin comment:

> My moral failure is not a matter of this item and that; it resides in my active association with the whole course of events. I had participated in a war which, as we of the intimate circle should never have

> doubted, was aimed at world dominion. What is more, by my abilities and my energies I had prolonged that war by many months. . . . Dazzled by the possibilities of technology, I devoted crucial years of my life to serving it. But in the end my feelings about it are highly skeptical. (pp. 523–524)

Finally, in what certainly would be among the most plaintive lines penned by any leading figure of the twentieth century, Speer wrote, “The tears I shed are for myself as well as for my victims, for the man I could have been but was not, for a conscience I so easily destroyed.”

If Speer and the years between 1933 and 1945 seem remote from the issues of the late twentieth century, one has only to change the names to see a relationship. Instead of World War II, think of the war being waged against nature. Instead of the Holocaust think of the biological holocaust now under way in which perhaps 20% of the life forms on the planet in the year 1900 will have disappeared by the early years of the next century. Instead of the fanaticism of the 1000-year Reich, think of the fanaticism inherent in the belief that economies have no limits and can grow forever. Speer’s upbringing and formal education provided neither the wherewithal to think about the big issues of his time nor the good sense to call these by their right names. I do not think for a moment that this kind of education ended in 1945. It remains the predominant mode of education almost everywhere in an age that still regards economic growth as the highest goal.

Like Speer, Aldo Leopold was middle-class, the son of a prosperous furniture manufacturer (in Burlington, Iowa) and had all the advantages of good upbringing (Meine, 1988). Leopold’s lifelong study of nature began as a boy in the nearby marshes along the Mississippi River. His formal education at Lawrence Academy in New Jersey and at Yale University were, I think, rather incidental to his self-education, which consisted of long walks over the nearby countryside. Leopold was an outdoorsman who, over a lifetime of rambling, developed the ability to observe in nature what others could not see. He was a keen student of nature, and it was this capacity that makes Leopold interesting and important to us. Leopold grew from a rather conventional resource manager employed by the U.S. Forest Service to become a scientist and philosopher who asked questions about the proper human role in nature that no one else bothered to ask. This progression led him to discard the idea of human dominance and to propose more radical ideas on the basis of our citizenship in the natural order.

Where Speer had seen human blood on the floor and turned away Leopold described a different kind of turning point that took place on rimrock overlooking a river in the Gila Wilderness in 1922. Leopold an his companions spotted a she-wolf and cubs along the bank and opene fire:

> We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain. I was young then and full of trigger itch; I thought that because fewer wolves meant more deer, then no wolves would mean a hunters’ paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view. (Leopold, 1966, pp. 137–139)

The rest of Leopold’s life was an extended meditation on that fierce gree fire, how mountains think, and what both meant for humans.

Where Speer regarded himself as apolitical, Leopold (1966) regarde “biological education as a means of building citizens” (p. 208). Instea of possessing a deep naivete about science, Leopold (1991) was scientifi about science as few have ever been:

> We are not scientists. We disqualify ourselves at the outset by professing loyalty to and affection for a thing: wildlife. A scientist in the old sense may have no loyalties except to abstractions, no affections except for his own kind. . . . The definitions of science written by, let us say, the National Academy, deal almost exclusively with the creation and exercise of power. But what about the creation and the exercise of wonder or respect for workmanship in nature? (p. 276)

Where Speer’s (1970) approach to nature was sentimental and escapis (to escape “the demands of a world growing increasingly complicated” Leopold’s (1966) was hardheaded and practical:

> The cultural value of wilderness boils down in the last analysis, to a question of intellectual humility. The shallow minded modern who has lost his rootage in the land assumes that he has already discovered what is important; it is such who prate of empires, political or economic, that will last a thousand years. (p. 279)

Where Speer had to learn his ethics in 20 years of confinement after th damage was done, Leopold learned his over a lifetime and laid the bas for an ecologically solvent land ethic. And where Speer’s education mad him immune to seeing or feeling tragedy unfolding around him, Leopold (1966) wrote the following:

> One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself to be well and does not want to be told otherwise. (p. 197)

After Speer and the Nazis, it has taken decades to undo the damage that could be undone. After Aldo Leopold, in contrast, it will take decades to fully grasp what he meant by a "land ethic" and considerably longer to make it a reality.

❖ Dangers ❖

From the lives of Speer and Leopold, what can be said about the dangers of formal education or schooling? This first and overriding danger is that it will encourage young people to find careers before they find a decent calling. A career is a job, a way to earn one's keep, a way to build a long resume, a ticket to somewhere else. For upwardly mobile professionals, a career is too often a way to support a "lifestyle" by which one takes more than one gives back. In contrast, a calling has to do with one's larger purpose, personhood, deepest values, and the gift one wishes to give the world. A calling is about the use one makes of a career. A career is about specific aptitudes; a calling is about purpose. A career is planned with the help of "career development" specialists. A calling comes out of an inner conversation. A career can always be found in a calling, but a calling cannot easily be found in a career. The difference is roughly like deciding to which end of the cart to attach the horse. Speer's problem was not a deficiency of mathematical skills, or reading ability, or computing ability, or logic narrowly conceived. I imagine that he would have done well on the Scholastic Aptitude Test or the Graduate Record Exam. His problem was simply that he had no calling that could bridle and channel his ambition. He simply wanted to "succeed," doing whatever it took. He was, as he said, "wild to accomplish," and ambition disconnected the alarm bells that should have sounded long before he saw blood on the floor in 1934. Speer was a careerist with no calling.

Leopold, on the other hand, found his calling as a boy in the marshes around Burlington, Iowa, and followed it wherever it took him. In time it took him a long way. From his boyhood interest in birds, he went on in adult life to initiate the field of game management, to organize the Wilderness Society, to work actively on behalf of conservation throughout his lifetime, and to lay the groundwork for the field of environmental ethics, while still finding time to be a good teacher and a good father. There is a consistency and harmony to Leopold's life rather like a pilgrim following a vision.

A second danger of formal schooling is that it will imprint a disciplinary template onto impressionable minds and with it the belief that the world really is as disconnected as the divisions, disciplines, and subdisciplines of the typical curriculum. Students come to believe that there is such a thing as politics separate from ecology or that economics has nothing to do with physics. Yet, the world is not this way, and except for the temporary convenience of analysis, it cannot be broken into disciplines and specializations without doing serious harm to the world and to the minds and lives of people who believe that it can be. We often forget to tell students that the convenience was temporary, and more seriously, we fail to show how things can be made whole again. One result is that students graduate without knowing how to think in whole systems, how to find connections, how to ask big questions, and how to separate the trivial from the important. Now more than ever, however, we need people who think broadly and who understand systems, connections, patterns, and root causes.

This is an unlikely outcome of education conceived as the propagation of technical intelligence alone. Speer in his Nazi years was a technician and a good one. His formal schooling gave him the tools that could be used by the Third Reich but not the sense to ask why and not the humanity necessary to recognize the face of barbarity when he saw it. Leopold, in contrast, began his career as something of a technician, bu outgrew it. *A Sand County Almanac*, written shortly before his death was a nearly perfect blend of science, natural history, and philosophy.

Third, there is the danger that education will damage the sense o wonder—the sheer joy in the created world—that is part of our origina equipment at birth. It does this in various ways: by reducing learning t routines and memorization, by excess abstractions divorced from live experience, by boring curriculum, by humiliation, by too many rules, b overstressing grades, by too much television and too many computers, b too much indoor learning, and mostly by deadening the feelings from which wonder grows. As our sense of wonder in nature diminishes, so too does our sense of the sacred, our pleasure in the created world, and the impulse behind a great deal of our best thinking. Where it is kept intact and growing, teachers need not worry about whether students learn reading, writing, and arithmetic.

In a small book titled *The Sense of Wonder*, Rachel Carson (1984) wrote that "it is not half so important to *know* as to *feel*" (p. 45). Feelings, she wrote, begin early in life in the exploration of nature, generally with the companionship of an adult. The sense of wonder is rooted in the trust that the world is, on balance, a friendly place full of interesting life "beyond the boundaries of human existence" (p. 88). The sense of wonder that Carson describes is not equivalent to a good science education, although in principle I see no reason why the two cannot be made compatible. I do not believe that wonder can be taught as "Wonder 101." If Carson is right, it can only be felt, and those early feelings must be encouraged, supported, and legitimized by a caring and knowledgeable adult. My hunch is that the sense of wonder is fragile; once crushed, it rarely blossoms again but is replaced by varying shades of cynicism and disappointment in the world.

I know of no measures for wonder, but I think Speer lost his early on. His relation to nature prior to 1933 was, by his testimony, romantic and escapist. Thereafter, he mentioned it no more. To Speer, the adult, the natural world was not particularly wondrous, nor was it a source of insight, pleasure, or perspective. His orientation toward life, like that of the Nazi hierarchy, was necrophilic. Leopold, on the contrary, was a lifelong student of nature in the wild. By all accounts he was a remarkably astute observer of land, which explains a great deal of his utter sanity and clarity of mind. Leopold's intellectual and spiritual anchor was not forged in a laboratory or a library but in time spent in the wild and in his later years in a rundown farm he purchased that the family called "the shack."

❖ Conclusion ❖

What are the dangers of education? There are three that are particularly consequential for the way we live on the earth: (1) that formal education will cause students to worry about how to make a living before they know who they are, (2) that it will render students narrow technicians who are morally sterile, and (3) that it will deaden their sense of wonder for the

created world. Of course education cannot do these things alone. It requires indifferent or absentee parents, shopping malls, television–MTV–Nintendo, a culture aimed at the lowest common denominator, and de-placed people who do not know the very ground beneath their feet. Schooling is only an accomplice in a larger process of cultural decline. Yet, no other institution is better able to reverse that decline. The answer, then, is not to abolish or diminish formal education but rather to change it.

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