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Table of Contents

Special Issue
Freedom and Education

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Editorial

Freedom: The Muck and the Mystery

Rabbi Lawrence Kushner retells the old Rabbinic tale of two Israelites who, in deliverance from their slavery, followed Moses across the parted Red Sea. The two complained about the muck beneath their feet. As they made their way from the shores of Egypt, they whined that the mushy ground reminded them of the clay and mortar they knew as slaves. And so, the two, not lifting their heads to behold all around them a miracle among miracles, were led kicking and screaming to freedom.

The story illustrates that the possibility of freedom is as unwelcome as it is mysterious. On a political level, for those who seek order and stability, freedom involves risk and evokes fear. On a personal level, for those who have the courage to embrace freedom, it implies ultimate responsibility. Bridging the two, freedom presents the prospect of a society whose well-being is grounded in the judgments of individuals who neither may wish to assume the burden of selfhood nor the yoke of public interest.

Despite the almost universal appeal of political freedom (as an uncritical concept) in America, the meaning of the idea is extraordinarily elusive. It refers not only to the right to vote and speak or assemble but to the sovereignty of the individual conscience and the public commitment to defend a spectrum of action so broad as to be limited only by compelling societal interests. Political freedom is an expression of respect for human dignity. It is recognition that the human being with all his/her fallibility and weakness is fundamentally independent from and protected by the power of government. If a people chooses a form of government securing, politically, the freedom of individuals in matters of conscience, they simultaneously accept the possibility that individuals may, through stupidity or malice, wreak havoc for themselves, their communities, and for society as a whole. The power of government should not extend into the sphere of individual conscience in attempts to control it. Freedom, as such, requires a lofty vision of the human spirit — and one which is capable of sustaining itself in the light of practical needs and reasonable fears.

Education may champion freedom; it may prepare children for responsible selfhood and citizenship. Education may help children to develop the clarity of mind, the depth of heart, and the strength of will to act singly and with cooperative spirit. Conversely, education may undermine the possibility of freedom by attempting to secure specific values (and/or value processes), interests, and actions consistent with an organized society capable of sustaining it. In such cases, schools are often called upon to serve common societal imperatives that overshadow the lofty ideal of individual liberty.

The former concept of education was fostered by Thomas Jefferson who maintained that the human mind free to inquire and contemplate would reveal and uphold truth. He believed truth could create a common foundation for action and discipline for judgment of all people who sought it. "[Where] reason and experiment have been indulged ... error has led before them. It is error alone which needs the support of government. Truth can stand by itself" (Ulich 1971).

However, Jefferson's noble vision came with extraordinary risk. He predicated his thinking on the tenuous notion that people would seek truth, could find it, and would serve it willingly. Extending his faith in the power of reason even further, he assumed that truth would reveal itself cohesively and consistently among all people. Jefferson did not account for the fact that truth may not exist solely in the rarified air of unfettered reason but in the daily morass of complex and competing interests.

When fear overcomes faith, when the desire for stability and organization overmatches the appeal of individual sovereignty, education prescribes moral values and the social objectives of life rather than develops the capacity for self-reliance. We can see the interaction of these factors historically with the founding of the first public schools in the United States.

Toward the middle of the nineteenth century, industrialization and immigration began to raise concerns about possible social and political fragmentation. Horace Mann, the father of American public education, suggested that social harmony could best be achieved through enforcing a common set of moral values to guide individual judgments and action. He argued, "It may be an easy thing to make a Republic; but it is a very laborious thing to make Republicans" (Mann 1848c, 135). Mann was not concerned with individuals as individuals but with people as citizens. Accordingly, he focused on imbuing citizens with those characteristics he believed necessary for social and political cohesion. Jefferson's grand vision of the independent human

mind governed only by the mandates of reason evolved, for Mann, into a member of a social organization who should be guided by the moral precepts of the Bible.

Mann envisioned common schools that could serve as "the center and circumference of a great circle of benevolence" (Mann 1848b, 135). The schools, he hoped, would create "a more far-seeing intelligence and pure morality than has ever existed among communities of men" (Mann 1848c, 84). The curriculum for the task was centered on a Protestant distillation of the Bible. The first public schools were intended to guard against the possible social and political fragmenting effects of individual freedom as well as "to give the advantages of pre-occupancy and a stable possession of fraternal feelings against the alienating competitions of subsequent life" (Mann 1848a, 56). Religious insight may light an inner path to freedom, but, when offered as an instrument of social control, only obscures it.

Today, much of federal educational policy extends the notion of schools as an instrument of social policy. The language of federal education reform, particularly since the publication of *A Nation At Risk* in 1983, has so adopted the vocabulary and generative principles of economics that the concept of individual freedom is beyond articulation. While the rhetoric of federal policy refers with fierce pride to the ideal of freedom, it guts the meaning of the term by conceptualizing the individual human being as so much raw material for international economic competition.

A Nation At Risk informed the American people that "knowledge, learning, information and skilled intelligence [were] the new raw materials of international commerce..." (National Commission on Excellence in Education 1983, 7). Unlike the industrial economy of the past, the report concluded that the new information-based economy would run not on natural resources such as coal, minerals, or forests but rather on the primary intellectual resources of the human mind. With the perceived centrality of the economy in ensuring the stability and prosperity of the nation, the schools were charged with the responsibility of developing for the market the minds of children. The report concluded that it was "essential — especially in a period of long-term decline in educational achievement — for government at all levels to affirm its responsibility for nurturing the *nation's intellectual capital*" (emphasis added) (National Commission on Excellence in Education 1983, 17).

The report assumed governmental proprietary interests in shaping children's minds; it assumed that children are a public resource that may be exploited to serve national economic interests. Similarly, in 1986 the Carnegie Commission Report, *A Nation Prepared*, asserted that the American people could "rightly demand an improved supply of young people with the knowledge, the spirit, the stamina, and the skills to make the nation once again fully competitive" (Task Force on Teaching as a Profession 1986, 2). The function of the schools was not to guide students in their development as human beings, as autonomous thinkers with unique values, aspirations, and life goals, but to maintain an abundant source of intellectually skilled labor. The concepts of human dignity and reverence for sanctity of the human mind are at best pleasant anachronisms that add a rhetorical flash to an otherwise uninspiring set of ill-constructed economic recommendations. Freedom is a nonsequitur, a romantic image that heralded the birth of a new nation but has no place in the one that has matured.

Perhaps the greatest danger we face is that we are losing the imagination to understand the possibility of human freedom. It seems that we, like the Israelites in Rabbi Kushner's story, have become so concerned with the uncertainties of the ground beneath our feet that we do not lift our heads. The miracle of the Red Sea was no greater than that of each child we teach, however reluctant we are to think in such terms. The point here is not to suggest we ignore economic concerns or the needs of the nation but that in our desire for prosperity, but that we have lost sight of our primary commitment to individual freedom. We have deceived ourselves into thinking that we are, as David Purpel has said, "means rather than ends." We need first the courage to release education itself from political control, and second, the imagination to guide children to freedom.

— Jeffrey Kane, *Editor*

References

Mann, H. 1848a. *First annual report of the Secretary of the Board of Education*. Boston: Dutton and Wentworth.

Mann, H. 1848b. *Eleventh annual report of the Secretary of the Board of Education*. Boston: Dutton and Wentworth.

Mann, H. 1848c. *Twelfth annual report of the Secretary of the Board of Education*. Boston: Dutton and Wentworth.

National Commission on Excellence in Education. 1983. *A nation at risk: The imperative for educational reform*. Washington: Government Printing Office.

Task Force on Teaching as a Profession. 1986. *A nation prepared: Teachers for the 21st century*. Hyattsville, MD: Carnegie Forum on Education and the Economy.

Ulich, R., ed. 1971. *Three thousand years of educational wisdom*. 2nd ed. Cambridge, MA: Harvard University Press.

Freedom in a Holistic Context

Ron Miller

Freedom in education involves responding with wholeness and balance to children, the subject matter, and the social/cultural milieu without having to rigidly follow a particular theory or method.

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The issue of freedom stands out as one of the central philosophical concerns of alternative, progressive, humanistic, and holistic educators over the past 200 years. Indeed, it could be argued that the quest for freedom is the quintessential element of most dissident educational theories. This is certainly the case in the development of my own thinking about holistic education: I came to holism by way of Henry David Thoreau, Carl Rogers (1969), and libertarians such as Nathaniel Branden (1969) and Paul Goodman (1964), all of whom championed the individual's struggle toward wholeness against the constraints of an unfree society. I later found that virtually all dissident educators — from Rousseau and Pestalozzi to Montessori and Margaret Naumberg to A. S. Neill and John Holt — also strongly emphasized the importance of allowing each young person freedom to develop according to his or her own unique nature, a freedom denied by conventional schooling and other institutions of modern society.

A conceptual overview

Alternative educators' insistence on freedom represents a vitally important dissent from the tendencies of modern culture toward bureaucracy, standardization, and the reduction of the individual to an anonymous political and economic entity. The technocratic worldview embodied in the powerful corporate state poses a direct and serious threat to human values rooted in any organic or spiritual sense of meaning, wholeness, and connectedness to the natural world (Sloan 1994; Mander 1991; Rifkin 1991; Roszak 1973). For more than two centuries, the lonely voices of various mystics, romantics, and transcendentalists have been warning that modern humanity must break free of this worldview or risk cultural and ecological destruction. Yet today, we see the corporate state extending its influence even further over the culture through political interference in education such as "Goals 2000" and its program of national curriculum standards, universal testing, and rigorous accountability (R. Miller 1995). If we are to reclaim essential human values that are denied by

a reductionist and technocratic culture, then clearly, the need for freedom in education is not only vital but desperate.

Freedom, however, is a complex notion. It involves philosophical, political, moral, psychological, and spiritual dimensions that take the issue far beyond a simple dichotomy between the individual and the state; if we are not to fall into the same epistemological trap that produced our technocratic worldview in the first place, we will need a *holistic* understanding of freedom that takes these dimensions into account. Holism is an alternative, critical worldview that sees all phenomena, all existence, as intrinsically interrelated. Whether drawing from concepts being advanced in "new science" (e.g., David Bohm's "implicate order" and holographic models of the brain proposed by neuroscientists) or ancient teachings of the "perennial philosophy" (such as Buddhist cosmology), one of the major principles of holistic thinking is that all ideas, concepts, and phenomena are *contextual* (Clark 1988). That is, nothing is complete or absolute in itself, nothing has meaning in isolation; it requires a larger context in which it is related to other phenomena and ideas (R. Miller 1991b). Consequently, even the notion of freedom is not complete or absolute as such but must be understood in its various dimensions or contexts.

A first step toward such an understanding would be to consider (as various philosophers have done) the difference between "freedom from" and "freedom for." Viewing the individual as an autonomous entity, many dissident educators and libertarian thinkers have sought to free the person *from* the stifling demands of schooling, society, and the state. Once disentangled from these demands, it is argued that the individual will flourish; the free individual will be psychologically healthy, creative, and economically productive and will sustain community life through voluntary social relationships. This position is the core assumption of libertarian thought, and it is reflected in the ideology of radical alternative schools such as Summerhill and the Sudbury Valley School. Daniel Greenberg, a founder of Sudbury Valley and its major spokesman, emphasizes this point. The school, he writes,

> is based on the notion that free individuals with a highly developed sense of themselves will be the best guarantors of a peaceful, cooperative society of people with a deep sense of mutual responsibility toward each other's welfare (1994, 63).

The cooperative community life that has evolved at Sudbury Valley and other alternative schools bears out this claim. People who are free from oppression and coercion do seem to engage naturally in cooperative endeavors, at least in intimate community settings that value such relationships.

However, I believe that, from a holistic perspective, the notion of "freedom from," by itself, does not address the deeper sources of modern technocratic culture. Libertarians' emphasis on free individuals is unfortunately rooted in an atomistic epistemology bequeathed to the modern world by thinkers such as Thomas Hobbes, John Locke, and Adam Smith. This view defines persons as calculating materialists engaged in ongoing competition and negotiation with each other for economic goods (G. Smith 1992, 27–34), and as holistic education theorist John P. Miller demonstrates clearly, it is a worldview based upon an assumption of *separation*: of person from society, of people from each other, of humanity from the natural world, of the personal ego from the higher Self or spiritual essence (J. Miller 1988, 1993a). Despite his interest in cooperation, Greenberg states this atomistic epistemology explicitly:

> The very essence of the human condition is the apartness of each person, the individuality of each human being, his uniqueness, his inherent worth — that, above all, is what religions have meant by man created in the image of God. (p. 59)

There are two very different claims being made here, and it is critical, from a holistic perspective, that we not confuse them. The recognition of each person's "inherent worth" is, indeed, an important aspect of alternative and holistic educational thought, but this notion does not require us to accept an atomistic epistemology stressing the essential "apartness" of human beings. A holistic epistemology, as I will describe shortly, points toward an essential, inherent *connectedness* between persons and between person and world — a concept holism derives from the "perennial philosophy" or "primordial tradition" underlying most religious understandings of the world (H. Smith 1989). In mystical terms, the "image of God" has more to do with a compassionate identification with Creation than with the individualistic striving for self-preservation that is celebrated by modernist epistemology in an image of human nature aptly called "economic man." Greenberg himself shows where an assumption of separateness leads:

> The world hits us with a primeval chaos of great masses of information, and we must somehow do something with it in order to be able to survive, by dealing with the world in a way that will make it fulfill our needs. (p. 81)

To deal with "chaos" — that is, the absence of any meaning given by inherent connectedness — Greenberg describes how the individual needs to invent

> *Modes of Dealing with Reality*, which are our own private systems of sorting, organizing, categorizing, symbolizing, and relating the inputs so that we can use them.... (p. 81)

There are two crucial problems with this epistemology: By seeing knowledge as essentially "private," it discounts the complex relationship between individual and culture and supports the notion that freedom *from* all social imposition is not only possible but ideal. Second, this atomistic view sanctions an exploitative, greed-driven economic system whose primary purpose is to "make [the world] fulfill our needs." This, in fact, was precisely Locke's and Adam Smith's ideological agenda, and it is politically, morally, and spiritually opposite to the holistic call for a more balanced and respectful relationship between human desires and the other inhabitants of the "biotic community" on earth (in Orr 1994, 16).

Therefore, the idea of "freedom from" does not, by itself, provide a basis for a holistic understanding of freedom. It is only when we consider "freedom for" that we can come to a more sophisticated understanding of the nature of the human being than the modernist, materialist image of economic man. *For what purposes* should the person enjoy freedom? What are the highest or most essential expressions of the free human being? The libertarian would argue that we have no right to answer these questions for anyone but ourselves, that freedom itself will supply the answers, appropriate to each person's private dreams and destiny. This is an important point, if we are to avoid the sort of social engineering that usually results when intellectuals and educators believe they have discovered the truth about human existence. But in a materialist culture, people are generally too busy producing, consuming, and being entertained to take such questions seriously. Pursuing these questions requires us to look deeply within ourselves and deeply into the fabric of the interrelated world we inhabit. While it is true that each individual must look for him or herself and be convinced of the answers, the perennial philosophy tells us that the deeper we look, the more our essential *oneness* will be revealed to us. We shall never again be able to think of ourselves nor treat each other and the earth as economic atoms. What might freedom mean then?

Holistic theorists have been approaching this question from two different but related perspectives: the ecological/cultural and the spiritual/epistemological. In the last three years, there has emerged a provocative literature on education for a postmodern, ecologically sustainable society. David Orr (1992, 1994), Gregory Smith (1992), C. A. Bowers (1993), and Gregory Cajete (1994), among others, have examined the cultural roots of the global environmental crisis, and all agree that the modernist overemphasis on individualism and personal freedom has shattered the communal, historical, and ecological obligations that traditional cultures universally place on their members — obligations that ensure cultural and ecological sustainability. *A global society of autonomous, competing, consuming economic atoms cannot survive because the earth's biosphere cannot indefinitely support it*. Personal freedom cannot be an absolute value but must be situated in a cultural context that recognizes the limits of economic development.

From a modernist point of view, these limits are seen as constraining to the individual (hence the ferocious backlash against the environmental movement), but from an indigenous (Cajete 1994) or postmodern perspective, such limits are experienced as an integral part of the person's identity as a member of the "biotic community." A major goal of holistic education is to develop the person's sense of relationship to the natural world, such that the individual is free *for* participating wholeheartedly in celebration of the wonder and mystery of life.

This is where the ecological/cultural theorists converge with the spiritual/epistemological thinkers. Bowers, especially, explores the relationship between ecology and epistemology, and in Cajete's Native American view, ecology and spirituality are intimately related. Additional insight comes from the holistic epistemology being worked out by education theorists such as Douglas Sloan (1994), Parker Palmer (1993), William Doll (1993), and Donald Oliver and Kathleen Gershman (1989). As they see it, the human being is not situated solely in a material world that is apprehended empirically (through "private systems of sorting, organizing, categorizing, symbolizing"), but is situated in a purposeful, spiritual cosmos that can be experienced directly through insight, intuition, and meditative discipline. These holistic theorists draw inspiration from such seminal thinkers as Plato, Emerson, Rudolf Steiner, Alfred North Whitehead, Teilhard de Chardin, Gregory Bateson, David Bohm, Matthew Fox, and important religious figures such as Jesus and Buddha (see J.

Miller 1988, 1994). They do not all employ religious language, but ultimately both theistic and nontheistic holism (such as Whitehead's "process cosmology") involve a sense of awe and reverence toward the complex wholeness and unfathomable mystery of Creation.

Reverence engenders modesty, which calls for self-restraint. Freedom, according to a spiritual epistemology, is always engaged in a mutually nourishing relationship with its apparent opposite — discipline. In fact, according to this view, genuine freedom (freedom for the deepest expression of our humanity) is only achieved *through* discipline. There is a clear pattern, for example, in the history of alternative education movements, with libertarian dissidents emphasizing children's freedom and spiritually grounded pedagogies (best exemplified by the Montessori and Waldorf approaches) insisting that young people attain true freedom only through some definite educational structure (R. Miller 1992, 129).

Spiritual epistemology distinguishes between the personal ego — the social/psychological persona that is little more than a bundle of desires and fears — and the true self or divine spark that lies deeper within the personality (Del Prete 1990), which Montessori poetically called the "spiritual embryo." In order to break through the ego to discover this true self, the individual must be free from artificial restraints and social expectations, but at the same time, he or she must learn to temper personal wants and dislikes — that is, surrender a certain measure of freedom to moral and meditative discipline. Once the divine spark has been tapped and selfish desires are no longer one's primary motivation, *then* the person's "inherent worth" is truly revealed, and the individual has earned "a degree of freedom which rarely exists" in society, as Thoreau put it (in Metzger and Harding 1962, 37); his fellow transcendentalist Emerson even declared that "the appearance of character" — that is, the awakening of divinity within — "makes the State unnecessary" (Emerson 1965, 357).

Thus, a spiritual holism leads to a radically libertarian conclusion, but it is based on a conception of freedom other than the "freedom from" notion promulgated by materialist ideology. Rudolf Steiner's social vision, the "threefold" society, called for an entirely free cultural and intellectual life — that is, a system of education and a culture of art, science, and humanities entirely uncontrolled by either the economic or political spheres of society. There would, ideally, be no government schools. But before the followers of Adam Smith and Milton Friedman rush to embrace this plan, they should be reminded that freedom, for Steiner and other spiritual libertarians, is not a self-interested grasping for security by atomistic egos but a spiritual activity within the human soul; freedom does not set individuals apart from each other in pursuit of economic goods but unites them in the common task of the spiritual evolution of humanity. The key factor, as in the ecological understandings of holism, is *relationship*. A spiritual epistemology, as Parker Palmer (1993) describes so well, calls for a compassionate, participatory way of knowing and acting in the world, engaging the whole self rather than just the calculating ego. Education's task is to draw forth and cultivate this whole, connected self.

A third, and very important, body of literature has developed over the past decade that wonderfully weaves together the two holistic strands of ecology/culture and spirituality/epistemology: this is the feminist, or simply the feminine, perspective. It would seem that atomistic individualism is a characteristically male obsession (Ayn Rand being a notable exception),[1] and now that women are taking their rightful place in the arena of philosophical discourse and cultural critique, they are strongly articulating a perspective that emphasizes caring, nurturing, and the sustaining embrace of family and community (Ruddick 1989; Noddings 1984, 1992; Belenky et al. 1986; Sapon-Shevin 1990; Martin 1992; Wood 1991). This perspective is deeply enriched by feminist historical and cultural critiques (e.g., Merchant 1980; Griffin 1978), feminist theology (e.g., the work of Carol Christ and Rosemary Radford Reuther) and by female theorists who portray intimate connections between ecology and spirituality (Spretnak 1982, 1991; Starhawk 1982; Plant 1989; Macy 1991; McFague 1987). Charlene Spretnak captures the essence of ecospiritual feminism in these words:

> If we believe, and experientially *know* through various practices such as meditation and holistic ritual, that neither our sisters and brothers nor the rest of nature is 'the other,' we will not violate their being, nor our own. (in Plant 1989, 128)

Once again, the essential point is the cultivation of *relationships* between persons and between human beings and the rest of nature. In relationship, there is no dominating urge for "freedom-from" because the individual is willingly engaged with other persons and, indeed, identifies one's own interests with those of others. Certainly, feminist writers seek freedom from the patriarchal culture that has denied their

experience and silenced their voice for centuries, but personal freedom, in the sense of an atomistic individualism, is not their primary goal. As the male holistic writers on ecology and spirituality have discovered, the freedom *for* being most fully human necessarily involves connections and mutual obligations, which in turn require us to temper the demands of the individual ego.

Educational freedom, then, involves far more than freeing the child *from* an oppressive society. Although this is a necessary first step, especially if we are to defeat the destructive reductionism of Goals 2000, it is not enough. As the transcendentalists pointed out, the American Revolution has not been completed yet — indeed, on a moral and spiritual level, it has hardly begun. Who is this free being?

Toward what ends, what possibilities, ought he or she to strive?

Freedom in education

I am arguing that from a holistic perspective, freedom is always situated in a particular context involving the particular temperaments and developmental levels of the persons involved, the particular educational task at hand, and the particular social, economic, and cultural realities being experienced. A holistic educational environment is not fixed around a single notion of "freedom" but remains flexible and responsive to its changing situational context. I shall illustrate this point with the following account of conversations I have recently had with two very different kinds of alternative educators.

I was observing a second-grade Waldorf class, and as always, was struck by the beauty, care, and nurturing sense of order that characterize a Waldorf environment. The teacher was leading children through a series of activities that clearly were thoughtfully designed to tap into their multiple intelligences and diverse learning styles as well as the love of rhythm and colorful image that Steiner believed children of this age share universally. They were superb educational activities, I thought — but after a while I began to realize that the children had no freedom of choice; they were required to participate in these lessons, which followed each other one after another after another with virtually no interval. As I had noticed during other observations of Waldorf classrooms, the teacher was completely in command of this environment and the children seemed to have virtually no freedom to choose their own activities, speak with each other, or dwell in their own private thoughts. Afterward, I asked the teacher whether the Waldorf approach needed to be so thoroughly adult-controlled. I wondered whether the adult could supply a beautiful environment that would call to the child's nature, and then leave the child free to explore it. (I had in mind my own experience as a Montessori educator, though recognizing that a Waldorf "prepared environment" would emphasize imaginative and aesthetic elements more than the cognitive and empirical experience provided by the Montessori materials.)

"I was a public school teacher before I took Waldorf training," she replied, "and I used a progressive, open-classroom approach such as what you're describing. But I have come to see that children truly thrive when they are given the kind of guidance and support they receive here." Waldorf education would not work, she told me, without the strong guiding presence of the teacher.

Several weeks later, in a town not far away, I visited a lively little school modeled after the Sudbury Valley School, in which children are literally free to choose their own activities throughout the day. During the morning I spent there, I watched a group of children play Monopoly for well over two hours, another few playing with trucks and blocks, and others reading, playing computer games, or talking with friends. There was an (optional) school meeting, which was attended by only five children. Later, I had a chance to interview the teachers, and asked whether there might be any positive value to having adults share their experience and knowledge with children in a structured way. Their answer was a mirror image of the Waldorf teacher's: "We all began as public school teachers," they said, "and we believed in the open-classroom, integrated day approach. We started this school on that model, but after a while we began to feel that there was a subtle sort of coercion in planning learning activities for children rather than letting them pursue their own interests. Once we asked ourselves whether we truly trusted children's ability to make sense of the world, we knew we had to let go of our desire to control their learning."

The Waldorf educator sees unbounded freedom for young children as premature, as violating their innate developmental needs. The Waldorf approach is grounded in the understanding that the growing child possesses an unfolding spiritual identity, which can be nourished with loving yet firm guidance. According to this developmental view, human

capacities are inherent, but they require cultivation and discipline in order to be expressed to their fullest measure. Though I am not aware of any empirical evidence either way, I wonder whether graduates of Waldorf education in fact develop a richer inner life, a deeper sensitivity and feeling for the wonder, beauty, and mystery of the world, than graduates of "free" schools, because their capacity for wonder and connection has been so carefully tended.

Yet even so, the sweet experience of freedom has value in itself, does it not? The Sudbury Valley-type educators argue convincingly that a child who is trusted enough to govern his or her own life develops a secure sense of self-respect and self-discipline that are essential qualities for maintaining a democratic society based on individual rights. In a handout I obtained at the libertarian school I visited, one of the school's founders claimed that *all* other educational approaches are rooted in mistrust for "the miracle of [children's] ability to learn" (Werner-Gavrin n.d.). All forms of progressive education (including presumably Waldorf and Montessori) are categorized as the "velvet glove" approach — with the adult's "iron fist" (control over what, how, and when children learn) merely concealed by a veneer of kind words and fun activities. This is an extreme statement (too extreme, as I will argue in a moment), but it does highlight the importance of personal freedom. After several visits to Waldorf schools as a prospective parent, I finally decided not to enroll my children there, however nourishing the activities, because I want them to taste the experience of freedom and have opportunities to pursue their own questions and interests, even as young children.[2] While guidance and structure are necessary aspects of cultivating the soul, a child's life should not *entirely* be bound by discipline.

The holistic perspective, which strives for balance and wholeness, acknowledges the paradox that there are important pedagogical truths in both the Waldorf emphasis on careful guidance and the libertarian insistence on freedom. In a child's life — in any person's life — there is a time for discipline, and a time for freedom. In a compelling discussion of the need for psychological balance, Bernie Neville (1989) considered the pantheon of Olympic gods as universal archetypes and concluded that all have an important place in the human psyche and hence in education. To perpetrate Apollonian rationality or a Promethean quest for power at the expense of Dionysian or Erotic joy is surely wrong — as the romantics and educational dissenters have told us over the years. But so too, said Neville, is it imbalanced to cultivate Dionysian freedom without rational discipline or the societal authority of the Zeus or Senex ("old man") archetype. The denial of any archetypal energies, he argued, leads to a distorted caricature of human development. (It is noteworthy that he sees Psyche — feminine archetype — as the symbol of wholeness.)

To dismiss all adult intervention, then, as "mistrust" of the child's innate powers or to lump together a wide range of pedagogical approaches under the sinister rubric "velvet glove" is to remain stuck in an atomistic conception of human nature — the autonomous individual versus the coercive authority of society. The child's ability and desire to learn *is* miraculous, as libertarian educators such as John Holt (1989) have always insisted. But this does not mean that learning takes place in a social, cultural, ecological, and spiritual vacuum (R. Miller 1991a). Holt and others like to point out how children learn to speak without adult instruction, but if learning were as completely autonomous as they suggest, there would be no cases of "feral" children who are unable to speak because they had no adult humans who responded to them at the critical time of language development. Montessori, Steiner, Vygotsky, Dewey, and other advocates of the "velvet glove" approach recognized, as atomistic individualists do not, that learning is not merely a private activity but an interactive one.

The miracle of human learning is that it is a highly complex process through which the person establishes relationships with the world. Relationship requires mutuality, dialogue, and responsibility as the essential complements of freedom. A libertarian education certainly turns out self-reliant people who value their rights (and respect those of other individuals); but if the holistic perspective suggested by theorists in ecology, spirituality, and feminism is correct, there are vital dimensions of human experience that remain uncultivated, perhaps untouched except in sporadic and haphazard ways, when young people receive from their elders nothing but unadulterated doses of freedom. The art of holistic education involves responding authentically — that is, from wholeness and balance — to the children, to the subject matter, and to the social/cultural milieu of the living situation without having to follow a theory or method that rigidly dictates what one must or must not do, let alone a curriculum dictated by government bureaucrats. *This* is freedom in education.

The educational moment is defined by a child's (or a group of children's) emotional, psychological, and intellectual readiness, by an event (such as a war or solar eclipse) that compels attention, by a topic of special interest sparked by someone's personal experience or urgent question, and by what is taking place in the community outside the school door. An education that responds to these factors — a holistic education — needs, then, to be informed by developmental insight, by the pedagogical ingenuity of progressive and other open classroom educators, by a keen sensitivity to children's inner lives as well as their academic behavior, and by a social and ecological conscience. Such an educational approach cannot be condensed into a specific method; it is the cultivation within the teacher of qualities such as authenticity, empathy, mindful presence, and responsiveness to each unfolding moment. What these qualities look like in practice has been described first hand both in recent literature (e.g., Ayers 1993; Logan 1993; Kessler 1991; J. Miller 1993b, 1994; Palmer 1993) and in earlier accounts such as George Dennison's *The Lives of Children* (1969) and Carl Rogers's *Freedom to Learn* (1969) — classic works that both led me to holistic education in the first place. I am convinced that Rudolf Steiner and Maria Montessori also advocated this existentially responsive approach to teaching, before their creative innovations became hardened into near-religious dogma.

All of these master teachers have certainly been concerned with freedom in education because this authentic responsiveness is impossible in a situation dictated by political, economic, or ideological mandates. Yet they have all recognized that structure, discipline, and the wisdom of maturity are essential elements of a humane, compassionate, and liberating education as well. The interconnection between freedom and structure has implications, not only for pedagogy but for the vitality of democratic life in the larger society. The philosophical and pedagogical issues we are considering here have significant ideological implications. Does the desire for freedom translate automatically into a social system of atomistic free market capitalism? The holistic perspective points to other possibilities. If the notion of freedom takes on new meanings in different contexts, so too does the exalted concept of democracy.

Education and democracy

Dissenting educators have often been deeply concerned with the role of schools in building a viable democratic society; probably none have expressed these concerns as consistently as the progressive educators. The leading theorists of progressive education — Dewey, Parker, Counts, Kilpatrick, Bode, Brameld, Washburne, Kallen, and others — discussed at great length the connection between democracy in the school setting and democracy in society at large. In strong language, they argued that conventional classroom routines, with teachers controlling the curriculum as well as students' activities, represented an elitist, hierarchical, even "aristocratic" social order. They asserted that young people could not be expected to appreciate, much less engage in, a participatory democracy if during their formative years they were subjected to a rigid authoritarian system. This was one of the major philosophical bases for the student-centered practices that developed out of the progressive education movement, and one of the major reasons that the movement was viciously attacked during the conservative crusade of the 1950s (R. Miller 1992).

However, progressive education diverged into two complementary but ultimately separate factions, which are historically known as the "child-centered" and "social reconstructionist" wings. The former emerged during the 1920s (another conservative era) when progressive educators felt that social reform was impossible; social reconstructionism was a response to the Depression, when social reform appeared to many to be a vital necessity. Later generations of progressive educators have also tended to fall into one or the other of these camps: Many of the "progressive" private day schools and boarding schools that tend to serve affluent families and many of the "free" schools that emerged after the 1960s concentrate on freedom of thought and action within the school setting; on the other hand, the critical pedagogy movement and activist educators aligned with "progressive" liberal politics have emphasized the role that schools should play in a larger social movement for economic and racial equity, justice, and nonviolence — in other words, social reconstruction.

There has always been a tension between these two perspectives. Reconstructionists like George Counts (1932) and Jonathan Kozol (1972) have been sharply critical of child-centered educators for avoiding larger social and cultural problems, while many alternative and humanistic educators have viewed political activism as tainting children's natural learning processes with adults' ideological agendas. (Reit-

man [1992] offers a coherent statement of this position from a progressive perspective.) From a holistic point of view, however, education for a democratic society means allowing children freedom to develop according to their own unique (and ultimately spiritual) destinies and to follow their own personal interests *as well as* challenging them to engage their social and political milieu critically (Purpel and Miller 1991).

Dewey's theory of democracy had, in fact, sought to integrate personal development with social reconstruction, but the progressive agenda broke down into rival factions because Dewey and his followers did not understand freedom in a large enough context. They defined the human being as essentially a social animal and saw the critical problems of education and democracy in terms of socialization. Consequently, the more "tough minded" among them (to use a phrase William James coined in another context) became concerned with fighting oppressive forces in society, while the more "tender-minded," have avoided this difficult battle and concentrated on freeing persons individually from oppressive socialization. The "tough minded" reconstructionist argues that collective action is necessary to overcome the selfish individualism underlying an exploitative economic system, while the "tender minded" child-centered progressives, true to their romantic and transcendentalist heritage, fear that collectivism tends to endanger personal individuality.

From a holistic perspective, both positions rest on valid insights, and their polarization is unfortunate and unnecessary. Both the reconstructionist and child-centered views rest on a simplistic dichotomy between person and society that ignores the much more complex pattern of cultural and ecological interconnections linking them (Bowers 1993). When we situate human existence in ecological and spiritual contexts as well as the social, there is a mutual relationship between person and society that involves freedom as well as commitment to values and ideals larger than oneself. Personal freedom in a holistic cultural context does not lead to atomistic self-indulgence but to an awakened sense of connectedness with all of life. The individual becomes free *for* collective action in the service of justice and compassion. Social reconstruction, then, would not merely involve partisan political struggle but the moral and spiritual development of the persons who make up society, which is not only a proper educational task but the defining task of holistic education (Purpel 1989).

A viable democratic society requires both personal freedom *and* social responsibility. Progressive educators often describe schools as "democratic public spheres"; this is an important idea, but a holistic perspective would extend it still further. For education to serve a democratic society, it is not enough for children to do independent research or practice democratic rituals such as town meetings, which they do in some alternative and progressive schools. Nor is it enough for educators to engage students in critical questioning of society's various ills. These are useful elements, to be sure, but if we aim for the kind of democracy that Emerson and Thoreau envisioned, in which the most vital energies and highest possibilities of human beings are encouraged to flourish, then education must be a process of human engagement that awakens and nourishes our wholeness. This will require a great measure of freedom, a great deal of guidance and discipline, and above all, a great commitment to respond authentically in each moment of educational encounter.

Notes

1. Why this is so is itself a complex issue, probably involving numerous biological, psychodynamic, and cultural factors, on which I shall not even begin to speculate.

2. I did not find any school in my area that satisfied my expectations of holistic education and have since helped launch a new alternative school based on the principles articulated in my journal and other writings for the past decade. For information, contact The Bellwether School and Family Resource Center, 120 South Brownell Rd., Williston, Vermont 05495.

References

Ayers, W. 1993. *To teach: The journey of a teacher*. New York: Teachers College Press.

Belenky, M. F., B. M. Clinchy, N. R. Goldberger, and J. M. Tarule, 1986. *Women's ways of knowing*. New York: Basic Books.

Bowers, C. A. 1993. *Education, cultural myths, and the ecological crisis: Toward deep changes*. Albany: SUNY Press.

Branden, N. 1969. *The psychology of self-esteem*. Los Angeles: Nash.

Cajete, G. 1994. *Look to the mountain: An ecology of indigenous education*. Durango, CO: Kivaki Press.

Clark, E. T. 1988. "The Search for a New Educational Paradigm: The Implications of New Assumptions About Thinking and Learning." *Holistic Education Review*, (1): 18–30.

Counts, G. S. 1932. *Dare the school build a new social order?* New York: John Day.

Del Prete, T. 1990. *Thomas Merton and the education of the whole person*. Birmingham, AL: Religious Education Press.

Dennison, G. 1969. *The lives of children: The story of the First Street School*. New York: Random House.

Doll, W. E. 1993. *A post-modern perspective on curriculum*. New York: Teachers College Press.

Emerson, R. W. 1965. *Selected writings*. Edited by William H. Gilman. New York: New American Library.

Goodman, P. 1964. *Compulsory mis-education and the community of scholars*. New York: Vintage/Random House.

Greenberg, D. 1994. *Worlds in creation*. Framingham, MA: Sudbury Valley School Press.

Griffin, S. 1978. *Women and nature*. New York: Harper and Row.

Holt, J. 1989. *Learning all the time*. Reading, MA: Addison Wesley.

Kessler, S. 1991. "The Teaching Presence." *Holistic Education Review*, 4(4): 4–15.

Kozol, J. 1972. *Free schools*. Boston: Houghton Mifflin.

Logan, J. 1993. *Teaching stories*. Plymouth, MN: Minnesota Inclusiveness Program.

Macy, J. 1991. *World as lover, world as self*. Berkeley: Parallax Press.

Mander, J. 1991. *In the absence of the sacred: The failure of technology & the survival of the Indian nations*. San Francisco: Sierra Club Books.

Martin, J. R. 1992. *The schoolhome: Rethinking schools for today's families*. Cambridge: Harvard University Press.

McFague, S. 1987. *Models of God: Theology for an ecological, nuclear age* (Minneapolis: Augsburg Fortress).

Merchant, C. 1980. *The death of nature: Women, ecology and the scientific revolution*. San Francisco: Harper & Row.

Metzger, M., and W. Harding. 1962. *A Thoreau profile*. Concord, MA: Thoreau Foundation.

Miller, J. P. 1988. *The holistic curriculum*. Toronto: Ontario Institute for Studies in Education Press.

Miller, J. P. 1993a. "Worldviews, Educational Orientations, and Holistic Education." In *The Renewal of Meaning in Education: Responses to the Cultural and Ecological Crisis of Our Times*, ed. Ron Miller. Brandon, VT: Holistic Education Press.

Miller, J. P. 1993b. *The holistic teacher*. Toronto: Ontario Institute for Studies in Education Press.

Miller, J. P. 1994. *The contemplative practitioner: Meditation in education and the professions*. Westport, CT: Bergin & Garvey/Greenwood.

Miller, R. 1991a. Review of *Learning All the Time* (John Holt) and *Child's Work* (Nancy Wallace). *Holistic Education Review* 4(1): 62–65.

Miller, R. 1991b. "Holism and Meaning: Foundations for a Coherent Holistic Theory." *Holistic Education Review* 4(3): 23–32.

Miller, R. 1992. *What are schools for? Holistic education in American culture* 2nd edition. Brandon, VT: Holistic Education Press.

Miller, R. 1995. *Educational freedom for a democratic society: A critique of national standards, goals, and curriculum*. Brandon, VT: Resource Center for Redesigning Education.

Neville, B. 1989. *Educating psyche: Emotion, imagination and the unconscious in learning*. Blackburn, Australia: Collins Dove.

Noddings, N. 1984. *Caring: A feminine approach to ethics and moral education*. Berkeley: University of California Press.

Noddings, N. 1992. *The challenge to care in schools: An alternative approach to education*. New York: Teachers College Press

Oliver, D. W., and K. Gershman. 1989. *Education, modernity, and fractured meaning: Toward a process theory of teaching and learning*. Albany: SUNY Press.

Orr, D. W. 1992. *Ecological literacy*. Albany: SUNY Press.

Orr, D. W. 1994. *Earth in mind: On education, environment, and the human prospect*. Washington, DC: Island Press.

Palmer, P. 1993. *To know as we are known: Education as a spiritual journey*. San Francisco: Harper San Francisco.

Plant, J., ed. 1989. *Healing the wounds: The promise of ecofeminism*. Philadelphia: New Society Publishers.

Purpel, D. 1989. *The moral and spiritual crisis in education: A curriculum for justice and compassion in education*. Westport, CT: Bergin & Garvey/Greenwood.

Purpel, D. and R. Miller. 1991. "How Whole is Holistic Education?" *Holistic Education Review*, 4(2): 33–36.

Reitman, S. W. 1992. *The educational Messiah complex: American faith in the culturally redemptive power of schooling*. San Francisco: Caddo Gap Press.

Rifkin, J. 1991. *Biosphere politics: A cultural odyssey from the Middle Ages to the New Age*. San Francisco: Harper San Francisco.

Rogers, C. 1969. *Freedom to learn*. Columbus: Merrill.

Roszak, T. 1973. *Where the wasteland ends: Politics and transcendence in postindustrial society*. Garden City, NY: Anchor/ Doubleday.

Ruddick, S. 1989. *Maternal thinking: Towards a politics of peace*. Boston: Beacon Press.

Sapon-Shevin, M. 1990. Schools as Communities of Love and Caring. *Holistic Education Review*, 3(2): 22–24.

Sloan, D. [1983] 1994. *Insight-imagination: The emancipation of thought and the modern world*. Brandon, VT: Resource Center for Redesigning Education.

Smith, G. A. 1992. *Education and the environment: Learning to live with limits*. Albany: SUNY Press.

Smith, H. 1989. *Beyond the post-modern mind*. Wheaton, IL: Quest Books.

Spretnak, C. 1982. *The politics of women's spirituality: Essays on the rise of spiritual power within the feminist movement*. Garden City, NY: Anchor Press/ Doubleday.

Spretnak, C. 1991. *States of grace: The recovery of meaning in the postmodern age*. San Francisco: Harper San Francisco.

Starhawk 1982. *Dreaming the dark: Magic, sex and politics*. Boston: Beacon Press.

Werner-Gavrin, M. n.d. Trust, control and education. Unpublished paper.

Wood, C. 1991. "Maternal Teaching: Revolution of Kindness." *Holistic Education Review*, 4(2): 3–10.

Education and the Metaphysics of Freedom

Dale T. Snauwaert

An education for freedom based upon ecological interrelation would be devoted to the realization of one's fundamental interconnection with nature, knowing nature and one's self from the inside in a state of integration, and realizing the seamless unity of life.

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The purpose of this paper is to explore the metaphysical foundations of freedom and its implications for conceiving the aims of an education. It will be argued below that freedom is fundamentally relational, that it can be best understood as being founded upon relationships with others and the world; in other words, it will be argued that it is the ontological nature of relationship that defines freedom and in turn an education devoted to it. Three different conceptions of freedom will be explored: classical liberal, democratic, and ecological. These reflections primarily constitute an attempt to come to grips with freedom from the perspective of holistic, ecological interdependence. It is a search for the meaning of freedom within a consciousness of our fundamental interconnection with others and the physical environment. The project here is to philosophically delineate the nature of freedom and education from the perspective of relationship while fully acknowledging that freedom is not an abstract, logical reality but a concrete, lived experience.

The metaphysics of freedom

Freedom as an existential experience is founded upon relationship — relationship with others and the world. Without relationship there can be no freedom, for freedom is only meaningful if there is a possibility of constraint, and the possibility of constraint can only exist if one stands in relationship to others. This relational foundation of freedom is starkly illustrated by Jean-Paul Sartre's proclamation in his play *No Exit* that "hell is other people."[1] What Sartre means here is not that people are literally hellish, but that the gaze of the Other can be objectifying, thereby delimiting the possibility of freedom. On the other hand, we can realize and maintain our subjectivity and in fact enter into subjective relations with others. From this perspective, it may be said that we can be free in the context of relationship if we enter into "mutually permissible relationships" with

others, relationships wherein there is both self-acceptance and acceptance of the other; that is, relationships constituted by love.[2] Thus my central premise: freedom is metaphysically grounded in relationship.

Relationships can be either internal or external. We can be either internally or externally related to others and the world. Internal relations are those that are essential to who we are, in the sense that a change in the relationship alters our self-definition and/or experience of self. External relations are such that they do not affect us essentially. For example, under the influence of Cartesian dualism we have conceived the mind and body, self and nature, as distinct and separate substances such that, while there may be interaction between them, the body and nature are not conceived as fundamental to the self. We talk of our bodies as distinct from our self and the natural world as something so distinct and apart that we visit nature on vacations or on weekends rather than intimately living in unity with it. In this case, we have become dissociated from our bodies and nature. In other words, the above relationships between mind/body and self/nature can be understood to be external, in the sense that, while in interaction with them, they are not fundamental to how we experience ourselves. In contrast, if our bodies and nature are fundamental parts of self, then we have an internal relationship with them. This is to suggest that external relations can be defined in terms of ontological independence whereas internal relations are constituted by ontological interdependence.[3]

If we are externally related to other human beings, that is, if we are atomistic, autonomous individuals existing in relative independence from others, then freedom must logically be defined in negative terms, in the sense of being free *from* the deliberate interference of others. As autonomous individuals there must exist a zone of privacy independent of the coercive influence of others, for such a zone defines autonomy. On this basis, freedom is defined within classical liberal tenets as protection of a zone of privacy within which we are free to define and pursue our own conception of the good life (consistent with the equal freedom of others to define and pursue their own good).[4]

This is an egocentric conception of freedom wherein the individual is conceived as existing fundamentally as a separate, autonomous ego in relation to others. Freedom is thus conceived as noninterference. An example of this ideal is found in Ayn Rand's *The Fountainhead* in the character of Howard Roark, the individualistic, eccentric architect *qua* artist.[5] Roark's artistic creativity, in fact, his very integrity as a person, is tied to his independence, to an existence unfettered by convention, custom, or intimate connection. More profoundly, this egocentric conception of freedom is illustrated by the Hero myth found in most, if not all, cultures.[6]

If, however, we are internally related to others, then freedom must be defined communally. Communitarians, feminists, strong and social democrats, critical theorists, and postmodernists, among others, maintain that identity is socially constructed (wholly or in part).[7] The social construction of identity logically must be based upon internal relations, for if our identity is socially constructed, that is, formed out of interaction with others, then by definition we must be internally related to others. For we are being affected essentially. We are not independent but exist within an interdependent web of relationships that profoundly shapes our experience of self. If we are internally related socially, then the negative conception of freedom must be abandoned.

From this perspective, what does "freedom" mean? If we are internally related on a social level, how can we be free? Under these conditions, freedom can only be achieved in communion with others. Freedom must be public and communal. We are only free if we can participate in the direction of social life, what Amy Gutman refers to as conscious social reproduction.[8] We can only be free if we have an equal voice in how reality is socially constructed, and this requires the establishment of democratic forums wherein the decisions that determine social practices and customs are formed.[9] Thus, freedom is founded upon decision-making power and its democratic distribution. As Hannah Arendt suggests: "... a body which is the result of covenant and 'combination' becomes the very source of power for each individual who outside the constituted political realm remains impotent," and thus unfree.[10] If we influence each other, and if that influence inescapably shapes who we are, then freedom must be a product of mutuality and reciprocity, which in turn are only made real through participation in public forums wherein the course of collective life is given direction. If we are internally related on a social level, then freedom must be conceived as democratic freedom. An example of this kind of communal, democratic freedom is the matriarchal utopia constructed by Charlotte Perkins Gilman in her novel *Herland*.[11]

Is our internal relatedness purely social? The view from physics and ecology suggests a holistic reality wherein we are internally related not only to human beings but to all living beings *and* the physical universe itself. From this perspective, the web of relations extends to include a holistic, ecological interdependence. Errol Harris maintains that "A whole is always and necessarily a unity in and of differences."[12] A whole entails both particularity *and* interconnection. Without particularity it would be empty and without interconnection it would be a mere collection of discrete, autonomous parts. Wholeness entails a unity of diversity, a uni-verse. Wholes are thus comprised of individuated units that are internally related.

Based upon the principles of nonlocality(i.e., faster-than-light influences), indeterminance, complementarity, implicate order, space/time, and energy/matter unification, among others, quantum and relativity theory describe a universe that is an internally related whole.[13] As Capra suggests: "As we study the various models of subatomic physics, we shall see that they express again and again, in different ways, the same insight — that the constituents of matter and the basic phenomena involving them are all interconnected, interrelated, and interdependent; that they cannot be understood as isolated entities, but only as integrated parts of the whole."[14] Henry Stapp maintains that, from the perspective of quantum theory, the human being "appears no longer as an isolated automaton. [S/he] appears rather as an integral part of the highly nonlocal creative activity of the universe."[15] Erwin Schroedinger, one of the founders of quantum mechanics, maintains that Reality is "essentially eternal and unchangeable and numerically *one* in all men, nay in all sensitive beings.... Inconceivable as it seems to ordinary reason, you — and all other conscious beings as such — are all in all. Hence this life of yours which you are living is not merely a piece of the entire existence, but is in a certain sense the *whole*.... "[16] The picture of the universe from the perspective of modern physics is one of holism and process as opposed to atomism and substance ontology. Creation is a cosmic dance of energy wherein matter is understood to be a network of probability patterns or tendencies to exist. Creation is not "particular" but a complex, interdependent web of relationships.

In a similar way, ecology asserts our fundamental interdependence.[17] From the ecological perspective, we and everything else are and exist within interrelated systems — subsystems within larger systems. The earth itself is conceived to be a living system within which countless subsystems exists interdependently. The earth is an internally related whole that includes human beings. As Leonardo Boff puts it: "... we may define ecology as the science and art of relations and of related beings. The home/habitat/*oikos*, in fact, is made up of living beings, matter, energy, bodies, and forces in permanent relation to one another."[18] From the perspective of ecology, the universe is also an internally related whole.

If we are internally related to each other and to the universe itself, then what constitutes freedom? From the perspective of ecology and quantum theory, we are not autonomous beings in any atomistic sense. We exist within an internally related web. So situated, how can freedom be conceived? If we are internally related ecologically, then we can never be free from the influence of other beings as well as the forces of the physical world. We are materially interdependent. The only way to be free then is through what can be referred to as "self-realization,"[19] a process of enlargement of self to include all that is internally related to us. If in fact we are internally related to the universe, then the universe is part of our very existence, and therefore, our consciousness of self can, in principle, be expanded so that we become aware of this interconnection. For example, our physical bodies are made up of minerals that come from the earth. Physically we are made of the earth and continually exchange matter/energy with it. Are we fully cognizant of this reality? Is this interdependence at the core of our experience of self? The conscious experience of the deep interconnection between one's body and the earth as a part of self is one of liberation. It liberates one from one's narrowly defined ego. It enlarges the self to include the body as connected to the earth and thus expands the territory of one's consciousness and conscious influence, thereby increasing one's capacity for self-determination.

If we identify with our narrow ego, then we will be attempting to escape from the inescapable influence of our interdependent relations. We will create terms and structures of isolation in an attempt to be free. As Alan Watts eloquently suggests:

> It is this ... ignorance of and, indeed, estrangement from ourselves which explains our feeling of isolation from nature. We are, as it were, cut asunder into a confined center of attentiveness, which is 'I,' and a vast organic complexity which we know only in terms

> of indescribable and disquieting feelings, or abstract biological technicalities: and this is 'myself.' Throughout his history, the type of man molded by the Western cultures has been peculiarly estranged from himself, and thus from the natural environment in which his organism inheres.[20]

However, freedom from a holistic, ecological perspective does not consist of identifying with the ego as an autonomous entity but with identifying self as fundamentally interconnected with others and the environment. This notion of ecological self-realization concerns the realization of the ecological dimensions of selfhood. It implies becoming increasingly conscious of ourselves as ecologically constructed and interdependent. It is not about constructing an ecological self out of an atomistic one; it concerns realizing one's already existing interconnection. From this perspective, freedom is liberation from the illusion of egocentrism to embrace the unity of life.

This embrace does not, however, imply merger; wholeness entails both particularity as well as interconnection. The individuated self is maintained but simultaneously with awareness of interdependence/unity. The ego here is neither isolated nor merged but is individuated; individuated in the sense of living unity while not losing one's self in that unity. This is, in essence, a process of learning to experience nature from the inside. This can also be thought of as an integration of Vedic *samadhi* and Buddhist *mindfulness*, an integration of the feminine and masculine dimensions of consciousness, the Taoist integration of *yin/yang*: being open and present.[21]

This integration is illustrated by the ancient myth of the Skeleton Woman of the indigenous peoples of the far north. A young girl is cast into the sea by her father for some transgression and lives in a state of starvation under the sea. One day a fisherman unknowingly hooks her rib cage and to his surprise brings her into his boat. Out of compassion he brings her home and cares for her, warming her with his fire. The fisherman falls asleep and while sleeping the Skeleton Woman removes his heart and beats it as a drum singing "flesh, flesh, flesh." As she beats the drum heart and sings, her skeleton fills out and she is brought into a state of nourishment. She returns the fisherman's heart and lies down with him in his bed where they sleep blissfully in a unified state.[22]

This integrated state, which we are equating with an enlarged sense of self and freedom, is also symbolized by the *mandala*. Mandalas exemplify the spiritual center of both the world and the self, illustrating unity in diversity by placing individuated symbolism within the encompassing context of the circle, a symbol of unity and wholeness.[23]

Education

Just as freedom is contingent upon the nature of ontological relations, so is an education for freedom. As discussed above, an ontology based upon external relations leads to a negative conception of freedom wherein one exists in relative autonomy free to define and pursue one's own conception of the good life. From this perspective, an education for freedom would consist of exposure to a wide variety of conceptions of the good life so that one would be adequately prepared to define one's own good. It entails, in essence, a liberal education.[24]

An ontology based upon internal social relations leads to a democratic conception of freedom wherein freedom is achieved through a democratic process of deliberation and decision concerning the direction of social life. From this perspective, an education for freedom would consist of the development of the skills and understandings necessary for participation in democratic deliberation and decision-making as well as the capacity for critical thinking. An education for freedom is thus a democratic education wherein one is prepared for democratic citizenship, for equal participation in public life.[25]

An ontology based upon internal ecological relations leads to a conception of freedom based upon self-realization. From this perspective, freedom is liberation from egocentrism to embrace interconnection. An education for freedom based upon ecological interrelation would be devoted to the realization of one's fundamental interconnection with nature, knowing nature and one's self from the inside in a state of integration, and realizing the seamless unity of life.

An education devoted to ecological freedom would include interdisciplinarity, perhaps transdisciplinarity, to cultivate an awareness and understanding of interconnection across logically distinct disciplines; exposure to rich aesthetic experience to cultivate a heightened sense of holistic perception;[26] the practice of a variety of contemplative techniques to expand the student's conscious awareness and to cultivate a sense of deep, internal centeredness (contemplative techniques are well-suited to developing a heightened sense of wakefulness essential for self-realization);[27] communion with nature in order to develop an understanding of and deep feeling for

one's essential interconnection with the natural world;[28] — This is the cultivation of an awareness of nature as something intimate to our very existence rather than something separate from us) and exposure to the indigenous cosmologies of First Peoples[29] who possess a deep ecological worldview as well as an understanding of the latest developments in physics (e.g., quantum theory and unified field theory), biology (e.g., morphogenetics), and ecology.[30] Also, and this is an essential point, an education for freedom based upon internal ecological relations would also include democratic freedom and the imperatives of a democratic education, for embedded in the larger ecology is the social ecology.

From this perspective, we are beings in constant interaction with the environment, both social and ecological, and this reality suggests that we are engaged in a continual process of becoming. We are continually inventing and reinventing ourselves through dynamic interaction with the social and physical ecology. When we look at the current social ecology that defines educational practice we find very little in the way of the practice of freedom, neither liberal, democratic, nor ecological.

As Paulo Freire has so clearly articulated, our social ecology is premised upon the epochal theme of domination, not freedom.[31] This domination is reflected in educational practice premised upon what Foucault calls disciplinary power.[32] Through the processes of hierarchical observation, normalizing judgment, and examination, students undergo a socialization process that renders them docile and obedient in the interests of economic productivity. The practice of freedom is absent. Under these conditions the achievement of self-determination and self-realization must be based upon the critical deconstruction of dominating practices. Democratic *and* ecological freedom can only be real in this historical moment through the cultivation of a critical consciousness, a consciousness that is intimately aware of the fluidity of reality and the power of human consciousness through choice and action to invent and reinvent one's cultural environment and one's relationship to nature, and hence to be free and responsible. However, critical consciousness alone is not sufficient, for true transformation also entails hope, love, and imagination. Critical consciousness must be integrated with the enlargement of self to foster the realization of our fundamental interconnection with others and the earth. Only on this basis can the prophetic imagination and compassion essential for both individual and social transformation in the direction of freedom be developed.[33]

In conclusion, the parameters of an education for freedom are defined by the metaphysics and ontology of relationship. The answer to the basic metaphysical question of relationship defines freedom and in turn an education for freedom. For this author, freedom is ultimately a question of interdependence and education a question of the development of heightened awareness of interdependence and the cultivation of the skills necessary to live in internal relationship with others and the world. It is through the development of such awareness and skill that freedom becomes real, and it is freedom that is, in part, the fundamental quest of our human journey.

Notes

1. Jean-Paul Sartre, *No Exit* (New York: Knopf, 1947).
2. I am indebted to Brooks Barton for this point.
3. Arne Naess, "Ecosophy and Gestalt Ontology," in *Deep Ecology for the 21st Century: Readings on the Philosophy and Practice of the New Environmentalism*, ed. George Sessions (Boston: Shambhala, 1995), 240–245.
4. See Isaiah Berlin, *Four Essays on Liberty* (Oxford: Oxford University Press, 1969).
5. Ayn Rand, *The Fountainhead* (New York: Bobbs-Merrill, 1943).
6. Erich Neumann, *The Origins and History of Consciousness* (Princeton: Princeton University Press, 1954).
7. See for example Benjamin Barber, *Strong Democracy* (Berkeley: University of California Press, 1984); Peter Berger and T. Luckman, *The Social Construction of Reality* (Garden City, NY: Doubleday, 1966); Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Vintage Books, 1979); Paulo Freire, *The Pedagogy of the Oppressed* (New York: Seabury Press, 1970); Peter L. McLaren and Colin Lankshear, *Politics of Liberation: Paths from Freire* (New York: Routledge; 1994); L. J. Nicholson, *Gender and History* (New York: Columbia University Press, 1986); Jo Anne Pagano, *Exiles and Communities: Teaching in the Patriarchal Wilderness* (Albany: SUNY Press, 1991).
8. Amy Gutman, *Democratic Education* (Princeton: Princeton University Press, 1987).
9. See Hannah Arendt, *On Revolution* (New York: Penguin Books, 1962).
10. Ibid., p. 171.
11. Charlotte Perkins Gilman, *Herland* (New York: Pantheon Books, 1979 [1915]).
12. Errol E. Harris, "Contemporary Physics and Dialectical Holism." In *The World View of Contemporary Physics: Does It Need a New Metaphysics*, ed. Richard F. Kitchener (Albany: SUNY Press, 1988), 161.
13. See Richard F. Kitchener (ed.), *The World of Contemporary Physics*.
14. F. Capra, *The Tao of Physics* (New York: Bantam, 1980), 142.

15. Henry P. Stapp, "Quantum Theory and the Physicist's Conception of Nature: Philosophical Implications of Bell's Theorem," in *The World View of Contemporary Physics*, ed. Richard F. Kitchener, 57.
16. Erwin Schroedinger, *My View of the World* (London: Cambridge University Press, 1964), 21, emphasis original.
17. See Leonardo Boff, *Ecology and Liberation: A New Paradigm* (Maryknoll, NY: Orbis Books, 1995); Warwick Fox, *Toward a Transpersonal Ecology: Developing New Foundations for Environmentalism* (Boston: Shambhala, 1990); George Sessions, *Deep Ecology for the 21st Century*.
18. Boff, *Ecology and Liberation*, 11.
19. See Arne Naess, "Self-Realization: An Ecological Approach to Being in the World," *Deep Ecology for the 21st Century*, ed. by George Sessions, 225–239; Fox, *Toward a Transpersonal Ecology*.
20. Alan W. Watts, *Nature, Man and Woman* (New York: Vintage Books, 1970 [1958]), 2–3.
21. A. H. Almaas, *Essence: The Diamond Approach to Inner Realization* (York Beach, Maine: Samuel Weiser, 1986).
22. For a discussion see Clarissa Pinkola Estes, *Women Who Run With the Wolves: Myths and Stories of the Wild Women Archetype* (New York: Ballantine Books, 1992), 130–165.
23. Mircea Eliade, *Images and Symbols: Studies in Religious Symbolism* (Princeton: Princeton University Press, 1991[1952]).
24. See for example Robert M, Hutchins, *The Conflict in Education* (New York: Harper, 1953); Mark Van Doren, *Liberal Education* (Boston: Beacon Hill, 1943).
25. See for example John Dewey, *Democracy and Education* (New York: Free Press, 1916); Gutman, *Democratic Education;* Freire, *The Pedagogy of the Oppressed*.
26. See John Dewey, *Art as Experience* (New York: Minton Balch, 1934); Steven C. Rockefeller, *John Dewey: Religious Faith and Democratic Humanism* (New York: Columbia University Press, 1991).
27. John Miller, *The Contemplative Practitioner* (Westport, CT: Bergin & Garvey, 1994).
28. See David Orr, *Ecological Literacy* (Albany: SUNY Press, 1991).
29. See for example Mircea Eliade, *Shamanism: Archaic Techniques of Ecstasy* (Princeton: Princeton University Press, 1964).
30. See Rupert Sheldrake, *The Rebirth of Nature: The Greening of Science and God* (Rochester, VT: Park Street Press, 1991).
31. Freire, *Pedagogy of the Oppressed;* see also Boff, *Ecology and Liberation*.
32. Foucault, *Discipline and Punish*. See also ed. Stephen J. Ball, *Foucault and Education: Disciplines and Knowledge* (New York: Routledge, 1990).
33. See Boff, *Ecology and Liberation;* David Purpel, *The Moral and Spiritual Crisis in Education* (Westport, CT: Bergin & Garvey, 1988).

The Heart of Freedom

Sheldon Stoff

The concept of freedom entails more than physical movement or the absence of mental compulsion. Freedom is, essentially, spiritual activity motivated by love.

Receive the child in reverence,
Educate him in love,
Send him forth in freedom.

— Rudolf Steiner

Freedom — I love its flashing face: it flashes forth from the darkness and dies away, but it has made the heart invulnerable. I am devoted to it, I am always ready to join in the fight for it, for the appearance of the flash, which lasts no longer than the eye is able to endure it. I give my left hand to the rebel and my right to the heretic: forward! But I do not trust them. They know how to die, but that is not enough.

— Martin Buber

In the Garden of Eden, man began his quest to know "good and evil," to be free of external demands, to be free even from his Creator. Yet today, though he wields unlimited power, he still appears to be controlled by instinctive and environmental forces and therefore unfree. All the more determinedly he seeks to solve the riddle of freedom, as though he must succeed now or never. The time has surely come to search out the concept of freedom as a forerunner of social reform. They are related, for the first condition of freedom is the will to self-improvement: a social action that begins with changes within each individual.

It is possible, of course, even in the midst of war, uncertainty, and deprivation, that man can by inner effort rise above his troubles. His thoughts can soar, regardless of external circumstances, into the pure air of freedom. The many examples of noble thought conceived in concentration camps and ghettos attest to this ability of man to transcend physical conditions. It can even be observed that poverty is generally more favorable than wealth as the matrix for the burning ideal of liberty. Wealth and ease often depress and corrupt the human spirit to a greater extent than poverty and suffering. To be truly free is to be master of outer conditions, whether favorable

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or adverse. It is to be oneself. We may or may not be able to be free outwardly, but we are impregnable if we are inwardly free.

When is a man free to be himself? He is master in his own house when he has achieved harmony among his own faculties of will, feeling, and thinking. If he responds automatically to a stimulus, he acts without control of his own will; and obviously there is very little of the man himself in such response. Yet human behavior is still being explained by current psychology in terms of the stimulus-response theory. This theory may suit automatons, but it denies the very premise of human freedom: namely, that man himself shall intervene (to choose and to decide) between stimulus and response. It ignores the real man and his climb toward lasting values. In its undue emphasis on externals, it loses sight of the inner quest, the fateful encounter of a man with himself, his primary need for self-conquest.

The finest guides in man's quest for his higher self, the only self whose will truly suits the individual and fits the world, have always been found in the self-forgetting concepts of sacrifice and active service to mankind. Without the willingness to sacrifice his limited advantage for the whole that he holds dearer than self, man is doomed to pursue the kind of self-aggrandizement that always ends in self-defeat. Throughout history, the great religions have sought to lead communities of men to the light and power of such ideals as that of rebirth through the giving of self. Today, as individuals, we must discover these ideals anew if will-lessness is not to drown us in inertia, or willfulness destroy us through violence.

Unchecked emotions also can rob a man of freedom of choice by denying him his rationality. His feeling response then becomes as automatic and unthinking as a reflex action. Both are "programmed." Compulsive loathing and hatred or attraction and desire deny a man his conscious self-direction. Serving such emotions, he loses his unique individuality. True feeling is not compulsive. It does not dominate the will but reinforces it. Its warmth does not obliterate reason but enriches it, giving it power of comprehension. There can be no dialogue without warmth; man or nature can be rightly known only through warm encounter. The "I" must be bound in warmth of heart to the "Thou."

To think in freedom is to overcome stereotype and tradition: regionalism, nationalism, and peer pressure. It is to consider how the pure ideal can be imaginatively and efficiently realized in action. It is to overcome one's bias of self-love in order to truly know oneself. With the help of the free insights thus achieved, man can execute the bidding of his higher self; he can do that which is knightly and just.

On this rung of experience, our intuition is awakened. The one using only intellect is alienated from the world about him, simply a spectator of life. His thinking freezes into rigid patterns, and his coldness is the beginning of decay. Such a man stands in the wings of life's drama with little zest to play his part.

A man is free to be himself when he has achieved harmony among his own faculties of will, feeling, and thinking.

But when intellect and intuition combine, their balance brings wisdom, freedom, love, and creativeness — all that guarantee human achievement.

A society of free individuals, capable of rising at critical moments above inner as well as outer compulsions, must be the goal of enlightened civilization. This achievement would be the completion of the task begun in Eden. Today it is the goal of many who dare to question. To question is to seek perspective, to look for beginnings and endings. The individual who searches comes to feel the pain and joy of the hour's claim on his soul: he begins to chart his own course and to shoulder social responsibility.

Ours is the beginning of an age when freedom is attainable. The external restraints of family, religion, and societal codes are crumbling. In such a situation, man has the possibility of making his own decisions. He is called upon to walk the thin ridge of freedom that rises between the abyss of self-abandonment on the one side and the abyss of self-immersion on the other. But the mastery of freedom requires a deep understanding, and this can only follow from a far more significant education than society is now providing.

How are free human beings to be educated? Surely the extensive use of the computer will have to be avoided for elementary school children. Those who favor the computer do not accept even the hope of a free man able to neutralize and transcend his environment. They would prefer to program all behavior

to their conception of the good life, denying both opportunity and responsibility. Whether this conditioning is to be accomplished by programming or by drugs, it can never awaken, encourage, nor permit what is essentially human; namely the free act. To ease ourselves of the burden of choice is to become something between man and machine.

Opposed yet strongly linked with programmed instruction is another impulse in education: the child-centered classroom. Its appeal is to the best in teachers. It has wisely removed harsh authority in education but it offers no systematic understanding of the interrelatedness of knowledge. It is often based on concepts of freedom that may be dangerously false because only half-true. Though it involves the emotions, it does not see beyond the traditional intellectualistic brand of knowledge that has, in the end, always deeply disappointed children. It does not point children to a distant horizon nor does it help them with an understanding of the higher as opposed to the lower nature of man and existence.

By confusing freedom with movement and by preferring knowledge as a tool of power to knowledge as the gateway to insight and love, it does not usher the child to the portal of deep wonder and gratitude. By viewing all knowledge in terms of selfish usage, it may develop a subjective bias. This unwise subjectivism is as harmful to the best interests of the objective world as behavioristic objectivism is deadly to the human soul.

Superficial warmth, fired by sentimentalism, does not lead to true self-awareness. The appeal of the open classroom is to self-satisfaction rather than to self-transcendence. Yet, as we have seen, to do what one wants to do is not freedom. To do what is right and true, in devotion, comes closer to the mark.

Programmed learning and open education lack the qualities needed to educate the free man. A better beginning will have to be made with an education that can show us how freedom arises from love of the world and the desire to serve it.

A first step must be to see that education at all levels is filled with reverence for man and nature alike. In the words of Abraham Heschel, "The beginning of awe is wonder, and the beginning of wisdom is awe." Every act of learning must open the heart to appropriate feeling. An education of the head alone is a distortion of reality. If feeling is to grow, it must spring from the deeper recesses of a heart that knows the brotherhood of man with man and man with nature.

To provide an example: One could teach arithmetic in the first grade by counting objects that reveal no meaning either to the teacher or the children. On the other hand, I recall seeing a fine teacher, George Benner, who was stirring children's minds and hearts, begin his arithmetic lesson with an orange. To the lively imagination of teacher and class, however, it is no longer just an orange. It becomes a representation of the world and of a unified humanity. The teacher peels the orange — with drama. Its halves represent the hemispheres: the number "two" is introduced as the whole is parted. And finally the segments of the orange are disengaged, each one representing a nation. The segments are real and separate, yet the orange is clearly made to be one. Men are individualized, yet they should remain brothers. Such an arithmetic lesson can satisfy a child's heart as well as his mind. The teaching is simple and practical, yet it also has deeper levels of meaning.

The fairy tale is especially effective in satisfying a child's longing for experience that touches the heart. It opens him to inner beauty and the world's hidden meaning. While the teacher can utilize such stories for teaching reading, they also provide the basis for unlimited experiences in drawing, painting, drama, and dance. Fable and myth deal with the inward realities of human life; they awaken moral discrimination and foster dedication to the good. In the education of children of all backgrounds, fairly tale, fable, myth, and legend are an essential ingredient, a step toward the development of freedom.

Another step in the education of free individuals would be achieved through the training of the will, as we mentioned earlier. If the will is to develop, it must be based on a childhood regard for wholesome authority. The child should grow strong in the presence of teachers who are able to perform their tasks and able to say "no" when necessary. The teacher must serve as more than a passive guide; rather, he must be almost a hero, inspiring his students with enthusiasm and love for the day's labor. Such childhood experience will later support in a man the strength to stand up to his duty, to practice the self-control adult responsibilities require of him. If the experience of authority is missed in childhood, the possibility for self-direction in maturity become slim. The child wants outside authority as a model preparing him for the development of obedience to his own innermost promptings. He comes to a later self-discipline only through an earlier discipleship. Schools

should not attempt, in their striving for "democracy" in all things, to duplicate the politics of an adult world designed for far different purposes. Student control in education is not the answer to present problems; a nourishing education is more the way.

The final aspect of an education for freedom lies in the development of independent thought. Secondary schools and colleges must not be afraid to confront the ultimate questions: Who am I? Why am I here? What is the meaning of life on earth? It may well be that the most relevant challenge the student can face is the time-honored one of learning to know himself. He makes progress in this as he comes to understand the activities of mankind as he draws lessons from his encounters. Out of clear thinking he must determine where he ought to go and what he ought to do. The student must experience himself as both sacred and commonplace. His consciousness must expand until all about him comes alive and declares itself. The world is symbol, and the symbolic is to be penetrated. Life is to be known! When intuition joins intellect in the complete act of thought, a realization of the wonder, sacredness, and beauty of the earth becomes the joy of the free man.

Today it is vital that the militant weigh his actions. He must evaluate his passion. Action based on hatred or lust is obviously reaction. It is never free; it can never favor the cause of man. Buddha's words are as true today as when first spoken:

> He abused me, he beat me, he defeated me — in those who harbor such thoughts hatred will never cease.
>
> He abused me, he beat me, he defeated me, he robbed me — in those who do not harbor such thoughts hatred will cease.
>
> For never does hatred cease by hatred here below: hatred ceases by love; this is an eternal law.

The individual must understand his motives. His action must result from the balance of feeling and thinking if it is to be a forward step. Without such balance, confusion, frustration, and violence are inevitable. The conquest of one's lower self is the painful, laborious task of our time. It is also the gateway to the upward climb.

Let us understand that it is with clear thinking, permeated by love, fulfilled in consecrated action, that man can reach his moments of freedom. Today's man, heeding the voice of his better self, mastering life, can truly accomplish the quest for freedom begun so long ago. To fail in this quest is to miss the meaning of our time. To fail in this quest is also to guarantee individual and social disaster.

The Physics of Higher Education

Walter Glickman

More than a century has passed since the abandonment of a mechanical foundation to physical law, yet our root metaphors and the way our institutions function are still essentailly based on Newtonian physics. What is missing in education today is wonder, joy, aesthetic awareness, reverence, and moral sensibility.

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> To get America's children ready for the stiff competition on tomorrow's global battlefield of technology ... the most potent weapons are math and science literacy.... A study of professors at the University of Michigan and the University of California suggests America's young technology troops need to learn a whole lot more math at boot camp if they're going to be ready for a high tech workplace.[1]

A survivor of one of the death camps in Europe in the early 1940s reported seeing a baby murdered by a Nazi soldier. He noticed a book protruding from the SS officer's back pocket. It was a copy of Kant's *Critique of Pure Reason*. Now this officer had been educated in the Weimar Republic, a model of civilized culture. It had top-flight universities with outstanding faculties in philosophy, art, and literature — in what we call the humanities and the Germans call science of the spirit. Their "technology troops" were well versed in math and science; very competitive in the "global battlefield." Was there some flaw in their university system — a system not so different from our own? Here are the words of another survivor:

> My eyes saw what no person should witness. Gas chambers built by learned engineers. Children poisoned by educated physicians. Infants killed by trained nurses. Women and babies shot and killed by high school and college graduates. So I'm suspicious of education. My request is: help your students to be human. Your efforts must never produce learned monsters, skilled psychopaths, or educated Eichmanns. Reading and writing and spelling and history and arithmetic are only important if they serve to make our students human.[2]

How do we make our students human? I'm taking the position that making our students human is more important than making them competitive. This is not the mainstream position.

Educators argue about facts, knowledge, testing, mental skills, and critical thinking because their institutions are simply not geared up for stimulating qualities not so easily measured — wonder, joy, aesthetic awareness, reverence, and moral sensibility. And the mere mention of soul, religion, spirit, or holiness is enough to make an academic laugh or cough or choke. So I want to talk about the rise *and demise* of the mechanistic view that still permeates our culture, in the hope of providing a basis for a more humane educational system.

While focused on university education, the thrust of my argument applies to grade schools as well. I will argue that reverence and caring, even (bite my tongue) holiness, need not be scientifically unacceptable, and that the debate on what constitutes quality education needs to be drastically widened.

Our curricles are being driven by economic, military, and political interests. We are told that more technology is the answer to the problem: how to compete in the global marketplace. Meanwhile, meaningful work and meaningful life has been marginalized.

In many universities today, this debate centers around curricular reform — what courses should be offered and which of those — the so-called core courses — should be required. What are they talking about?

Curriculum is Latin for race. In ancient Rome it also referred to a race track; a *curricle* was a two-horse racing chariot and a *courser* was a sleek, spirited horse. The root meanings of our educational vehicles derive from racing. Wouldn't it make sense, before building superhighways for higher tech chariots, to ask where we are going, who's driving, what we win, why we're running? Are there better metaphors for the educative process than a horse race? Which ones would best serve in making our students human? Are we free to choose them?

The ad quoted at the beginning of this article goes on to say that the Mobil Corporation is sponsoring a program of "plant tours and frank talk with industry and government leaders" so "teachers get real-life examples of what students need to know today to fill our jobs tomorrow." Besides telling teachers what to teach, many corporations provide them with materials. Mobil offers a free video called *Polystyrene, Plastics and the Environment;* Exxon has a 1.6 million dollar teaching package on pollution. MacDonalds offers a program, hosted by Willie Munchright, on nutrition and good eating habits. While Proctor and Gamble's educational information reaches only 80,000 classrooms, Modern Talking Picture Service, a producer and distributor of "corporate educational materials," claims to reach 35 million students a year. One of its ads in *Advertising Age* shows a girl carrying books above copy that reads: "Modern product sampling can help you develop brand loyalty even before she becomes a shopper. To put your product in her hands call us...."[3] And then there's Channel One, a corporation that will "donate" video equipment to high schools in exchange for 12 minutes of required viewing time by the students. "News" will be accompanied by commercials.

And this "information" barrage is not limited to the private sector. It was reported[4] some time ago that Speaker of the House Newt Gingrich would return to the classroom, hoping to reach an "audience" of 200,000. "Marketing" would be handled by Gopac, Gingrich's political action committee. One restaurant chain has already contributed $25,000, and others might follow suit "if the course could incorporate some papers that indicate entry-level jobs need not be dead ends."

Our curricles are being driven by economic, military, and political interests. We are told that more technology is *the* answer to *the* problem: how to compete in the global marketplace. Meanwhile, meaningful work and meaningful life has been marginalized as we experience more poverty, alienation, drugs, crime, and pollution. Frustration and violence erupts not only in Bosnia, Rwanda, Gaza, etc., but in our streets and in our schools. Concerned educators do not have the resources to compete with the dominant agenda. Gingrich says he'll have guest lecturers address his class. "I'm going to allow Democrats," he is quoted as saying, "but not liberal ideas."

If I have not been successful in making the peril of our situation clear, consider Rudolph Steiner's comment on German education 13 years before Hitler: "It becomes ever more evident that the commercial and industrial magnates, by their position alone, have acquired the monopoly of culture."[5]

The war and racing metaphors, profit motive, and tunnel vision on goals still dominates debate in our own educational circles. The tone was set by the 1983 report by The National Commission on Excellence in Education. The report called "A Nation at Risk" stated:

> Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world.... If an unfriendly foreign power attempted to impose on America the mediocre educational performance that exists today, we might have viewed it as an act of war.[6]

"Excellence" is a key word throughout the report. But how can most students excel when the word means

to surpass, to outdo, to go beyond the average? Besides, as Albert Einstein writes:

> The desire to be acknowledged as better, stronger or more intelligent than a fellow being or fellow scholar easily leads to an excessively egotistic psychological adjustment, which may become injurious to the individual and the community.[7]

Nonetheless, it is through "excellence" in the use of reason, the report insists, that America's place in the world can be secured, "and our society will be prepared ... to respond to the challenges of a rapidly changing world."[8] That phrase has gotten a lot of mileage. A decade later, we read that a national curriculum "will help prepare students for a rapidly changing world. And who can argue with that?"[9] Philosopher Leonard Grob, for one:

> The challenges of modernity are less the economic and often narrowly defined social problems spelled out as the central concerns of *A Nation At Risk*, rather they are those enduring *moral* issues which come to challenge each and every age anew.[10]

It is these enduring moral issues that have fallen under the hooves of the mainstream educational debate. While no one can argue the necessity for knowledge, mental skills, and critical reasoning, a curriculum *limited* to those goals is unconscionable.

If that Nazi soldier happened to have read what was in his pocket, if he had gotten as far as the preface, he would have read these words: "Our Critique [of Pure Reason] is of very important use, if only we are convinced that there is an absolutely necessary practical use of pure reason (the moral use)...."[11]

In one of my recurring fantasies about that Nazi soldier, he's reading Kant's complete works. He's discussing it with his friends and professors. Critically. He's writing carefully referenced papers and getting A's. *What's missing?*

Before tuning or retooling our curriculums and the courses they cover, we have to get back to the real basics. Can morality be taught? Can goodness, kindness, and caring find a niche in our curriculums along with cognitive skills? *How do we make our students human?*

If we are serious about dealing with racial, national, and religious conflicts, with world hunger and disease, with allocating sane priorities for our limited resources, with maintaining loving bonds with our families and friends, we must reach beyond knowledge and technical innovation, beyond critical thinking, beyond creative thinking. We have to get beyond thinking. Education must not be limited to the brain. It must encompass the mind and the heart and the soul. And as uncomfortable as allusions to the human *spirit* may be, they have such a deep resonance for most of us that even the National Commission on Excellence in Education felt embarrassed enough to pay it lip service: "Our concern," they wrote, "goes well beyond matters such as industry and commerce. It also includes the intellectual, moral, and spiritual strengths of our people."[12] But this last sentence was never developed in the report, because in academic circles the "spiritual" is relegated to the periphery. This is certainly ironic, since in most circles the word "academic" is a synonym for peripheral.

The word *academic* also conjures up Plato's Academy, where academic subjects were taken quite seriously — competence in mathematics, for example, was an entrance requirement. But taken just as seriously were the teachings of Socrates, which included the examined life, the Good, the questioning of premises, and the pedagogical tool we know as Socratic dialogue. Unlike the Mobil Company and The National Commission on Excellence in Education, Socrates did not use a war metaphor for the educative process. He chose the metaphor of a midwife — one who draws forth (in Latin, *educare*). As Socrates told the jury at his trial:

> I go around doing nothing but persuading old and young among you not to care for your body or your wealth in preference to or as strongly as for the best possible state of your soul....[13]

By trying to enrich values through a spiritually based critical thinking, Socrates was seen as a threat to the rulers of Athens. It's not really surprising that he was executed for undermining the youth of the world's first democracy.

So Newt Gingrich's fears may be well grounded. A "liberal education" means drawing out, setting free. But, in the Socratic sense, a freedom that presupposes a sacred, moral, and *unpoliticized* core. The pre-Nazi Weimar Republic concept of *voraussetzunglose* (devoid of presuppositions) is a presupposition of our own institutions — particularly in the sciences — where we describe our work as "value-free." But if we are to make our students human, values cannot be ignored. As physicist Silvan Schweber writes in *Physics Today*:

> We must accept that the separation between the moral sphere and the scientific sphere cannot be maintained. The history of the present century makes clear that we must reject instrumental rationality, the notion that control and usefulness should be the overriding criteria guiding our behavior.[14]

Making distinctions is not new to western culture. The ancient Greeks delighted in distinctions and taught us to depend on them. Plato divided ideas from experience, Aristotle categorized plants, animals, and thought processes. But when rationality bloomed in the Renaissance, Rene Descartes established the mind–body split as the definitive worldview. By separating

res extensia from *res cogitans*, the outer from the inner, he laid the ground rules that ultimately settled the turf war between science and religion. The Church took the ephemeral — the moral, the spiritual, yielding an inanimate external world to the scientific institutions and the secularized universities. By splitting our minds from the world, Descartes induced us to make rigid dichotomies — *to draw distinct lines between aspects of reality*. But partitioning makes for an uneasy peace. Each of us, it seems, must wrestle with those established borders, particularly those that separate our spiritual and logical selves. And in that we are no different from the great thinkers who forged our current belief systems. Let's turn to some of this thinking to get an idea of the soil from which our educational institutions grew.

Classical physics

Isaac Newton was one of the greatest intellects of all time. He created an austere amoral world of empty three-dimensional space and absolute sequential time through which tiny bits of matter moved in meaningless but predictable smooth paths.

> This theoretical scheme is in essence an atomistic and mechanistic one. All happenings were to be interpreted purely mechanically — that is to say simply as motions of material points according to Newton's law of motion.[15]

> Such a law is an expression of ratio which is considered to be both *universal* and *necessary* in the sense that anything other than this form of ratio was not thought to be possible.[16]

Thus the rational became the mechanical. Descartes' *res extensia* became "The Newtonian World Machine."

The idea of the universe as a machine was extraordinarily fertile. Newton explained the paths of the planets, the motion of the tides, and the precession of the equinoxes. He predicted the path of a comet! His conception was truly brilliant. But it was never Newton's intention to identify the universe as a machine. In fact what he had done was to unify the laws of heaven and earth by showing that the falling of an apple and the rising of the moon are caused by the same *immaterial* attraction. He felt the concept of mass he discovered was a "divine property of matter." "God," he said, "endures forever, and is everywhere present; and by existing always and everywhere, he constitutes duration and space...." Absolute space was "the sensorium of God."[17] In short, the spiritual aspects of Newton's discoveries did not elude him; it was the temper of his times that made him isolate his elation and keep his spiritual self apart from the science it inspired.

And so, somewhat ironically, a robot-like universe became his legacy. In 1747, just 20 years after Newton's death, an essay entitled *L'Homme Machine* proclaimed:

> The term "soul" is therefore an empty one, to which nobody attaches any conception, and which an enlightened man should employ solely to refer to those parts of our bodies which do the thinking.... Let us then conclude boldly that man is a machine, and that the whole universe consists only of a single substance (matter) subjected to different modifications.[18]

The concept of independent mass points moving through an absolute space and time influenced a wide range of thinkers. Kant hard-wired space and time into the Western psyche. France, the leading light of the Age of Reason, produced the *philosophes*, prophets of reason, natural law, and progress. They saw themselves as "the Newtons of statecraft, justice, and economics." Laissez-faire economics culminated in Adam Smith's "world of atomistic competition ... a world in which each agent was forced to scurry after its self-interest in a vast social free-for-all."[19]

Despite strong opposition by Berkeley, Leibniz, Blake, Goethe, and many others, Newton's conception became the consensus reality. The rich metaphor of "world as machine" degenerated into an identity. Soon, thoughts and equations turned to brick and steel as the Industrial Revolution took hold.

At the time William Blake was writing *The Marriage of Heaven and Hell*, Charles Coulomb was explaining electrical phenomenon in Newtonian terms. An object, he said, carries an electrical "charge" that attracts (or repels) other charged bodies through empty space — just the way "masses" attract each other in Newton's gravitational law. Again, a purely mathematical interaction occurs between inanimate bodies separated by a void. For Newton and Coulomb, then, a grain of sand contained mass and possibly charge — but not as it did for Blake, a World.

In the early nineteenth century, the great experimental physicist Michael Faraday, a deeply religious man with little formal education, questioned the Newtonian scheme: If all we know of electric charges are the invisible forces they exert, why assume a material force bearer — a grain of sand too small to be seen, that carries the "charge"? Perhaps "atoms," "charges," "masses," are names we give to the centers of emanations of force. Faraday came to believe that invisible "lines of force" reached out in all directions from "charges." His attention moved from figure to ground. The notion of a field — a reality attributed to what Newton had thought an emptiness — began to take root.

Although many scientists found it difficult to believe in a nonmaterial reality permeating the space between

bodies, Faraday's idea had great influence, particularly on a young mathematical prodigy at Trinity College in 1852. This sensitive young man, an avid reader of Wordsworth as well as Kant, had experienced a vision that so disturbed him that he was moved to put it into verse. Cold reason appeared to him as a "mathematical Hag" ("hair of pen and skin of paper/Breath, not breath but chemical vapour").[20] He dreaded the loss of beauty and poetry, of being part of a learned crowd devoid of spiritual feelings. Reverence, he decided in the end, was the only saving grace:

> Worship? Yes, what worship better
> Then when freed from every fetter
> That the uninforming letter
> Rivets on the tortured mind,
> Man, with silent admiration
> Sees the glories of creation,
> And in holy contemplation,
> Leaves the learned crowd behind! [21]

Having, for the moment, settled his inner struggle with reason versus rapture, the young man, James Clerk Maxwell, proceeded to express Faraday's field concept in the four beautiful equations that bear his name.

The conceptual hinges of the Newtonian World Machine were coming undone. Einstein writes:

> For several decades most physicists clung to the conviction that a mechanical substructure would be found for Maxwell's theory. But the unsatisfactory results of their efforts led to gradual acceptance of the new field concepts as irreducible fundamentals — in other words, physicists resigned themselves to giving up the idea of a mechanical foundation.[22]

Maxwell's equations unified electric and magnetic phenomena and showed that electromagnetic forces, when stirred, billow out through space at the speed of light. Light itself, then, no longer regarded as a Newtonian particle, became conceived as electromagnetic fields in various rates of vibration. The rainbow was found to extend far beyond violet, to ultraviolet, x-rays, and further; far beyond red, to infrared, microwaves, and radiowaves. Maxwell's equations, essential for modern communications technology, also cleared the way for two of the great theories of the twentieth century: relativity and quantum mechanics.

More than a century has passed since the abandonment of a mechanical foundation to physical law. Einstein and others have rerooted our understanding of the world, yet our root metaphors and the ways our institutions function are still essentially based on Newtonian physics. Technical innovations come within a few years, but new ways of thinking may take a century or more to filter into all the cultural crevices. Since mechanistic philosophy has affected our lives so profoundly, it is not surprising that it still permeates our thinking.

K. Eric Drexler coined the term "nanotechnology" — molecular engineering that may lead to bacteria-sized computers. He speaks of ribosomes, constituents of living cells, as "genetically programmed machine tools that assemble small reactive molecules in complex patterns to form large molecular machines." Drexler puts the curricle before the horse when he writes "The molecular machinery of life demonstrates functions that will be important in nanotechnology"![23] But his thinking is representative. I just received a flyer from my son's future high school, headlined: *Meeting The Needs Of Technology For The Future.* Technology's needs?

Education must not be limited to the brain. It must encompass the mind and the heart and the soul. And as uncomfortable as allusions to the human spirit may be, they have a deep resonance for most of us.

Formed in an industrial age, modeled on factories, whose needs do our schools address? It is not just a matter of churning out students to keep the wheels of commerce turning. It's that analysis and compartmentalization are considered not only essential *but sufficient* for understanding. It's that feeling has no place, validity is determined exclusively through measurability, and moral and aesthetic *sensibilities* have a tough time getting their foot in the door. Listen to the tone of some educational journals.

Educational and Psychological Measurement has an article on moral development. Its title is "The Moral Development Scale (MDS): A Piagetian Measure of Moral Judgment." Here's an excerpt:

> One difficulty common to research on both Piaget's and Kohlberg's theories has been the unavailability of standardized, easily administered operational measures ... [but it is possible to measure] distributive justice reasoning that is reliable and valid resulting in standardized assessment and objective scoring procedures.[24]

In his article in *Educational Research,* Terence Clifford-Amos explained how he taught the section in Joyce's *Portrait of the Artist As A Young Man,* where Stephen Dedalus says the conditions needed to achieve a state of beauty are "wholeness, harmony, and radiance":

> The task was to analyze the pedagogical structure in terms of sequencing and organization of concepts and to apply appropriate correctives.[25]

Give us a break, Mr. Clifford-Amos! Wholeness, harmony, and radiance top a long list of what cannot be understood by analysis. Educators naturally aspire to be scientific, but since twentieth century physics has shown the limits of analysis, it is imperative that educators assimilate these ideas.

Wholeness

The complement to analysis is synthesis. Seeing patterns as a whole — the mode of perception that enables us to appreciate a symphony or recognize a face — is a basic skill, a fundamental educational requirement. The eminent physicist David Bohm says: "Though quantum theory is very different from relativity, yet in some deep sense they have in common this implication of undivided wholeness."[26] It is this aspect of perception and understanding that needs nurturing.

The rational mind is a precious commodity. Clearly, analysis and categorization should *not* be discarded. But as we shall see, the validity of distinct constructs is limited and ultimately dangerous. Since "undivided wholeness" cannot be analyzed or objectified, we must learn — and teach — new tools. Reason and knowledge, although absolutely essential, *are totally inadequate.*

The perception of undivided wholeness is stimulated by cultivating the imagination. Imagination is "more important than knowledge," said Einstein; "the great instrument of moral good," said Shelly. How can we inspire it in our students?

What inspired the imagination of the greatest physicists, what inspires imagination in general, is beauty, joy, harmony, wonder.

And so to be effective as educators, we must concern ourselves with stirring the soul as well as the mind. Einstein, who was no slouch when it came to rational thinking, also spoke of:

> A sort of intoxicated joy and amazement at the beauty and grandeur of this world, a world for which man can form but a faint notion. It is this joy that gives true scientific research its spiritual sustenance.[27]

And Niels Bohr, who spearheaded the creation of quantum physics, said:

> Quantum theory ... provides us with a striking illustration of the fact that we can only speak of it in images and parables ... when it comes to atoms, language can be used only as in poetry.[28]

"It is more important to have beauty in one's equations than to have them fit experiment,"[29] said Nobel physics laureate Paul Dirac. And "the truly religious conviction that this universe of ours is something perfect...," said Einstein, is "a strongly emotional one ...."[30]

The boundary we impose between the academic and the emotional, between the cognitive and "the truly religious," has become so rigid our students rarely get to feel that perfection. We have to let them know the universe is wholesome as well as rational. Just as musicians must get beyond technical mastery of their instruments, students have to get beyond facts and categorization. They have to learn to feel the harmony of the whole. That feeling is a fundamental requirement. Einstein spoke of it in these words:

> The individual feels the sublimity and marvelous order which reveal themselves both in nature and in the world of thought.... He wants to experience the universe as a single significant whole.... *In my view it is the most important function of art and science to awaken this feeling and keep it alive in those who are receptive to it.* [author's emphasis][31]

But Einstein also said:

> *The most important human endeavor is the striving for morality in our actions.* [author's emphasis] Our inner balance and even our very existence depend on it. Only morality in our actions can give beauty and dignity to life.
>
> To make this a living force and bring it to clear consciousness is perhaps the foremost task of education.[32]

If this is so, and it certainly seems *reasonable*, the purpose of science, art, education, of all human endeavor, is not to provide us with more technology or make us more competitive. Its purpose is to make us reverent, to make us whole, to make us human.

I believe Einstein is an icon today because people intuitively sense that his deeply ingrained moral sense was inseparable from his scientific accomplishments.

> It is the moral qualities of its leading personalities that are perhaps of even greater significance for a generation and for the course of history than purely intellectual accomplishments. Even these latter are, to a far greater degree than is commonly credited, dependent on the stature of character.[33]

"The physical and the moral do not exist side by side." said Rudolph Steiner. "No, *they are only different aspects of something that is in itself one.* [author's emphasis] "[34] It is precisely this sort of unification that lies at the core of Einstein's Theory of Relativity.

Einstein assumed, like Newton and Descartes, a real, objective world whose laws are independent of any observer. But he discovered, to his amazement, that some basic scientific notions — time, space, mass, energy, and field — have no reality independent of the state of motion of an observer. The familiar world is not objective. What *is* objective, is not familiar: the abstract notion of "space-time," a seamless four-dimensional fusion of the two. All of Newton's separate concepts

turn out to be "different aspects of something that is itself one." Mass and energy, like space and time, are inseparable. Material bodies are warps, ripples, in a fabric woven of space-time. All the stuff of our world, from atoms to stars, are not separate material entities, but aspects of the "space" that compose and unite them. Inspired by Faraday's original idea, Einstein tried to weave all electromagnetic phenomena into the fabric of space-time. He tried for 30 years, until his death, to find a unified field theory. Despite his failure to express it mathematically, his insight persists:

> According to the [field theory of matter], a material particle such as an electron is merely a small domain of the electric field within which the field strength assumes enormously high values, indicating that a comparatively huge field energy is concentrated in a very small space. Such an energy knot, which is by no means clearly delineated against the remaining field, propagates through empty space like a water wave crossing the surface of a lake; there is no such thing as one and the same substance of which the electron consists at all times.[35]

> There is nothing in the world except empty curved space. Matter, charge, electromagnetism, and all other fields are only manifestations of the bending of space. *Physics is geometry.*[36]

Or as the Mahayana Buddhists say: "Form is emptiness and emptiness is indeed form."[37]

The quantum theory, which evolved during the first third of the twentieth century, displayed an even more fundamental unity. When two "things" interact quantum-mechanically, they form a single "entangled entity." Niels Bohr, the major architect of quantum physics, like Einstein, was still groping for an explanation days before his death. "If you have some things...," he said, "they are so connected that if you try to separate them from each other, it has nothing to do with the situation."[38] But let's back up.

In 1904, it was assumed that light was a wave and the newly discovered electron was a particle. But a year later, Einstein gave a convincing argument that light could be conceived as a particle. And some years after that, electrons were successfully described as waves. This so-called wave-particle paradox was deeply disturbing. The rug of reality had been pulled away. How can something *be* the opposite of itself? Are there limits to our mental constructs?

In 1927, Werner Heisenberg formally specified those limits. According to Heisenberg's Uncertainty Principle, it is impossible to determine simultaneously such quantities as location and movement. There is a limit to precision. The act of probing an electron to see what it "is," alters what it "is." Niels Bohr generalized Heisenberg's formulation into what he called the Principle of Complementarity: reality presents one of two apparently conflicting aspects of itself at a time. The act of seeing one aspect hides its "opposite." There is no objective reality; we can discover truths whose opposites are also truths, but we cannot discover "the" truth. What we conceptualize (wave or particle, free will or determinism, organism or mechanism, whole or part) is a consequence of our mode of inquiry. What's "out there" depends on how we look at it.

When Bohr visited China in 1937, he found in Taoist thought the same essential idea. He adopted for his coat of arms the *t'ai ch'i* symbol of *yin* and *yang*, with the words *contraria sunt complementa* (opposites are complementary). He strongly believed that the Principle of Complementarity had wide implications and that eventually *it would provide spiritual guidance by being taught in schools.*[39]

Looking, for a physicist who is interested in a quantitative description, means measuring. But what is a "measurement"? Orthodox quantum theory has no words to explain exactly what occurs in the passage from the strange world of quantum reality to the more comfortable domain of sense reality. The nature of the bridge from the "world out there" to our conscious understanding is not clear. Descartes' premise turns out to be invalid. In Heisenberg's words:

> The common division of the world into subject and object, inner world and outer world, body and soul, is no longer adequate....[40]

But most physicists today are not concerned with such implications of their ideas. They are concerned with predictive power. This is understandable considering quantum mechanics is one of the most successful of scientific theories. Its predictions are backed by experiment to a high degree of accuracy and technological spin-offs (nuclear energy, lasers, computers, cat scans, digital displays, etc.) have transformed our lives. But there is still no consensus on what it *means*.

And yet, some of the great physicists sound like astronauts returning from space. Their discoveries stirred them so deeply that their words seem more religious than scientific. Erwin Schrodinger put it this way:

> Thus you can throw yourself flat on the ground stretched out upon Mother Earth with the certain conviction that you are one with her and she with you.[41]

Einstein chose these words:

> A human being is a part of the whole, called by us the "universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest — a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection to a few persons nearest to us. *Our task must be to free ourselves from this prison by widening our*

> *circle of compassion to embrace all living creatures and the whole of nature in its beauty.* [author's emphasis][42]

From wholeness to morality

This superposition of "scientific" and "religious" consciousness forms a basis for connecting what is whole to what is moral.

The word religion contains the root *lig* (found in ligament and league; the German word for league is Bund, same root as bind, band, and bond). So we can think of religion as a binding together again, a reunification. Similarly, whole, holy, and heal derive from the same root *hal*.

Our modern societies, stripped of the ties that bind, are in vital need of healing. Awareness of relationship opens a path from seeing whole to being kind, to ethical behavior and responsibility.

But responsibility involves response, and to respond, one needs to be "in touch" with an other. There must be a connection, a sense of what's between. Response, like dialogue, like field, is a speaking between. Particles respond to each other through the field that forms them. In isolation, there can be no response.

Kindness contains the root kind, like kin, one of my own. The German word *kind* (child) similarly expresses that my offspring is one of my own, my *relation*, a being inseparable from me. You are one of my kind, we are family, we are one. Kindness implies recognition of relationship. A test of our civilization is how far we can extend such kinship or "circle of compassion."

Is it possible for an individual to feel for both herself and for all others of her "kind"? Is there a conflict between self-centeredness and altruism? Or, as Spinoza believed, are our own interests inseparable from those of others?

Individuals, like atoms (both words mean "that which is indivisible") are both separate and not separate. They are "entwined entities." There must be a dynamic tension between concern for ourselves and concern for others — just as a poetic metaphor vibrates between similarity and difference, or as our conception of a subatomic entity fluctuates between particle and field. When we see so-called conflicts as complementary, as Niels Bohr did, the creative tension produces a harmony and a unity. Hegel's notion of thesis and antithesis leading to synthesis expresses the same idea. So does Buber's I–Thou relationship.

M . H. F. Wilkins applies this idea to conflict resolution — an endeavor motivated by concern.

> The idea that the conflict might be ended by agreement or reconciliation is unattractive because it is only thought of in terms of a degrading and impractical compromise with evil. Such attitudes are the result of mechanical thinking. We see the world as being like a giant mechanism of parts which interact but remain fixed in nature. But if we see the components of the world changing their nature as they interact, and changing their mode of interaction, creative and unforeseen possibilities may be opened up.... We need to escape from the clear, but somewhat limited, thinking which takes place in the cortex and to let the mind regress creatively into intuitive and imaginative activity. Then, as in all creativity, the results of such free play can be examined critically by the intellect. Dialogue encourages a free movement of mind and is, of course, essential in conflict resolution. In dialogue, each mind learns from the other. The thinking of both parties unites and helps to create, in effect, one common mind....[43]

Differences are negotiable; boundary lines can be altered or erased.

But new ways of thinking, like new ways of seeing, do not come easy. The first impressionist painters were vilified by the critics. These painters, breaking with the prevailing tradition, used little blobs of color to suggest a scene that the viewers themselves helped bring into view — like Seurat's pointillism or pixel imaging on video display systems. Camille Pissarro, one of the early Impressionists, described his technique this way: "Forget the objects you have in front of you, a tree, a field, etc. Merely think here is a little square of blue, here is an oblong of pink, here is a streak of yellow...."[44] Long after the Impressionists were accepted as major contributors to painting, "painting by numbers" kits became popular. All you had to do was put the labled color within the boundary lines provided. The paintings that emerged were for the most part awful. What they lacked was a sense of the whole. Coleridge's criteria of beauty — unity in variety — was violated. The blobs of color may have been placed correctly, but they didn't inform each other. There was no relationship, no harmony, no life, no soul. Compared to the canvases of Monet, Cezzane, or Van Gogh, they were ludicrous.

And what of us who paint with lectures and discussions and reading assignments and exams? How do our canvases turn out? Do the patches of knowledge we apply inform each other? They didn't in the German universities under the Weimar government.

Think again of that Nazi officer reading Kant's *Critique of Pure Reason*. His analysis of ethical behavior didn't inform his actions with other human beings, and he seemed to be unaware that it *should* have. His education, detailed and rigorous as it may have been, lacked soul and meaningful harmony.

Or consider Dr. Joseph G. Hamilton, a neurologist at the University of California Hospital who in 1945 began injecting "suitable patients" with "many times the so-

called lethal textbook dose" of plutonium without their knowledge, and who by 1950 was seeking "healthy human volunteers to inhale near-lethal doses of radioactive aerosols" — conceding that his experiment had "a little of the Buchenwald touch." The University of California — by no means an atypical institution — also supported human radiation experiments in a county-run home for the aged in San Francisco.[45] Can our educational system claim moral superiority to that of the Weimar Republic?

Our insular categories must be taught in such a way that they inform each other. Fragmenting the world is dangerous. Alexander Pope, well aware of the brilliance of Newton's vision, was also aware of its shadow. The Newtonians, he warned,

> see Nature in some partial narrow shape,
> And let the Author of the Whole escape....
> Religion blushing veils her sacred fires, And unawares Morality expires.[46]

But post-Newtonian physics offers us a healing analogy. If elements of our world (physics, poetry, electrons, people) are viewed as warps in a field, or "entangled entities," it becomes more difficult to think of another as alien. If we could "feel," in Einstein's words, "the harmony of the whole," and know, from our earliest schooling, that separation into parts is a convenience not a truth, Apartheid would be more difficult to *conceive*, much less tolerate.

Twentieth-century physics suggests that separations (waves/particles, space/time, matter/energy, observer/observed, part/whole, me/you) are cultural conventions, real only within limits. If the universe is an undivided whole, we are, scientifically speaking, all related.

The sole source of all value judgments, says C. S. Lewis, derive from the *Tao*, "our duty to do good to all men is an axiom of Practical Reason."[47] But reason is not the only route to Kant's Categorical Imperative. We should care for each other because we are each other. There is a direct, *felt* connection linking wholeness, relationship, kinship, kindness, caring, and responsibility, which of itself justifies raising morality to the status of a postulate. And of course we are not speaking of a politicized morality, but one based on love and identity. "All that brings out the significant resemblances between men," wrote Freud, "calls into play this feeling of community, identification, whereon is founded, in large measure, the whole edifice of human society."[48] The moral imperative is an act of faith. Of the many lessons to be drawn from modern physics, let us *choose* one that complements the great religious and moral teachings of our species. Let us embed morality, ethics, caring, and love into our educational systems simply because they provide a means for making our students human.

Individuals, like atoms, are both separate and not separate. They are "entwined entities." There must be a dynamic tension between concern for ourselves and concern for others — just as a poetic metaphor vibrates between similarity and difference, or as our conception of a subatomic entity fluctuates between particle and field.

How do we do this? For starters, by accepting the legitimacy of imagination, feeling, and interrelationships. By fostering intuitive, creative frames of mind and developing a contemplative consciousness that provides meaning and value to guide our rational modes of thinking.

For many centuries, Euclidean geometry, algebra, Latin, and Greek were taught to hone the rational mind. Can we perform a similar function for the creative mind? What can we teach to awaken the feeling of holism, "and keep it alive in those who are receptive to it"? Metaphoric thinking would be one option.

Metaphors

Why bother with a metaphor when you can use a well-written statement or equation? *Sometimes you don't want clarity*. Metaphors help erase boundaries, free up feelings, form unexpected bonds. A metaphor is a carrying between or beyond, "a condensed and unexpected analogy."[49] Aristotle, a major force in transforming *logia* (from *analogia*) into our modern concept of logic, also wrote:

> But the greatest thing of all is to be a master of the metaphor. It is the only thing which cannot be taught by others [sic!] and it is also a sign of original genius, because a good metaphor implies the intuitive perception of similarity in dissimilar things.[50]

And speaking of a master of the metaphor, why did Shakespeare say "When fourty winters shall besiege thy brow And dig deep trenches in thy beauty's field...." when he could have said "when you get older...."? Because, recognizing the richness of reality,

he wanted to do more than facilitate intellectual understanding. He wanted to delight us, move us, make us catch not just our breath but our *pneuma*, our *ruach*, our spirit. He literally wanted to animate us. Such poetic imagery allows us to climb inside of an idea or concept and explore it from a new perspective. The metaphor sounds a note but elicits a chord (accord?). It raises the stakes of the experience beyond the merely rational. There is a tension, a movement from one meaning to the other, like a pulsating field between electrodes. As the old conception and the new fluctuate in the nostrils of our mind, we get a whiff of the whole. Am I mixing metaphors? The metaphor is more concerned with process than conclusion. It risks failure, it breaks new ground — like a Zen koan.

> The metaphor's dynamic appears to engender the perception that the metaphor means all the possible similarities between its terms and none of the similarities. The categorical or conclusive mind set which is the staple of our consciousness is momentarily canceled out.[51]

John Briggs extends the notion of metaphor to what he calls a reflectaphor — "that which carries between and beyond by a constant bending back." It "mirrors the apprehender of the reflectaphor so that ... the observer becomes revealed as the observed."[52] As in Heisenberg's Uncertainty Principle or Basho's haiku:

> One's life, a single
> dewdrop.
> Its lonely savor.[53]

Through a network of such mirroring, the whole may be savored.

Lets examine such an extension of metaphoric bonding by considering the ancient Greek word *logos*. What I would like to suggest is that logic, rationality, reason, metaphor, beauty, intuition, Divinity, communication, relationship, and so on, are reflectaphors, hopelessly entangled entities.

Logos is a word associated with Heraclitus of Ephesus, a contemporary of Pythagoras, who lived some six centuries before the birth of Christ. Needless to say the word loses something in translation. Reason, understanding, judgment, wisdom, have been suggested. "Wisdom is one thing." said Heraclitus. "It is to know the thought by which all things are steered through all things."[54] He also said, "It is wise to hearken not to me but to the *logos* and to confess all things are one."[55] The word was also perceived as Divine Speech — It was translated as "Word" in the opening lines of the Book of John (In the beginning was the Word, and the Word was with God, and the Word was God). It has been compared to the *Tao* in Taoism. In 25 centuries, the little word has had an interesting journey, but in recent times its divine associations have been shed, like an out-of-style garment. It has come to mean the rational (as opposed to the divine) principle that governs the universe.[56] It has been subdued into logic. Reduced to "the study of," (as in biology, psychology, etc.) it trails along like a chained captive. But it's in etymology too — *etymos* means real or true — and as physicist David Bohm writes:

> It is useful first to go into the roots of words, which may show deeper and more universal meaning that is still implicit, though it has been covered up in the routine usage developed out of tradition and habit. The word "reason" is based on the Latin *ratio*, which in turn comes from *ratus*, the past participle of *reri*, meaning "to think." This has further been traced back, though somewhat speculatively, to the Latin, Greek, and Indo-European meaning "to fit in a harmonious way." With all these meanings in mind, let us consider the word "ratio." Of course we may have a simple numerical ratio as proportion. It is well known that in ancient times it was quite common to relate harmony, order, and beauty to such ratios (e.g., in music and art). But ratio actually has a much more general qualitative meaning which can be put: As A is related to B, so C is related to D.[57]

Or, as Newtonian physics is a special case of Einsteinian physics, so logic is limited logos, so reason is restricted metaphor.

Beauty has been defined as "a word of God."[58] Is it then akin to *logos* (the Word of God)? Can the Divine be at odds with the rational? "The harmony of the universe is neither mechanical nor psychical," said mathematician Hermann Weyl, "it is mathematical and divine."[59] "Science without religion is lame," said Einstein, "religion without science is blind ... there exists between the two strong reciprocal relationships and dependencies."[60]

Free play with metaphor reveals hordes of similar unsuspected relationships, showing, in Heraclitus' words, that "what is at variance agrees with itself."[61] But as Einstein observed, making creative connections has never been a high educational priority:

> Would Faraday have discovered the law of electromagnetic induction if he had received a regular college education? *Unencumbered by the traditional way of thinking*, he felt that the introduction of the "field" as an independent element of reality helped him to coordinate the experimental facts.[62]

Faraday's field concept, like any creative act, had to break constraints. Let's reflect on this "field" again.

Shakespeare, in the lines quoted earlier, saw the beauty of a face as a field — a space, a ground, that is bare but fertile. Faraday used that *same* field metaphor for electric and magnetic forces. Martin Buber used it in his interpretation of Socratic dialogue, and it applies to the educative process as well. Pedagogies must be centered in what Buber calls "the Between — *a space defined*

by lines of creative tension stretching between students and teachers ... who regard one another as full persons."[63]

Or in the words of brain scientist D. M. Mackay:

> Once the barriers to fully reciprocal communication are down ... a specially interesting configuration becomes possible, in which the information-flow structure that constitutes each supervisory system *interpenetrates* the other and *the lines of flow from each return by the way of the other*, so that the two become one system for purposes of causal analysis.
> ...There are "interaction terms" as a physicist would say, in the joint state-equation, which prevent it from a uniquely determinate solution for either, even if the physical systems concerned were as mechanistic as pre-Heisenberg physics pictured them.[64]

So a course on metaphors illustrates how any open-ended course can promote a sense of the whole as it winds and twists in unpredictable paths that wiggle their way through all disciplinary fields. We can beat our curricles into ploughshares. And the rows don't have to be straight.

Chaos

Another scientific revolution has arrived. It is known as Non-Linear Dynamics, or Chaos. The following lines are from the prologue to James Gleick's *Chaos*:

> Chaos breaks across the lines that separate scientific disciplines. Because it is a science of the global nature of systems, it has brought together thinkers from fields that had been widely separated.... Chaos poses problems that defy accepted ways of working in science. It makes strong claims about the universal behavior of complexity. The first chaos theorists, the scientists who set the discipline in motion, shared certain sensibilities. They had an eye for pattern, especially pattern that appeared on different scales at the same time. They had a taste for randomness and complexity, for jagged edges and sudden leaps. Believers in chaos — and they sometimes call themselves believers, or converts, or evangelists — speculate about determinism and free will, about evolution, about the nature of conscious intelligence. They feel they are turning back a trend in science toward reductionism, the analysis of systems in terms of their constituent parts: quarks, chromosomes, or neurons. *They believe they are looking for the whole.* The most passionate advocates of the new science go so far as to say that *twentieth century science will be remembered for just three things: relativity, quantum mechanics, and chaos. Chaos,* they contend, *has become the century's third great revolution in the physical sciences.*[65]

Like relativity and quantum mechanics, Chaos breaks strongly with the Newtonian worldview. Chaologist Joseph Ford defines his new "field" as "systems liberated to randomly explore their every dynamical possibility"[66] — words that apply to open-ended courses as well.

A so-called chaotic system does not proceed along a definite prescribed linear path, but in random jerks and spastic jumps. Before computers, dealing with non-linear systems was just too complicated. The calculations were beyond reach and so the phenomenon was basically ignored.

A linear process is one whose outcome is predictable. It is described by relatively simple (linear) equations that have the advantage of being solvable. A non-linear system contains feedback loops that prevent the output information from being calculated by the input. So when the wind speed increases, for example, a flag's ripples get proportionally deeper. But at some higher speed, the flag begins to snap wildly, then tear. It has become a chaotic system. But this appearance of randomness is not totally anarchistic. When running water exceeds a certain speed, the flow becomes turbulent, acquiring an order and beauty of its own, as in a babbling brook or a waterfall. *It is impossible to neglect the aesthetic element embedded in chaotic systems.* Think of the randomness of falling leaves, the patterns of stars, tree branches in a winter sky, even the patterns of history. The complimentarity here is inescapable — in order there is chaos; in chaos, order.

The onset of Chaos is ubiquitous and transdisciplinary. The patterns that arise reveal connections totally unforeseen a few decades ago — a gold mine of reflectaphors. Not surprisingly, it is of great interest to people working with ceramics, tiles, wallpaper, stained glass, diatoms, starfish, and flowers. But engineers, too, find non-linear dynamics useful.

Exactly when a metal hull or seal will break (a situation mathematically known as a "catastrophe") is unpredictable. And, according to engineers who have studied actual shipwrecks, "the linear approximation is usually worst when things are about to fail."[67] How can Chaos theory be of help?

> The answer lies in "universality."... The power of chaos theory is embodied in this concept.... Using such holistic techniques, we are beginning to understand many of the features.... Good engineering demands that engineers have an intuitive feel for how their designs behave, rather than relying on a set of numbers. The study of the shapes of the underlying fractal structures and the rules that govern their evolution can provide such a deeper understanding.[68]

Cardiologists studying a heartbeat as it strays from regular to eurythmic, to erratic fibrillation find similar catastrophe patterns. And these are also similar to "transient phenomenon" found in weather prediction, phase changes, stock market fluctuations, population growth — and the learning process.

Educational theorists have found much evidence that supports a non-linear model of how students learn.

> Suffice it to say here that recent research on learning clusters around a "constructivist" model, one that, in contrast to the positivist's linear, additive view of learning, suggests that the learners construct knowledge by applying what they already know.... It has become a truism of the assessment movement that feedback is essential.... [We should] adopt a holistic approach: consider feelings, attitudes, and values, not merely cognitive indicators. Assessment calls for a wider view of student learning and development — a look at outcomes that transcend individual courses.[69]

One particularly jagged branch of deterministic chaos has caught the public eye. The irony in its discovery sounds like a grade B science fiction movie: As the juggernaut of mechanistic philosophy quickens its pace, a seed of transformation emerges. Not from some shaman in a South American rainforest, but from the very icon of global corporate mechanization — a giant institution bearing the Pynchionesque name of International Business Machines Corporation.

Benoit Mandelbrot was a mathematician, "sheltered" by IBM, who "confronted problems by depending on his intuition about patterns and shapes. He mistrusted analysis, but he trusted his mental pictures."[70] Mandelbrot discovered endless layers of chaotic relationships folded into a simple equation — a quadratic we used to solve in high school. Unraveling the skein by feeding back solutions into the equation thousands upon thousands of times, he was able to conjure up on his screen the crude image now seen in much better resolution on posters, calendars and T-shirts — that odd-shaped blob known as the Mandelbrot Set.

Zooming in on the "outline" of his set, Mandelbrot noticed endless wiggles, inlets, and peninsulas. He could zoom in forever and still not be sure which points belonged inside the set, and which ones belonged outside. The set was bordered by an edgeless edge. To describe such an ephemeral borderline, he coined the word fractal (from the Latin *fractus*, meaning broken, irregular).[71] If borders can be regions in ferment rather than points standing passively "in line," is "the creative edge" such a border? Is the line we draw between any two entities, concepts, or disciplines fractal as well? Mandelbrot had discovered "a totally new world of plastic beauty ... a new mathematical and philosophical synthesis" transcending completely the limitations imposed by Euclid and Newton.[72]

Euclidian geometry conditioned us to certain smooth shapes that the scientific revolution of the seventeenth century adopted wholeheartedly. Galileo saw projectiles move in parabolas. Newton saw apples and moons following elliptical paths. The conception of a smooth continuous line was necessary for Newton's invention of calculus, and calculus was essential to his theories of motion and gravity. But this conception did not survive the computer revolution. Mandelbrot declared "A manifesto: there is a fractal face to the geometry of nature."[73] Gert Eilenberger writes:

> Why is it that the silhouette of a storm-bent leafless tree against an evening sky in winter is perceived as beautiful, but the corresponding silhouette of any multipurpose university building is not, in spite of all the efforts of the architect? The answer seems to me, even if somewhat speculative, to follow from the new insights into dynamical systems. Our feeling for beauty is inspired by the harmonious arrangement of order and disorder as it occurs in natural objects — in clouds, trees, mountain ranges, or snow crystals. The shapes of all these are dynamical processes jelled into physical forms....[74]

Besides liberating us from linearity, computers now make possible the nearly instantaneous ordering of trillions of bits of text, opening a near infinite number of possible relationships. In the realm of hypertext, bits of information have no fixed order and feedback loops are a natural part of the process. How does this apply to university education?

Universities are houses divided, cubbyholed into disciplines, departments, majors, programs, schools, courses — what Aldous Huxley called an "organized series of celibacies" which,

> live in their monastic cells, apart from one another and simply do not intermarry and produce the children that they ought to produce. The problem is to try to arrange marriages between these various subjects, in the hope of producing valuable progeny.[75]

Despite the fact that students take several courses at a time and may choose electives, a university curriculum is essentially linear, a series of preplanned paths, like strands of pearls. The linear paradigm, what Mandelbrot called "the tyranny of the straight line," masks interrelationships, feedback loops, and the fractal nature of disciplinary borders. What is needed is not so much a change in curricular elements, but a change in how we see and use them. In Huxley's image, hypertext could play the role of marriage broker.

Courses, lectures, theater presentations, dance recitals, art exhibits, discussion groups, seminars, sports, exercise, writing workshops, books, tapes, CDs, computing facilities, health services, student government and media, cooperative internships, clubs, events in the local community, the city, and so on — consider these elements as hypertext. Then no correct arrangement is presumed. Pathways through such a network of offerings are virtually infinite.

The Hindu God, Indra, was said to have a wondrous set of pearls; in each pearl, all the rest could be seen. It is this Indric net, not separate strands of pearls, that bring the quantum universe to mind. Heisenberg wrote:

> The world thus appears as a complicated tissue of events, in which connections of different kinds alternate or overlap or combine and thereby determine the texture of the whole.[76]

Chaos theory provides a metaphor for interdisciplinary education as well as providing a new perspective for entwined entities. The lines we draw between aspects of our experience are infinitely delicate and breathtakingly beautiful — which suggests another course for the contemplative mind.

Earthscience

When I think of light in its photon guise, I picture it as a ball. But it's not a ball. Nor is it a wave nor both nor neither. *Its reality pulsates between conceptual polarities.* We should not expect to be able to isolate a piece of it. In the words of physicist Arthur Zajonc, "Try though we may to split light into fundamental atomic pieces, it remains whole to the end."[77] In the words of Lao Tsu: "The universe is sacred.... If you try to hold it, you will lose it."[78] Perhaps our study of the earth can benefit from these insights.

Several times I have mistaken satellite photographs of the earth for a soap bubble. Certainly the sight of our home planet against the blackness of space — a defining image of our time — is awesomely beautiful. I heard that Dostoyevsky said that only beauty can save the earth. Maybe he knew something we didn't. Does beauty affect our interpretation and understanding of the world? Should it? What about the names we give to things? What are the relative connotations of spherical, global, planetary, earthly?

How do we study the earth? What model do we choose? The greatness of Newton and Einstein stemmed from their ability to question presuppositions that were "so much a part of the unconscious general background that they were, in effect, taken to be truths, rather than presuppositions."[79] What presuppositions have we brought to bear? If wholeness, holiness, and the sacred have been banished from academic discourse, the "truths" we accept may be suspect.

The generally accepted discipline for the study of our planet is called geology. The etymology of that word, stirs up (for me) "The Word of the Earth" or "earthspeak," and so implies a deeper geology. I'm sure the earth spoke to Dostoyevsky. Maybe it arranged to have its picture taken by us from afar so it could save itself by its beauty.

In 1785, James Hutton, "the father of geology,"[80] delivered a lecture to the Royal Society of Edinburgh in which he expressed the belief that the earth was alive and should be studied as physiology. Needless to say, the Newtonian worldview overwhelmed Hutton's and the earth was treated like any other Newtonian particle. But in the words of Hermann Weyl

> The quantum theory is called upon to bridge the gap between inorganic and organic nature; to join them in the sense of placing the origin of those phenomena which confront us in the fully developed organism as Life, Soul, and Will back in the same original order of nature to which atoms and electrons are subject.[81]

Critical thinking implies questioning premises. The metaphor of "earth as mother" speaks to me. *You* don't have to adopt a belief that the earth "lives," but you might want to try it on, like a sweater, just to see how it *feels*. You don't have to buy it. Belief, remember, whether in God or world machines, does not stem from reason, but from love. Besides, whether or not the earth *is* alive is scientifically untestable. Perhaps the true "test" of a premise is how effective it is in making us human.

Let us embed morality, ethics, caring, and love into our educational systems simply because they provide a means for making our students human.

Allowing ourselves to be seduced by the notion that entities are entwined and boundary lines fractal, we can conceive of the earth and ourselves as one "being," in the sense we share an inseparable existence. Never mind whether or not a premise, be it mechanical or organic, is "true." The sphere we inhabit can, like a field or a metaphor, range or pulsate between notions of a dead round rock and the Sacred Mother of us all — just as a person can be *felt* as a living soul or *measured* as a complex machine. The notions are complementary. What needs emphasis today, is the felt, living image, *because that particular presupposition offers more hope of making our students human.*

How would the predominant view of a sacred earth affect mining, whaling, pollution, agriculture, plutonium production, the real estate business, nationalism, and war? Surely such a belief system threatens not just the economic, political, and military interests that drive our educational chariots but also the security of a long-held reality structure. The loosening of old beliefs, however, may be necessary for our continued existence. So we must broaden our children's conception of the sphere we live on, allow them the fulfillment of identifying themselves with their planet rather than what George Orwell called "the lunatic modern habit of

identifying oneself with large power units and seeing everything in terms of competitive prestige."

Despite its diminished validity, the mechanistic view remains entrenched. An insatiable hunger for measurement, money, knowledge, progress, and control is making us blind. Our machines have grown so large we no longer perceive them as such. Military research centers like Los Alamos and Livermore have taken the legitimate need for defense and manufactured a worldwide assemblage of weaponry that can destroy us all hundreds of times over. Hannah Arendt, speaking of policy makers in the Pentagon in 1972, wrote:

> They were not just intelligent, but prided themselves on being "rational."... They were eager to find formulas, preferably expressed in a pseudo-mathematical language, that would unify the most disparate phenomena with which reality presented them; that is, they were eager to discover *laws* by which to explain and predict political and historical facts as though they were as necessary, and thus as reliable, as the physicists once believed natural phenomena to be ... [they] did not *judge*; they calculated....[82]

"The brain," said Professor Marvin Minsky of MIT, "is merely a meat machine"[83] — a view shared by many highly intelligent scientists and engineers at the "brain" centers of the artificial intelligence and robotics communities and by economists, diplomats, businessmen, and professors. A sincere belief in growth and progress drives us to decisions that seem neutral and incontrovertable. Each new step is obvious and natural. The mill, the factory, the assembly line has grown to a worldwide corporate, scientific, academic, military, political structure that has not been programmed to consider the needs of our planet nor the needs of most of her inhabitants. Substructures from GATT to GUT (from an international agreement on the flow of material goods to a Grand Unification Theory, a mathematical treatment of material particles) are treated as soulless entities. There is no allowance for the sacred.

So educators have to wake up and grab the reins. We need to do more than beef up our students' meat machines. If rationality were an appropriate *guide* to our actions, we could eliminate both overpopulation and hunger by eating people. Morality, not competitiveness or instrumental reason, is the fundamental educational requirement of our time. Our ability to relate outweighs our need to compete or outsmart. The lack of universality in our universities must bear some blame for the lack of civility in our civilization.

Whether we speak of right brain, contemplative, creative, intuitive, or imaginative modes of thought or use words like mind, psyche, consciousness, spirit, or soul, we are groping, like Niels Bohr, to express what is beyond analysis. We must become aware how *all* our concepts, interests, and needs overlap and entwine. As our root metaphor moves through Organism, through Mechanism, into what we cannot yet fathom, we must remain open to new connections and deeper meanings and allow goodness and kindness to play a central role in our thinking and teaching.

Notes

1. Mobil advertisement, op. ed. page, *New York Times*, September 9, 1993.

2. Haim Ginott, *Teacher and Child: A Handbook for Parents and Teachers* (New York: MacMillan, 1972) 317. Quoted from L. Grob, *Higher Education in the Shadows of the Holocaust* (unpublished) 1.

3. Stewart Allen, "Corporations Woo Young Students," in *Rethinking Schools* 7(4) 1993: 6.

4. New York Times, September 4, 1993, 6.

5. Rudolph Steiner, *The Social Future* (Spring Valley, NY: Anthroposophic Press, 1972) 317; quoted from Douglas Sloan, "Immigration, Education, and Our Postmodern Possibilities," *Revision* 15(2) 1992: 52.

6. National Commission on Excellence in Education, "A Nation at Risk," in *The Great School Debate: Which Way for American Education?*, edited by Beatrice and Ronald Gross (New York: Simon & Schuster, 1985) 23.

7. Albert Einstein, *Ideas and Opinions* (New York: Crown, 1954) 62.

8. A Nation at Risk, 29.

9. "The Fight over National Standards," by William Cellis 3rd *New York Times Educational Supplement* Aug. 1, 1993, p. 16.

10. Grob, Higher *Education*, 5.

11. Grob, 5.

12. Grob, 5.

13. Plato, *The Trial and Death of Socrates*, quoted from David Purpel, "Holistic Education in a Prophetic Voice" in *The Renewal of Meaning in Education*, edited by R. Miller (Brandon VT: Holistic Education Press, 1993) 74.

14. Silvan Schweber, "Physics, Community and the Crises in Physical Theory," *Physics Today* (November 1993): 40.

15. Einstein, *Ideas and Opinions*, 267.

16. David Bohm, "Insight Knowledge, Science and Human Values," in *Toward the Recovery of Wholeness*, edited by Douglas Sloan (New York: Teachers College Press, 1981) 18.

17. Banesh Hoffmann, *Relativity and Its Roots* (New York: Freeman, 1983) 41.

18. Julien de La Mettre, *L'Homme Machine*, quoted in Leonard Shlain, *Art & Physics* (New York: William Morrow, 1991) 84.

19. John Miller, "Worldviews, Educational Orientations, and Holistic Education," in *The Renewal of Meaning in Education*, edited by R. Miller (Brandon VT: Holistic Education Press, 1993) 56.

20. Arthur Zajonc, *Catching the Light* (New York: Bantam, 1993) 142.

21. Zajonc, 143.

22. Einstein, *Ideas and Opinions*, 328.

23. K. Eric Drexler, quoted in Fred Gardner, *Nanotechnology* (Anderson Valley Advertiser, Boonville, CA: October 27, 1993) 5.

24. "The Moral Development Scale (MDS): A Piagetian Measure of Moral Judgment," *Educational and Psychological Measurement* 32(2) (1983): 102.

25. Terence Clifford-Amos, "Getting up to Basics: School Based Initial Teacher Education in English," *Educational Research* 32(2) (1990): 102.

26. David Bohm, *Wholeness and the Implicate Order* (London: Routledge and Kegan, 1980) 134.

27. Einstein, *Ideas and Opinions*, 186.

28. Werner Heisenberg, *Physics and Beyond* (New York: Harper & Row, 1971) 210.

29. H. F. Judson, *The Search for Solutions* (New York: Holt Rinehart & Winston, 1980) 11.

30. Einstein, *Ideas and Opinions*, 52.

31. Einstein, 38.

32. Banesh Hoffmann, *Albert Einstein, The Human Side* (Princeton: Princeton University Press, 1979) 95.

33. Einstein, *Ideas and Opinions*, 76, 77.

34. Einstein, 222.

35. Hermann Weyl, *Philosophy of Mathematics and Natural Science* (Princeton, NJ: Princeton University Press, 1949) 171, quoted in F. Capra, *The Tao of Physics* (New York: Bantam, 1984) 199. Weyl, a mathematician, was a friend and colleague of Einstein. He worked on aspects of the unified field theory.

36. John Archibald Wheeler, quoted in Leonard Shlain, *Art & Physics* (New York: William Morrow, 1991) 324. Professor Wheeler was a colleague of Einstein and Bohr.

37. *Prajna-paramita-hridaya Sutra*, in *Sacred Books of the East*, edited by F. M. Muller, Vol. XLIX, "Buddhist Mahayana Sutras," quoted in Capra, *The Tao of Physics* (New York: Bantam, 1984) 201.

38. Gerald Holton, *Thematic Origins of Scientific Thought — Kepler to Einstein* (Cambridge, Mass.: Harvard University Press, 1973) 137.

39. L. Rosenfeld, *Physics Today*, 16, October (1963): 47, quoted in M. H. F. Wilkins, *Complementarity and the Union of Opposites: Quantum Implications*, edited by B. J. Hiley and F. D. Peat (London: Routledge and Kegan, 1987) 343, 344.

40. W. Heisenberg, *Physics and Beyond*, 130.

41. Erwin Schrodinger, *My View of the World* (Cambridge, MA: Harvard University Press, 1964) 21, 22.

42. I have seen this quote several times and am certain of its authenticity, but I cannot locate the reference.

43. Wilkins, *Complementarity*, 358. Such an accord often comes as a complete surprise, as it did in the case of the 1993 Palestinian-Israeli peace agreement. Interestingly, the Hebrew *shalom* and the Arabic *salam* — words we translate as "peace" — are better translated as completeness and self-surrender.

The Theory of Relativity can also be seen as an example of conflict resolution. The unification of Newton's Laws and Maxwell's equations came as a surprise because in order to overcome their incompatibility, Einstein had to abandon rigidly held beliefs.

44. David Glickman, *On Seurat* (Miami Art League Newsletter, April 1985) 2.

45. Herken and David, "Doctors of Death," op. ed. page, *New York Times*, Jan. 13, 1994.

46. Marjorie H. Nicolson, *Newton Demands the Muse* (Princeton, NJ: Princeton University Press, 1946) 142, 143.

47. C. S. Lewis, *The Abolition of Man* (Toronto: Macmillan, 1965) 54.

48. In a letter from Sigmund Freud to Albert Einstein, 1932. See *Einstein On Peace*, edited by Otto Nathan and Heinz Norden (New York: Simon & Schuster, 1960) 199.

49. Matila Ghyka, *The Geometry of Art and Life* (New York: Dover, 1977) 173

50. Ghyka, 173.

51. Hiley and Peat, op cit., *Reflectaphors: The (Implicate) Universe as a Work of Art*, 421.

52. Hiley and Peat, 421.

53. Hiley and Peat, 427.

54. H. Frankfort (Mr. and Mrs.), J. Wilson, T. Jacobson, *Before Philosophy* (London: Pelican, 1949) 255.

55. H. Frankfort, et al., 256.

56. There were exceptions to the standard dictionary definitions. Hermann Weyl, for example said in 1932, "the mathematical lawfulness of nature is the revelation of divine reason." (Weyl, *Philosophy of Mathematics and Natural Science* [Princeton, NJ: Princeton University Press, 1949] 11).

57. David Bohm, Insight, Knowledge, Science, and Human Values, 17.

58. H. E. Huntley, *The Divine Proportion* (New York: Dover, 1970) 58.

59. Hermann Weyl, *The Open World* (Woodbridge, CT: Ox Bow Press, 1989) 26.

60. Einstein, *Ideas and Opinions*, 45, 46.

61. Frankfort, et al., *Before Philosophy* 256.

62. Einstein, *Ideas and Opinions*, 344. My italics.

63. Grob, *Higher Education*, 16. My italics.

64. D. M. Mackay, "Conscious Agency with Unsplit and Split Brains," in *Consciousness and the Physical World*, edited by B. D. Josephson and V. S. Ramachandran (Pergamon Press: New York, 1980); quoted from D. Shainberg, *Vortices of Thought in the Implicate Order*, B. Hiley and F. Peat, op. cit., 411. My italics.

65. James Gleick, *Chaos, Making a New Science* (New York: Penguin Books, 1988) 5, 6. My italics.

66. J. Gleick, 306.

67. A. McRobie and M. Thompson, "Chaos, Catastrophes, and Engineering," in *Exploring Chaos, A Guide to the New Science of Disorder*, edited by Nina Hall (New York: Norton, 1991) 151.

68. McRobie and Thompson, 160.

69. D. R. Ridley and J. D. Novak, *Assessing Student Learning in Light of How Students Learn*,. The AAHE Assessment Forum, American Association for Higher Education, in *Change* (Washington: Heldref, 1989) 5.

70. Gleick, *Chaos, Making a New Science*, 83, 84.

71. B. Mandelbrot, *The Fractal Geometry of Nature* (New York: W. H. Freeman, 1983) 3.

72. Mandelbrot, 3.

73. Mandelbrot, 3.

74. Gert Eilenberger, quoted in Gleick, *Chaos, Making a New Science*, 117. Eilenberger, a physicist, migrated into non-linear science.

75. James Quina, "Aldous Huxley's Integrated Curriculum," in *Holistic Education Review* 6(4) (Winter 1993): 51.

76. Werner Heisenberg, *Physics and Philosophy* (New York: Harper Torch, 1958) 107.

77. Zajonc, *Catching the Light*, 299.

78. Feng and English, *Tao Te Cheng* (New York: Random House, 1972) Verse 29.

79. Bohm, *Insight, Knowledge, Science and Human Values*, 14.

80. James Lovelock, *Gaia, A New Look at Life on Earth* (Oxford: Oxford University Press, 1989) vii.

81. Weyl, *The Open World*, 56.

82. Hannah Arendt, *Crisis of the Republic* (New York: Harcourt Brace Jovanovich) 1, quoted in J. Weizenbaum, *Limits in the Use of Computer Technology: Need for a Man Centered Science*, in D. Sloan, op. cit., 157.

83. J. Weizenbaum, 152.

Breaking the Taboo

Discussing Power in the Classroom

Felice Yeskel

Multicultural education must include both social diversity and social justice components and focus on the two dimensions of oppression: power/privilege and hurt/limitation/dehumanization.

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Helping our students gain the skills they need to live in our multicultural society requires that we help them learn to build alliances across differences; however, we will not succeed as long as we remain unwilling to confront the issue of power. As Margo Adair and Sharon Howell (1988) wrote:

> The process of building alliances across our differences begins with our willingness to look at power, not only as it resides in our institutions and political processes, but as it lives within each of us, blocking our vision and paralyzing our creativity. Power, the ability to do, to make, to create, has become distorted in our society because it is the means of protecting the privileges of the few, gained at the expense of the earth and her people. Power means dealing with force and control. (p. 1)

Our society is increasingly multicultural. Our cultural, ethnic, racial, religious, class, age, sexual, physical, emotional, cognitive, and gender differences can be sources of strength and growth or they can be sources of conflict, prejudice, and oppression. Educators who are concerned with helping to facilitate the growth of whole human beings are increasingly incorporating these issues into our teaching.

The attempts to deal with these concerns are known by many names: prejudice reduction, multiculturalism, celebrating diversity, anti-bias education, inclusiveness, promoting pluralism, teaching tolerance, teaching the whole child, social justice or anti-oppression education, fostering community, etc. Unfortunately, by whatever name, too often our educational approaches have fallen short. Refusing to break the silence about the issue of power limits our effectiveness. In the following article, I will examine what we have focused on, what we have left hidden, and why. I will suggest some frameworks that can help us move beyond the taboo.

Although words like "multiculturalism" may seem abstract, they reflect attempts to cope with some of the core concerns of our students. In order to provide them with a relevant education, our subject

matter must connect with the real lives and felt experiences of our students. We must address what our students feel and what they are concerned about (Shor and Freire 1987). In my experience, students of all ages are interested in issues of identity (Who am I?), relationships (What are my connections and interconnections with others who are alike and those who I see as different?), and power (What am I able to do and how do I stand relative to others?).

However, students do not just care about these issues as individuals, they also care in relation to the social groups to which they belong. This is true of us as well. Our sense of self-identity, our sense of relationship possibility, and our sense of our relative ability and power are all deeply affected by *our* social group memberships. Additionally, our beliefs about others' abilities, power, and worth are shaped by *their* social group memberships. Since our beliefs often affect our actions, our ability to treat others in a manner that allows their full human potential to flourish is diminished.

This process of stereotyping others based on their social group identities and being stereotyped by others happens in many ways. The process begins quite early; research indicates that by the age of three, children have already begun to acquire attitudes about people of different races and cultures (Cushner 1988). The acquisition of these attitudes does not have to be the result of malicious, intentional brainwashing. In fact, the process typically starts in our families and most of it happens quite inadvertently and unconsciously. We are born into a world where these stereotypes already exist, manifested in every aspect of our culture. We absorb them with the air we breathe.

I know that I learned to be afraid of people of color although no one ever said to me directly that people of color were scary. My father did, however, insist that I roll up the windows and lock the door of the car when we were driving in certain New York City neighborhoods. He never said this when we were driving down Fifth Avenue or Park Avenue, but only when the faces on the other side of the window were black or brown. My mother squeezed my hand just a little bit harder when a black man got on the elevator than she did when a white man got on. Neither my mother nor father intended to pass on their fears and prejudices to me, but they did.

These early lessons would not have been so powerful if somewhere along the line I had experienced any different or contradictory messages about people of color. Unfortunately I didn't; in fact, what I received was lots of reinforcement. My parents had no friends who were people of color. Not one of my teachers during my 12 years of education in very multiracial New York City was a person of color, nor was my pediatrician, nor any kids on the playground, nor any children in any of my classes at school. What I learned in school about people of color was of no help: Dick and Jane, their family and neighborhood were all white; I learned the "white man" brought civilization to the Indian and that blacks were slaves. Television, the other major input in my early life, showed Indians as savage, blacks as clowns, scared children, or criminals, Asians as inscrutable, and Latinos in fast cars. Racist imagery in language played a role as well: "white" lies (clearly bad lies were of some other color), or "white" meaning fair, generous, and decent as in, "that's very white of you," or white meaning pure and unsullied contrasted with the far more negative meanings of terms such as "blackmail," "blackball," and "black thoughts." The *American Heritage Dictionary* includes the following definitions of the word *black*: "Evil, wicked ... cheerless, depressing, gloomy ... attended with disaster, calamitous ... deserving of, indicating, or incurring censure or dishonor." My lack of personal contact with people of color, coupled with the cultural images that were available to me, allowed the early unconscious beliefs that I had absorbed to remain unchallenged. I learned very powerfully from my own experience that if cultural stereotypes aren't actively challenged, they remain embedded in our consciousness.

How can we as educators actively challenge the cultural stereotypes our students have absorbed long before they enter kindergarten? How can we prepare our students to overcome the limitations that stereotypes create on their own sense of possibilities and on their close and harmonious relationships with others? How can we help them to understand that the personal and interpersonal effects of stereotyping are small in comparison to their larger social and institutional manifestations? Furthermore, how can we, as Sleeter and Grant (1987) wonder, help to educate our students in a way that, "prepares young people to take social action against social structural inequality" (p. 435), so that we can develop a society where human diversity and connection become our most treasured resources? How can we as educators help to generate strength and growth rather than

more conflict and oppression from our increasing multiculturalism?

Social diversity versus social justice

Despite our best intentions, the addition of multicultural content to curriculums, and attendance at a number of sensitivity workshops, one reason for our failures to date may partially result from our confusion between a *social diversity* approach and a *social justice* approach. As educators, we often focus on teaching about different cultures' or social groups' customs, practices, and values. Additionally, we try to engender respect for those differences. This social diversity approach helps expand students' understanding of cultural differences; they learn that we are all different in a variety of respects and we each have an interesting and unique culture. The social diversity approach teaches an important part of what is necessary to promote human connection. However, this approach alone reinforces a problematic and erroneous myth: the myth of separate (or different) and equal. Having the capacity to perceive difference while simultaneously equally valuing all our perceived distinctions may be our desired goal; unfortunately it is not our current reality.

The social diversity approach focuses on helping us to appreciate social differences, including becoming aware of our different social group memberships; becoming aware of other social groups; and understanding how our social group memberships influence our view of the world. Table 1 lists a number of social identity categories and some of the social groups associated with each. This chart presents all social groups as equal and is illustrative of the social diversity approach.

We are all different from each other in countless ways. However, our dualistic society turns differences into superiority/inferiority, one up/one down, win/lose, competition rather than true equality and collaboration. It seems our ability to discriminate difference inevitably leads to discrimination. Social groups are accorded different levels of status in our culture; the perceived difference becomes the excuse for privileging some groups while devaluing others. This perspective is more indicative of the social justice approach, which focuses on the relative inequality between and among different social groups.

Far from different and equal social groups being the true state of affairs, membership in one or another social group affects (a) how we are treated by others, (b) expectations that others have of us, (c) what we think of and expect from ourselves, and (d) the access we have to the social resources needed to lead comfortable, productive, safe, and actualized lives. In short, some social groups have far greater access to social power. Power is about the control of resources: the more power one (or one's group) has, the more options one has. The social justice approach views the issue of relative social power as central to our understanding of social identity and social relationships. Margo Adair and Sharon Howell (1988) write,

> The effects of power are everywhere. It becomes most visible when force is required to protect it. Most of the time it's felt, not seen. This invisibility keeps power in place, perpetuating inequities. Power is maintained not only through the objective functioning of institutions and instruments of force, but through the patterns of thinking and acting that we all learn as we grow and live in a society dependent on divisions, especially of race, class, gender, and age. (p. 2)

In my experience, the focus on social diversity to the exclusion of social justice, is the focus that predominates in our educational system. While social diversity may be the place to start, by itself it is not the whole picture. Too often we only notice the "oppressed" groups' cultures and how they are different, interesting, or exotic. However, the prevailing, dominant cultures of the more privileged groups are typically taken for granted as normal, typical, or universal. The particularity of the dominant culture rarely becomes visible. Even if the dominant cultures are taught in the same fashion as the subordinate cultures, a danger remains. In a personal conversation, I heard African-American lesbian author and activist Barbara Smith refer to the social diversity approach as the "Crayola crayon box" approach to understanding oppression. In this approach what is learned is often, "Oh, I'm this color and you're that

Table 1.
Social Difference (Categories and Examples)

Race: White, African Americans, Latino/as, Asians, and Native Americans
Gender: Male, female, and transgender
Socio-economic Class: Owning, upper-middle class, middle class, poor, and working class
Physical/mental Ability: Temporarily abled and people with disabilities (deaf, blind, asthmatic, etc.)
Ethnicity: English, Japanese, Haitian, Polish, Sioux, Cuban, French-Canadian, etc.
Sexual Orientation: Heterosexuals, gays, lesbians, and bisexuals
Age: Middle-aged people, young people, and elders
Religion: Christians, Hindus, Greek Orthodox, Jews, Muslims, Buddhists, Atheists, etc.

color; isn't that interesting," or "Boys do this and girls do that," or "We celebrate this holiday and eat that food and you celebrate that holiday and eat a different food." In this approach, students never think about which color, gender, or holiday is the most visible or more valued. Teaching children about each other's cultures through celebrations, food, clothes, or other cultural artifacts can easily deteriorate into a "tourist curriculum" (Derman-Sparks 1989, 7) Students may be learning about the unique characteristics of a culture or social group, but they have no context in which to understand these differences because they are not learning about social power or dominance. "Nobody talks about power. Those who have it spend a great deal of effort keeping it hidden. Those who don't, rarely risk raising the question" (Adair and Howell 1988, 5). This silence contributes to the continuation of the rigid social structures of domination and subordination and makes true respect for diversity unattainable.

It is important to remember that in discussing issues of social difference, we do *not* have a situation of different but equal. Not all social groups are treated equally; social difference invariably overlaps with social dominance. Once again, the issue is power. It is important in this regard to distinguish between prejudice and oppression. Working definitions of prejudice and oppression used by Diversity-Works, Inc., an organization of social justice educators to which I belong is:

> Oppression: A systematic social phenomenon based on the perceived and real differences among social groups that involves ideological domination, institutional control, and the promulgation of the oppressor's ideology, logic system, and culture on the oppressed group. The result is the exploitation of one social group by another for the benefit of the oppressor group.
>
> Prejudice: A set of negative beliefs about a social group that leads one to prejudge individuals from that group or the group in general, regardless of individual differences among members of that group.

In short, Oppression = Prejudice + Social Power.

In this view, prejudice can go in many directions; groups with relatively less social power, such as women or African Americans, can and do have various prejudices against men or white people. However, neither women nor African Americans have access to the social power to enforce personal prejudice institutionally and culturally. Only social groups that have access to social power can act oppressively; groups without social power can only act prejudicially. Neither oppression nor prejudice is good, both are problematic; however, they are not the same. This is a complex and confusing point and it is difficult to do it justice briefly (see Marilyn Frye's essay "On Oppression," in *The Politics of Reality* [1983]).

To determine which social group is the socially dominant or agent group versus which is the socially subordinate or target group, it is useful to ask the following questions:

- Who has greater access to societal resources?
- Are all resources equally distributed?
- Members of which group wield social power?
- Who can arrange for the resources to accomplish a goal?
- Which groups' norms or cultural values predominate?

Asking these questions is taboo. Naming power is taboo. As Adair and Howell (1988) point out, "To raise the question of power is to threaten the freedom of those who have it" (p. 6). Members of social groups with relatively more access to social power or privilege are named agents/dominants/oppressors, while members of groups with more limited access to power and privilege are named targets/subordinates/oppressed. Members of agent groups tend to have more of the following characteristics: valued, privileged, "namers," "judges of appropriateness," "feels and acts entitled," "normal," accepted, visible, unconscious or unaware of inequality and their relative privileges, un-self-conscious (don't have to be self-aware), ignorant about target groups' reality, assumes that their reality *is* reality, and *dehumanized*. Members of target groups tend to have more of the following characteristics: seen and sometimes see themselves as devalued, suspected/blamed/penalized, stereotyped/ labeled, "abnormal," excluded, invisible, conscious of self or aware of self, conscious of inequality, feel inadequate, inappropriate, awkward, unentitled, blame self, usually aware of at least two views of reality — their own and that of the agents, and *dehumanized*. The condition of dominance and oppression is dehumanizing to both agents and targets.

It is important to remember that each of us belongs to many social groups simultaneously. Not only do I have a race but I also have a gender, an age, a class, etc. Most of us have relatively greater access in some areas and relatively less access in others. I belong to some social groups (whites, temporarily abled, middle aged, for example) that give me the experience of

being an agent, while I belong to other social groups (women, Jews, lesbians) that provide me with the experience of being a target. All of these identities affect my understanding of myself in this world. Table 2 below presents the various social groups according to their relative social dominance or social power. This chart is more illustrative of the social justice approach, which focuses on *social dominance.*

Rationale or rationalization?

We have many reasons why we don't discuss issues of social dominance in the classroom. I have often heard students' age given as the reason for not teaching about dominance. I think this often is an excuse, more rationalization than rationale. Children who are quite young can and should learn about social dominance if the content is appropriate and the concepts are accessible. Louise Derman-Sparks (1989) clearly states, "if children are to grow up with the attitudes, knowledge, and skills necessary for effective living in a complex, diverse world, early childhood programs must actively challenge the impact of bias on children's development" (p. 5). Luckily there are some very useful resources containing developmentally appropriate methods, such as Derman-Sparks's *Anti-Bias Curriculum: Tools for EMPOWERING Young Children* and Schniedewind and Davidson's *Open Minds to Equality: A Sourcebook of Learning Activities to Promote Race, Sex, Class, and Age Equality.*

Table 2.
Social Dominance

Agents/Dominants	Social Groups	Targets/Subordinates
Whites	Race	Africans, Latinos, Asians, Native Americans, etc.
Men	Gender	Women
Owning/middle class	Socio-economic class	Poor/working class
Temporarily abled	Physical/mental ability	People with disabilities
Northern Europeans	Ethnicity	Everyone else
Heterosexual	Sexual orientation	Gays, lesbians, and bisexuals
Middle aged	Age	Young people and elders
Christians	Religion	Jews, Muslims, Buddhists, Atheists, etc.

Educators sometimes worry that by raising these issues they will be creating a problem where there was none. However, those who worry that including issues of social justice into the curriculum will make things worse are often in denial about how bad things are already. Breaking the silence, and learning to communicate about injustice and difference is essential to empowering students to cope with their world. Another form of denial occurs when educators believe they are already doing the work, when in reality they focus only on social diversity and not also on social justice. Perhaps other educators shy away because they are loath to tarnish the innocence of younger children; they would prefer social justice to remain an adult concern. I can empathize with these feelings, it is tricky to teach about the reality of oppression while maintaining a positive and hopeful outlook.

Many of the other factors that inhibit us as educators from focusing on social justice concerns may be less conscious. Discussing these issues raise feelings — our own feelings as well as our students'. Many educators do not feel prepared for handling emotionally volatile subjects in the classroom. Our own unexamined biases lurking beneath the surface of our consciousness also can make us afraid of what we might inadvertently say. Our own education was probably lacking on this subject matter. It may seem daunting to learn what we think we must know in order to feel competent to include social justice issues.

In the classroom

The following story, told to me by a friend who is a third grade teacher, illustrates what can happen when dominance isn't discussed. She was helping out in a first grade class when she noticed a girl, Elizabeth, who was acting out. Elizabeth would not attend to what the class was doing, and she was refusing to listen to another child, Sophie, with whom she was engaged. The situation was starting to escalate into a full-scale conflict. When my friend intervened and asked Elizabeth to listen to Sophie, Elizabeth responded by loudly saying, "I don't listen to Jews." My surprised friend spontaneously said, "I'm Jewish, too, and you listen to me! " She went on to explain to Elizabeth that saying what she said could hurt others' feelings. She then asked Elizabeth, "Why did you say that?" Elizabeth responded, "I'm the only one here who celebrates Christmas." Since the vast majority of children and teachers in the school are Christian and celebrate Christmas, Elizabeth's perception was totally erroneous. When my surprised friend said, "You're definitely not the

only Christian in the school, but it sounds like you feel very alone," Elizabeth began to cry. Elizabeth's feelings of isolation and difference became apparent. As it turned out, Elizabeth's class had been engaged in discussion about the celebration of Hanukah, which fell in early December, so that the Jewish children in the class would feel welcome and acknowledged. The school also discusses Christmas, Three Kings Day, the Solstice, and Kwanza at the appropriate times.

If in the class discussions of different holidays the issue of dominance had been included, the context might have been different. If the teacher had asked children at this developmental stage questions such as, "What is Hanukah? or the Solstice? or Christmas? or Kwanza? or Three Kings Day?," it might have been revealed that most everyone knew what Christmas was, but not so with the other holidays. The teacher next could have asked why the children thought this was so, which might lead to a discussion about what's on TV, in the stores, etc.

While multiculturalism means that Christmas, too, will be included, it is important to help children understand what is societally dominant or societally valued and what isn't. And perhaps more importantly, a bit about why. This could be framed in terms of majority versus minority, or that certain cultural differences are more celebrated than others, and that this leads to certain assumptions about everyone being part of the majority, etc. If we don't include a focus on dominance as well as difference, we end up with Hanukah — the "Jewish Christmas."

Of course, in the process of teaching about these different holidays, many issues of dominance can also be discussed. Perhaps more appropriate for older children, the holiday of Hanukah lends itself to discussions of cultural imperialism, assimilation, and the struggle for self-determination. This particular historical struggle of the Jews against oppression by the Romans could be related to current examples for other groups. Questions such as: In what ways was the Greeks' oppression of the Jews similar and different from the oppression of blacks in South Africa during Apartheid and after the end of Apartheid? The Solstice can be taught as an indigenous pagan holiday that was usurped by the religion of a conquering culture. This explains why Christmas is celebrated at the end of December and why we have Christmas trees, which were derived from Yule. Students can be asked to think of other examples in which a conquering nation exerted control through absorption of the conquered nation's culture.

These are a few examples of choices we are faced with, to include only the social difference component or to also include the social justice component. Both issues of social difference *and* social dominance are essential to incorporating our students' concerns about issues of identity, relationship, and power; we need to get support so we can incorporate both.

The dimensions of oppression

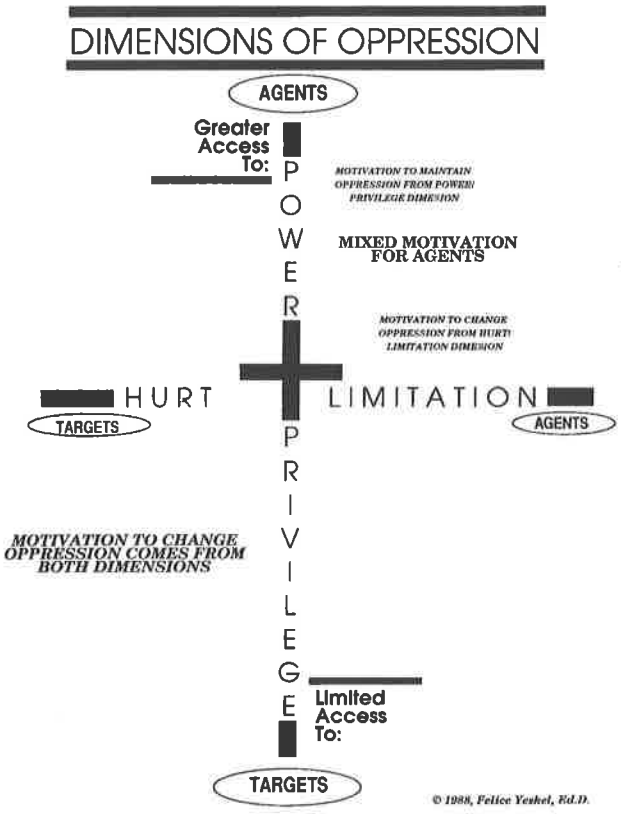
Having clearly stated how central social power is to our understanding of diversity, it is important to restate that it is not the entire picture. If we only focus on issues of social power, we risk completely alienating everyone in their agent identities. It is crucial that we acknowledge and validate the significant hurts that happen to members of agent groups (men, whites, heterosexuals, etc.). However, too much focus on agents' hurt can leave members of target groups fuming. Indeed, experience of oppression by target groups (women, people of color, poor working class people, etc.) includes significant hurt in addition to limited access to resources and lack of social power.

Educators engender significant resistance from students when they focus exclusively on *either* aspect or experience of oppression: the dimension that speaks to the reality of relative access to social power, resources, and privileges *or* the aspect that focuses on the hurt, limitation, and dehumanization. Resistance can take a number of forms: denial, "victim-blaming," changing the subject, or verbal and physical attacks against members of the target group. Do the following comments sound familiar:

> I don't understand why women are always complaining about being oppressed; they get to stay home if they want. I have to work. No one ever talks about the oppression of white men.
>
> Since I was raped last year, I'm scared every minute of every day. If I hear one more man complain about how hard it is to be a man, I'm going to scream!
>
> The black kids always sit together in the cafeteria, they seem to have all these in-jokes, handshakes, and stuff. I feel really left out.
>
> All these white kids are wanna-be's, they really piss me off. They have no idea what it's really like to be black — policemen hassle you, store owners accuse you of stealing, teachers talk down to you. It's easy to wear baggy clothes....

How do we respond to comments such as these? How do we validate the kernel of truth in each

person's experience before we ask them to put themselves in another's shoes? Yes, the expectations society places on men are difficult, but women also suffer under a different set of expectations, in addition to being dominated by men. Because of racism, most white people have lost any connection to their ethnic heritage and culture. When they see black people enjoying a vibrant culture and community, they are reminded of their own loss. This hurt is real, but it is not oppression. In order for males or whites to be able to acknowledge the real differences and privileges in their experiences compared to females or



people of color, it is imperative that we acknowledge the real experience of pain they feel.

Rather than an "either/or" strategy of teaching about one dimension of oppression or the other, it is crucial to employ a "both/and" strategy and include both. The Dimensions of Oppression model above has been invaluable to me in teaching educators how to teach from a "both/and" perspective about issues of multiculturalism, diversity, social justice, and oppression.

The power/privilege dimension

Along the power/privilege axis of the model the "dominant" group (alias "agents" or "oppressors" — whites, heterosexuals, men, gentiles, owning-class people, temporarily able-bodied people, middle-aged people) clearly benefits from the oppression by having greater access to privilege, power, and resources. In "The White Male Club," Robert Terry (1992) describes this situation as "membership in the club." While Terry focuses on the "white male club," his description rings true for all the dominant social groups. There are many other permutations of the club, e.g., the "heterosexual club," the "temporarily able-bodied club," or the "middle-class club." Terry states that "this club is an organization which arbitrarily selects members and bestows appropriate physical and psychological benefits. It distributes influence and power among its members and then uses that power to dominate groups unlike itself (consciously or unconsciously). It rigidly regulates behavior and demands conformity as a requirement of admittance and it legitimates certain life-styles and requires public acquiescence to them" (p. 49). While relatively few people run the club, all its members are offered benefits — even if they are only psychological. Some examples of benefits or privileges that members of the dominant group or club experience include (a) being around people like themselves most of the time; (b) seeing people just like themselves mirrored back to them by the media; (c) walking down the street with less fear of rape or physical assault; (d) buying posters, postcards, picture books, dolls and toys picturing people of their own race; (e) receiving benefits for their partners (health insurance, etc.); (f) admission to most cultural and educational events; (g) having legal holidays fall on their religion's holidays, making it easier to spend time with family and friends; (h) receiving a fair measure of societal approval for just being; and (i) being assured of prompt, courteous, attentive service in public establishments.

When we focus on this dimension, it appears it is in the self-interest of members of the agent group to hold onto their social power and privilege, while it is in the self-interest of the subordinate group (alias "targets" or "oppressed" — people of color, gay, lesbian, and bisexual people, women, Jews, poor and working class people, younger and older people, and people with disabilities) to fight to gain greater access to power and privilege. This dimension is often what we first imagine when we think about oppression. Adair and Howell (1988) suggest, "In whatever ways we have access to privilege, we have been carefully socialized to accept, protect, and

maintain it" (p. 13). It seems obvious that the "have-nots" would want to "get some," while the "haves" would want to protect what they had. However this piece or dimension of oppression is not the whole story.

The hurt/limitation/dehumanization dimension

An examination of the hurt/limitation axis of the model, reveals another key part of experience resulting from oppression. Under conditions of oppression, everyone, both agent and target is hurt, limited, and dehumanized. If we look at the oppression of sexism, where men are the social group with greater access to power and privilege and the social group of women is denied access to power and privilege, other facets of oppression become clear.

Sexism creates rigid roles that both men and women are forced to adopt or face grave sanctions (ranging from name-calling to job loss to physical assault). Because of these rigid roles, both men and women are constrained from expressing the full range of their humanity. Certain behaviors, such as tenderness and nurturing, crying, affection for other men, or artistic pursuits are more forbidden for men. Behaviors such as strength, many physical activities, saying "no," caring for ourselves before others, fixing things, or taking initiative are more forbidden for women. For men who want to write poetry or stay at home to care for their children, this constriction is quite hurtful, as is the pressure to fulfill certain expectations of success — physically, economically, sexually, etc. In certain respects along this dimension women may experience more flexibility and less constriction, such as in the ability to wear a wider variety of apparel. I would argue that when we consider this dimension of oppression, both men and women are equally limited, hurt, or dehumanized.

Adair and Howell (1988) argue, "We have established a culture in which the measuring stick for normalcy is white, male, Protestant, middle class, heterosexual, able-bodied, and serious.... Those of us who do not fit these categories, must, of necessity, prove our competence to be allowed into the club" (p. 6). Furthermore, those of us in our agent identities must hide particular aspects of ourselves that don't fit the idealized images of these categories. In fact, as Adair and Howell (1988) state, "The narrowness of this measure gives most of us the uncomfortable feeling that we never quite belong. Passing, usually thought of as people of color pretending to be white, is something we must all do to have access to privilege. The price is fragmenting ourselves" (p. 7). When viewed from this dimension, I believe it is in the best interest of both agents and targets to end the oppression.

As in the case of social diversity *or* social justice, when typically the focus is *either* on difference *or* on dominance, but rarely both, here too attention is usually paid to only one of the two dimensions of oppression. Attending to only one dimension yields incomplete and often ineffective educational strategies. Students respond to the missing piece of the truth and often resist or reject the piece of truth that is presented. I have witnessed countless arguments between members of target groups and members of agent groups, each talking from their own perspective and totally missing each other — a true apples and oranges argument.

Returning to the previous example, often women will talk exclusively about men's power and privilege in our society and want men to acknowledge the pain they experience as women due to that inequity. Simultaneously, men will talk exclusively about how they, too, have experienced pain due to the limitations of the prescribed male social role. Men also want women to validate and acknowledge their pain. Both men and women are speaking a valid piece of truth about their experience and each wants the other's acknowledgment. Because of the prevalence of either/or thinking, it is difficult for either men or women to recognize this as a situation of "both/and."

While it is important to acknowledge both dimensions of oppression, it is equally important to be clear about their differences. It is also important to be clear that *both* dimensions are necessary for an experience to be considered oppression. Marilyn Frye (1983) makes this point very cogently when she states, "When the stresses and frustrations of being a man are cited as evidence that oppressors are oppressed by their oppressing, the word 'oppression' is being stretched to meaninglessness; it is treated as though its scope includes any and all human experience of limitation or suffering...." (p. 1). People clearly can and do experience feelings of hurt and suffering without being the targets of systematic or systemic oppression. It is dehumanizing to oppress as well as to be oppressed, but that does not make them equivalent experiences. However, it will be difficult to teach about the experience of oppression to members of dominant groups without being able to acknowledge that oppression hurts everyone.

What can we do?

We need to develop educational strategies that encompass both power/privilege *and* hurt/dehumanization/limitation. Although I am committed to affirming these multiple simultaneous truths, I have found that when I talk about the power/privilege dimension first, I lose those who are part of the dominant social group. Conversely, when I discuss the dehumanization/hurt/limitation dimension first, I often meet significant resistance from those who are part of the subordinate social group. By using this model that allows both dimensions to be visible simultaneously, I can often circumvent resistance from both members of dominant and subordinate social groups because both pieces of truth visibly coexist. The Dimensions of Oppression model aims to validate both experiences, to affirm multiple simultaneous realities.

In considering the complexities of identity, social differences, social dominance, power, and oppression, it is critical that we develop the capacity to comprehend dual realities and affirm multiple perspectives simultaneously. We must try to help our students develop this capacity as well. The following are suggestions derived from my years of working with DiversityWorks, Inc., and training educators.

Suggestions for educators — Basic do's and don'ts

Model acceptance of where each person is in their process. While holding out a vision of where we're going, we need to create safety for all of us to make mistakes.

Set up guidelines or ground rules at the start to help create a safer, more supportive environment.

Make space for processing of feelings. It is part of learning about these issues. Confronting our own prejudices can be a painful experience fraught with shame, guilt, confusion, betrayal, and fear. Confronting the ways in which we have been oppressed can be a painful experience filled with anger, sadness, pride, confusion, betrayal, and fear.

Include *both* social diversity and social justice concerns.

Acknowledge the dimension of hurt/limitation and dehumanization *as well as* the dimension of power and privilege.

Don't get into a discussion about the hierarchy of oppression. There is little to be gained from debates about which form of oppression is more damaging or which is the root out of which all others grow. Do, however, acknowledge and identify the unique aspects of each form of oppression as well as the similarities among them.

Find examples and models of change agents from both target and agent groups.

Make it safe to ask questions so that differences can be visibly acknowledged.

Acknowledge the interconnections among all forms of oppression. Since many different forms of oppression affect each of us simultaneously, it is difficult to focus on any one manifestation exclusively.

Don't forget to stress how confronting oppression will benefit everyone, not just target group members. Remember it may be less obvious how agents have been hurt, but no less important.

Don't confuse fault/blame with responsibility. We have all been born into an oppressive society, and it is not our fault that we learned oppressive attitudes and inaccurate information.

Do, however, encourage every one of us to take responsibility for our attitudes and actions now. While it is not our fault that we learned it, it is our responsibility to unlearn it.

References

Adair, M., and S. Howell. 1988. *The subjective side of politics.* San Francisco: Tools for Change.

Cushner, K. 1988. Achieving intercultural effectiveness: Current knowledge, goals, and practices. *Education and Urban Society* 20(2): 159–176.

Derman-Sparks, L. 1989 *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: NAEYC.

Frye, M. 1983. *The politics of reality: Essays in feminist theory.* Trumansburg, NY: Crossing Press.

Nieto, S. 1992. *Affirming diversity : The sociopolitical context of multicultural education.* New York: Longman.

Schniedewind, N., and E. Davidson. 1983. *Open minds to equality: A sourcebook of learning activities to promote race, sex, class, and age equality.* Englewood Cliffs, NJ: Prentice Hall.

Shor, I., and P. Freire. 1987. *A pedagogy for liberation: Dialogues on transforming education.* South Hadley, MA: Bergin & Garvey.

Sleeter, C. E., and C. A. Grant. 1987. An analysis of multicultural education in the United States. *Harvard Educational Review* 57(4): 421–444.

Sleeter, C. E., and C. A. Grant. 1988. *Making choices for multicultural education: Five approaches to race, class, and gender.* Columbus, OH : Merrill.

Sleeter, C. E., and C. A. Grant. 1989. *Turning on learning: Five approaches for multicultural teaching plans for race, class, gender, and disability.* Columbus, OH: Macmillan.

Terry, R. 1992. The white male club: Biology and power. In *Human relations: The study of oppression and human rights,* 3rd ed., edited by J. Andrzejewski. Needham Heights, MA: Ginn.

A Teacher's Faith

Michael Umphrey

Children without a sense of structure may flounder, but they often "hear" a caring teacherwho has a deep commitment to freedom, stewardship, ecological thinking, and an ability to maintain the perspective of the whole.

> We are half-hearted creatures, fooling about with drink and sex and ambition when infinite joy is offered us, like an ignorant child who wants to go on making mud pies in the slum because he cannot imagine what is meant by an offer of a holiday at the sea....We are far too easily pleased.
>
> — C. S. Lewis

April was 15, with eyes that spat fire at any school authority who talked to her. Though she refused to answer most questions, sometimes she would snarl an obscenity in response to a routine classroom request. This landed her in my office quite frequently.

I tried to break her sullen silence by asking questions and suggesting ways I thought she might be feeling. After a serious of fruitless "conferences" with her the first months of school, I sat with her one morning for a half hour without getting so much as an eyebrow's twitch in answer to my questions about why she had cursed the science teacher or what I should do now that she had been kicked out of class. I tried several long minutes of silence, hoping the weight of it would prompt her to speak. Finally, she said, "I haven't ate for two days."

I brought her a doughnut from the outer office, but she wouldn't even look at it. "Would you like me to find something else?" I asked.

No answer. I sat and looked at her for several minutes.

"My grandpa died on the couch," she said.

I nodded and listened, waiting for her to go on. She didn't.

"What happened?" I asked vaguely.

"I drug him out to the porch."

This seemed like a breakthrough. She was admitting to a difficult situation, possibly asking for help. Her grandfather's death might account for her rebellious conduct. "When was this?" I asked, groping for detail.

"I was six."

She was talking about something nine years before — something, for someone her age, a great distance away. She had communicated to me only with grimaces for months. Even my simple "hellos" in the hall seemed like annoyances to her, so I grappled with what to say now that wouldn't trigger another shutdown. Letting

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me hear anything at all about her personal life felt like an important step.

"How did you feel?" I asked lamely.

"It didn't bother me. It didn't mean anything."

That was all. She wouldn't talk further and became hostile when I asked questions. I offered her the doughnut again, but she mumbled, "I'm not hungry." She sat with her eyes fixed on nothing, wearing the denim jacket carefully splattered with her own blood that had become her uniform.

A few days later the math teacher, a matronly woman prone to losing control of her classes and reacting with shrill outbursts, came into my office pushing April in front of her. The teacher was puffing and scarlet. April, again, was stone-faced. The teacher told me what had happened, in her wide-eyed, fearful way. She had asked April to open her book, and April had uttered the most provocatively obscene response she knew.

Since I thought I should separate them, I asked April to sit in the outer office while I talked with the teacher. April raised her middle finger and stuck it in my face, snarling profanities. "April, sit down." I said quietly. "I'll talk to you in a minute."

"Go to hell!" she swore, then called me a string of names, whirled, and left my office.

When she got to the front door and slammed it open, I said, "April, you can't leave campus." More swearing. She kept walking. She was on probation for a host of the usual crimes — alcohol, vandalism, and the like — and wasn't supposed to be unsupervised. I called the sheriff's office to let them know she had left school without permission. When a deputy got to her house, she wasn't there. Neither were any adults. Her boyfriend, who had spent the night, was still passed out on the living room floor.

She never came back to school. Teachers said that it was a good thing. She hadn't learned anything in the classes that she continually disrupted. She didn't do homework, didn't bother with class activities, made no effort on tests, and was never pleasant.

The mystery for me was not that she had left school, but that she had kept coming for so long. No one at home woke her or told her to go. Her mother had left school functionally illiterate when she was younger than April. Now, she was involved in an addiction treatment program, trying to overcome her problem with drinking, but for most of April's life she had been simply unavailable. April had never met her father, though a string of abusive and drunken boyfriends of her mother's had passed through her life. She had lived in several places, with a number of aunts and uncles, and it was pretty much left up to her where she stayed.

One teacher told me I should have kicked her out long before. But kick her out to where? She is here, with us. A few months later I heard from April again. Sometime in the middle of the night, she and two of her friends broke the window on my father's car, got inside, tore the ignition switch out of the dash and hot wired it. They drove it to a reservation several hundred miles away where they ran it into a ditch and abandoned it. Our failures with our children will haunt us.

Still, I got the feeling that my overtures toward her hadn't been wasted. I met her downtown a few months after the incident. She came up to me and, without making eye contact, apologized quickly in a mumbling tone for having stolen my Dad's car. Two of her friends stood off a few feet. They snickered, and she quickly retreated, joining them. "It's good to see you again, April," I said. She snorted contemptuously, and, without looking back at me, wandered down the street with her gang. But I think she had heard some of what I hadn't been able to tell her.

Everyone who works in schools these days meets students like April. In some neighborhoods, there are a great many of them. April lives in the wake of the breakdown of a traditional Salish order that her great-grandparents knew. Parenting in that culture was often indulgent by European standards, allowing children considerable free rein. When there were no worlds but that of nature and that of the tribe, this worked well. Children could explore and observe, gradually joining the circle of grown-ups and the order that they preserved.

But as white settlers flooded into the valley, the tribe was surrounded by worlds that offered the children choices their traditions didn't constrain. At the same time, the circle of grown-ups itself was broken. Many children wandered into destructive ways. The lives of April's grandparents and her parents were disordered by alcohol, and April had received neither strong and attentive parenting nor the support of an extended circle of cousins and grandparents. She was free to find her own way on the streets.

Though the specifics vary from family to family and from neighborhood to neighborhood, it isn't only on Indian reservations that children are growing up without being embedded in a traditional order. This nation's worst social problems are a legacy of slavery. Families and justice were both methodically destroyed for generations, sowing seeds of hostility and distrust that continue growing. The lesson teachers need to learn from this should be obvious: communities are kept in order by a shared commitment to justice. When

people look away from injustice, every person will have to look out for himself. In an important sense, when one person loses his place wrongly, all lose their places.

Even in places isolated from the effects of such monumental atrocities as slavery, no neighborhood is without children who, through misfortune or incompetence, are growing up without being taught the basics of living together with dignity and decency. They are the greatest challenge facing our schools, and they are rapidly becoming the greatest problem facing our nation.

In a better world, each child would be embedded in a loving family, and each family would be embedded in a just community. The work of teaching is to remain committed to building such a world, in spite of the fact that we actually live embedded in a human history that is a terrible failure, that is to a large degree a history of crime and bloodshed. None of us can walk out of it. There is nowhere for us to go. Our fate as persons is linked to the fate of the world. My fate is linked to April's as hers is to mine.

Our hope lies in whatever it was within April that prompted her to come up to me on the street and apologize. I think that at some level she wanted my approval, wanted to join the world she thought I lived in, if only she really could. In her rebellion was a shout that she wanted to be free. I think she wanted to be taught how.

The way of the teacher

To teach children like April to become free, we need to draw them into an order that surrounds them. The hard work is building that order. It's hard because we can't have such an order without authority, but our age is distrustful of authority — and with good cause. Many people have noted the statistics of teenage mothers, violence, and drug abuse that indicate a widespread disintegration of traditional society. Often bad conditions are accompanied by an almost knee-jerk readiness to protest any authoritative action. This has been fed by too many coercive and unjust uses of power, which have led to a rejection of authority. Such a rejection, of course, is anarchy. Hannah Arendt once commented that because we did not understand authority, we were in danger of losing our freedom.

The best education is a not an accumulation of facts or information but a passing on of the arts of freedom, which are deeply related to the arts of community building. Communities are ordered systems, and all ordered systems are balances between opposing forces of freedom and constraint, as an atom is a balance between attractive and repulsive forces within electrons and protons or as the solar system is a balance between centrifugal and gravitational forces. Harvard psychologist Robert Kegan has described human growth as a continual striving for balance between a strong desire to be independent and an equally strong desire to join. This tension exists in a good community as a balance between anarchy and totalitarianism.

Caring for success has driven underground other and better forms of caring: caring for others, caring for the earth, caring for ideas. Our world doesn't need more successful people nearly as urgently as it needs more good people.

Systems whose parts aren't given enough freedom soon lose contact with their changing environment and they eventually collapse, to be replaced by other systems. A teacher who is uncertain that authoritative acts will be supported tends to look away from small situations that need to be dealt with, and the school becomes somewhat like a body in which white blood cells are reluctant to respond to invading bacteria. On the other hand, systems that don't constrain their parts enough are unable to act as a whole, and they are also destroyed, as when school systems meet crises by paralyzing themselves in endless arguments, granting no person or group authority to respond until all are agreed. We need to remember that systems can take authority not from force but from the consent of the governed. People can willingly give others authority, within limits, because they understand the need for it.

We live in an unprecedentedly organized world where everything from the glass of water at our kitchen sink to the newspaper at our doorstep reaches us through complicated and interconnected systems. To keep such a world working, we must standardize procedures and keep careful schedules. To keep order in a society as complex as ours, persons need to accept considerable constraint. If we are to keep order without abolishing freedom, we need a more profound understanding of authority than we have often had. Most of us work in large institutions that monitor and regulate us through both formal and informal controls. We tend to forget that such approaches work only within limits.

Despite the many formal controls, we keep finding toxic by-products of our culture in our water, and every issue of the newspaper reveals further moral, political, and economic horrors. It is not hard to think that our civilization has reached a level of complexity that is now accelerating into chaos.

We will be able to relax our controls over one another only to the extent that we find and accept some authority other than mere force. Without authority, we cannot act as one, accomplishing things that require our cooperation such as producing and distributing food, playing symphonies, and caring for the poor. Musicians submit to the authority of a conductor because there are many ways to play a symphony, but if each musician pursues an individual interpretation, the result is not music. All are deprived of the joy they can only create by working together. The conductor's authority sets them free to join in beautiful music. Without it, even skilled musicians would find that each performer's actions interfered with everyone else's. Increasingly, this is the plight of our schools and of our society.

With primarily a bureaucratic understanding of authority, we have created inflexible systems that stifle and deaden us. The essence of bureaucratic control is its impersonality. You will be treated exactly like everyone else. That is, without care. Our teacher Erik Erikson pointed out that when adolescents meet the impersonal demands of institutions at just the age when they are demanding to be treated as persons, their very identity may be threatened. They may rebel "with the force of wild animals," like April.

We need an alternative.

Teaching is that alternative — not teaching as career, but teaching as method and philosophy of life. The essence of teaching is persuasion, drawing another toward what we see and love by living it and sharing it and by encouraging others to freely accept what is offered. This reliance upon persuasion grows from the faith that if what is truly good is offered as one of the choices, people will freely choose it. An important goal of teaching children should be to teach them to be teachers — not professional classroom instructors unless they are so inclined but citizens of the kingdom of hope who believe that others can become better and more powerful creatures than they are, that such a becoming would be a good thing, and that most people, when they can see, will freely choose such a course.

To believe that is to live by faith. Unfortunately, my experience of the world and of numerous schools insists that many people, and many of them avowed teachers, give their allegiance to a different faith: that of coercion and control. Controllers believe that the world can be made to work if only enough control can be built into all our systems. Unfortunately, this often leads them, step by step, to place their faith in manipulation, deception, and intimidation to attain ends that they believe are worth the costs of such methods.

A controller's authority comes from the power to reward and punish. A teacher's authority comes from her knowledge of the world. We follow teachers because they have been down the road farther and they know the way better. We believe what they say is true.

The goal of control is, well, control, but the goal of teaching is freedom. A teacher gives away the best that he or she has been given because the goal is to help the student become as powerful and as free as possible. Paternalistic authority wants the student to remain forever subservient, but teaching authority wants the student to outgrow the teacher.

Developmental models of student growth can help us avoid the confusion between authority and freedom that is too common among teachers. Since the goal of teaching is freedom, some people have concluded that children need to be unconstrained. But freedom is not an absence of discipline so much as a mastery through it. The normal developmental stages of growth into freedom are, first, obedience, then, negotiation, and, finally, freedom.

When each of our children was a toddler, exploring the world with hands and mouth, my wife and I kept a philodendron on the coffee table. Each of our five children went through a time when the poor plant got dumped on the floor or had its leaves torn off before we could intervene. We slapped little hands gently and said "No!" Of course, it would have been easier simply to move the plant out of reach until the children were older, but we felt it was better to teach them than to try to design a mini-world where they neither met nor caused trouble.

So rather than turning our home into a huge cocoon in which everything was either childproof or out of reach — a controller's strategy — Valerie and I set about teaching our children how to live. That is, we set about surrounding them with the order that we wanted them to learn. Much of the brilliance of Montessori's method derives from the profound insight that children grow by being held in a place of order and taught to sustain that order. The rhythm of teaching, at every level, is holding and contradicting: we hold the person and sustain the order and at the same time we contradict actions that threaten or destroy that order. Of course, this approach also has limits. Cleaning solvents, prescription medicines, and those other things that represented genuine dangers *were* put out of reach. But the philodendron was sacrificed to an ideal: it is better to

awaken children than to pad the rooms where they are sleepwalking.

A principal I worked for abolished the student council because the students did not know parliamentary procedure, and their meetings, which he supervised, were disorderly. He canceled dances because some students showed up drunk and rowdy. He canceled the science fair after some display items were stolen. He was not seeking ways to teach students but ways to curtail their opportunities for mischief, and his policies were not solutions but abdications of his responsibility to make solutions.

It is true that when you give people opportunities they are not yet responsible enough to manage prudently, they will often act badly, like my daughter joyfully shredding the leaves of our forlorn-looking philodendron. But such actions are only problems when your goal is "appropriate behavior" — if your goal is free and intelligent action, they are teaching opportunities.

We begin with obedience because it is as necessary to freedom as air resistance is to flight. When I slapped my daughter's hand and said "No!" what did I want her to learn? I would have been deeply disappointed if she had learned that plants are never to be touched, even though from her child's perspective that must at first have seemed to be my intent. I wanted her to learn things she could not then understand. "Thou shalt not touch the philodendron" was not a law that expressed our final will. It was only a means to a deeper law that might be expressed "Thou shalt respect living things," or "Thou shalt live in a house of order." And beyond these laws was a higher reality: "Thou shalt love plants."

Our philodendron rule was given in faith that our daughter would question it, not in a spirit of rebellion but out of hunger to know and understand. We knew she would question the rule, and we knew that as her questioning spirit became more mature, our answers — both implicit and explicit — would lead her toward understanding what we really wanted. Eventually, we allowed her to help with some tasks, such as watering the plants. As she asked to do more, we negotiated with her, and gradually her responsibilities and freedom increased to keep pace with her understanding.

In time, the philodendron rule became irrelevant as she learned that plants not only could be touched, but *should* be touched. They could be pruned, re-potted, fertilized, and enjoyed. Beneath the philodendron rule lay deeper laws, more difficult to understand but *more liberating to live.*

Our rules in many organizations, including schools, are not the highest standard to which we aspire. They are often the lowest standard that we will accept, the lower limit of the realm, the point below which we will shift to coercive methods. In the absence of virtue, we are forced to compel obedience. But we should never be satisfied with obedience or think it is our goal. The higher reality that we are trying to teach — freedom — can't be legislated, but it is death to forget it.

As organizations that are committed to control rather than to human growth deteriorate, regulations flourish as desperation for order becomes a desperate grasping for further control. Predictably, the controls often aggravate a spirit of protest and rebellion. All sides lose faith in teaching and begin to fight for control. We put much effort into error-avoidance (hiding the philodendron) rather than goal-seeking (teaching a good relationship with plants). Imagine the difficulty a child would have learning to walk if he were protected from falling. If his every slight imbalance was met swiftly with a hand that corrected it, the child might not fall, but he also might not learn balance, finding limits by falling past them. If the entire room were padded, the toddler might find it impossible to get hurt but also impossible to walk.

By the time I got to know April, her identity at school was almost completely that of a rebel. She had been punished and punished and punished, but she had been taught very little. She had been asked to comply, but she hadn't yet trusted any invitations to join. I knew the school and the staff well enough to suspect that most teachers were seeing April in terms of her past and her present, which were troubled. When we respond to students on any terms except hope and faith in their future, we destroy the bonds of teachability. As our teacher Plato has told us, the art of teaching is near to the art of seduction. Both succeed by cherishing the other. I didn't need to get angry at my daughter for wrecking a plant because I was living partly in her future, which, since I could see it better than she, I was able to guide her toward. In that future, she joined me in an order that I loved.

In a good school, as in a good town, sustaining a good order is the daily work of everyone. Understanding the wisdom and necessity of that order should be the central preoccupation of the curriculum. Another name for such an order is "community." Whereas bureaucracies exist by establishing controls to enforce their policies, communities come into being when people freely choose to live by shared principles.

A faith in teaching and freedom is the first such principle. The work of teaching this to ourselves and to our children should be the central work of our schools. From this emerge three other closely related principles that we also need to learn and teach better: a commit-

ment to stewardship rather than ownership as the means of seeing that the needful things are done, a commitment to ecological rather than fragmented thinking, and a commitment to working beyond diversity amid a larger unity.

Stewardship as an alternative to competition and ownership

One of the early pleasures of my marriage was brought to me by living in the place where my wife's father had worked, building corrals and planting trees. Though he died before I could know him, walking the places he walked and seeing the work he left for us drew me closer to him. Though he didn't survive to help his daughter directly, the good work he did continued to benefit her long after he was gone. Just before he died, he moved a mountain ash from the foothills to what became our yard. It couldn't have been more than a couple feet tall the last time he saw it. Each year as I pruned and watered it, I thought about his life. The tree was taller than our house and every fall when it bore enormous clusters of brilliant red berries, I shared the world with him. Without me to be glad for it, some of his work would have been wasted. Without him, my life would have been less abundant. Though we missed each other in time, we are bound to one another through stewardship.

Stewardship is easy to understand when we discuss the earth, since it's easy to see that the land outlasts all those who live through it, but we can also begin to understand the ways we are stewards of many other things — the learning and wisdom of the past, for example. It does the world no good that people once struggled against ignorance and found light if that learning is not kept alive in each generation by stewards of it, who spend the hard hours and years needed to understand the work of others, who keep that knowledge in good order through their own efforts in the world, and who dedicate some part of their time to passing it on to those who are younger. A library filled with life's wisdom can't help us face our difficulties if we don't study, if we are not stewards of what it holds.

Stewardship is not the same as collective ownership, which doesn't necessarily dissolve the destructive tendencies inherent in conceiving of the world as something we possess rather than as something to which we belong. Ownership tends to establish a competitive relationship between us and nature as well as between ourselves and other people. Collective ownership can be even worse than individual ownership when it undermines the commitment to personal responsibility that is the hallmark of stewardship. Ownership may or may not lead to care, but stewardship, by definition, always does.

Understanding stewardship can help us understand the liberating possibilities of authority. One who acts as a steward over something — a parent over a family, a farmer over a farm, a teacher over a class, a priest over a parish, a physician over a skilled procedure, a talented singer over a voice, a wealthy person over a business — will not realize his gifts without authority to carry out his stewardship. To say that a farmer is "only" a steward of his land does not mean that he must allow others to come and go without constraints, making such use of it as they see fit. Farms — as well as wealth, intelligence, and talent — are given to persons for the benefit of the community, and gifts, in all their forms, create obligations. The farmer's obligation to care for the land gives him authority.

When we act as if organizations were contests for control, we tend to become jealous of the authority of others. When we begin seeing them as ordered networks of nested stewardships, we can more easily see that in protecting the freedom of others to exercise authority, we are protecting our own. To be good stewards, principals need authority to decide many issues that affect more than one classroom, especially those over which teachers may disagree. Similarly, teachers need authority to keep their classrooms safe and work-oriented, to ensure that each student is cherished and invited to join. And students need some authority over their own learning as well as over school facilities and equipment they are privileged to use.

The better we understand the way stewards need authority as well as accountability, the more likely we are to be able to resolve conflicts. Many disagreements in schools are less over what is done than who gets to decide. When we place our faith in control, we have trouble knowing where to stop. The administrative state we are creating spreads its tentacles into every reach of our lives, searching for noncompliance that interferes with its plans. But as we place our faith in stewardship, handling problems with a strong bias in favor of teaching rather than coercing, we become deeply attentive to limits and more ready to grant others freedom.

Some decisions belong to persons. Some belong to families. Some belong to teachers. They don't all belong to administrators or boards. In schools committed to stewardships, teachers and other authorities would teach respect for authority by ensuring that the authority they exercise is respectful. In tribes that pass on their morality and *ethos* through customs and rituals, those who hold the authority to perform these rituals do not own the authority in the way that one might own a

pocket knife. Rather, they are stewards of an authority to which they must be as submissive as any. When they use such authority as a personal possession, they begin the process of destroying it.

The hard work we face is not tearing down central authority in the name of empowerment but balancing the many levels in a school, clarifying which decisions belong with the student, which with the family, and which with the administration.

Through understanding stewardships better, we can move toward understanding cooperation better. The alternative is unlimited competition, which in practice amounts to little more than a political theory of anarchy in which the wealthy and powerful always defeat the poor and weak, in which secrecy and lies triumph over openness and honesty.

We have too often tried to substitute competition for stewardship, and our schools thereby tend toward anarchy, filled not with students trying to understand the old verities of truth, beauty, and goodness, which command little respect in the market, but with students imitating many of their teachers in trying to get as much as they can as quickly and easily as possible. Competition motivates only those who think they might win. Students like April, who began losing early, are soon encouraged to become hostile toward the game. To admit an interest in it is to accept failure.

Stewards are judged by the use they make of the gifts they have been given, not by how they compare with others. A school that is a gathering of teachers rather than taskmasters or controllers establishes an alternative economy, an economy of gifts, where every person is a student, laboring to receive the best that has yet been created through the human spirit, and where every person is a teacher, laboring to give away what has been received. Children who grow up in loving families already know much of this way of life. For children like April, school may be their only chance to experience it.

A society of careful stewards creates abundance. Despite propaganda to the contrary, unconstrained competition leads to scarcity. As we fan desires for the highest test scores and access to a few lucrative jobs, we create failures for the many, fostering indifference, docility, and open hostility among them in the name of success for the few. We identify the problems we thereby cause, mounting ever more costly programs to mitigate the symptoms of selfishness that are legion among us, without seeing that the problems are as much a product of the system as are the honor students. By design we teach our children that their worth is determined by their readiness to defeat their fellows in the scramble for a handful of bright tokens tossed among them.

If teachers struggle to learn to speak and think in the language of stewardship while resisting the pressure to speak and think the language of behaviorism, which has become the official jargon of public education, and the language of the economy, which has become the official jargon of society, they will go far toward clarifying a better order for themselves and their students. Profound changes will follow.

Toward an ecological view of teaching

Caring for success has driven underground other and better forms of caring: caring for others, caring for the earth, caring for ideas. Our world doesn't need more successful people nearly as urgently as it needs more good people. If we are committed to building a world where justice, equality, peace, and abundance are serious goals, we need to pursue an education for our children and for ourselves that takes these goals seriously.

We can look to ecologists for guidance. Our best models for understanding networks of nested stewardships have been created by ecologists trying to better understand ecosystems. They have done pioneering work in advancing our understanding of complex orders and the way decision-making is distributed throughout them.

A couple of years ago, I was lifting my rototiller into the back of my pickup truck. It slipped, and my hand was caught between a sheet metal panel and the side of the truck bed. The sheet metal was sharp, and it severed the tendons in one of my fingers. It was eerie to exert conscious effort to move one of my fingers and to get no result. Nothing. The finger was freed from my will. I couldn't feel where the command from my conscious mind went, and I was made aware of the strangeness that had always been there: I didn't consciously *know* how the system worked that allowed me to move my finger. Each day as we go about our business mostly unconscious of it, millions of cells in our own body are born, millions do the work they have been created to do, and millions of them die. As far as I know, they don't know that I exist.

The scientist Lewis Thomas, watching ants busily scurrying across the ground, said that the movement of individual ants appeared random and confused. They struggled against obstacles, took detours, and appeared to have no clear idea of what they were doing or were supposed to be doing. But as he shifted his focus to the whole colony, he saw the work that was being done, smoothly and efficiently. Individual ants appeared to be neurons in one large nervous system, as

though the entire colony were one mind, possessed of an intelligence and a purpose of which the individual ants were only dimly aware.

Barry Lopez watched herds of musk oxen in the north approached by Arctic wolves. Without apparent communication, they moved together into a circle around the calves and drove the wolves away with their hooves. They became, when they needed to, one organism with an intelligence and a purpose that no one of them on its own could fulfill.

Aldo Leopold saw an even bigger picture. "You cannot love the game without loving the predator," he told us. "The land is a single organism."

The most important contribution of ecologists has been their increasingly precise descriptions of the way every whole is also a part of a yet larger whole, and that populations are embedded in communities, communities within ecosystems, and ecosystems within the earth, which is one entity. This is a way of seeing that our greatest teachers have always understood. For example, this way of seeing leads us to realize that if what is taught in history and literature classrooms about the way human beings need to live to enjoy freedom and dignity contradicts what is said about school discipline, the school is hypocritical, and students will always see it.

The main reason for studying the humanities is to understand how to live, and the disciplinary approach used in the school should grow out of these studies as naturally and seamlessly as the actions of a good person grow out of what he believes. The curriculum and all school policies should form a single teaching, representing our best understanding so far about how we must live. The discourse at school board meetings should be deeply informed by the principles that adults are consciously trying to pass on to their children in the classrooms. It can't be any other way, if we take our teaching seriously. Needless to say, if teachers don't lead the way, speaking with both learning and courage, such a state is unlikely to occur.

Unlike cells and musk oxen, humans achieve what they can of unity through discourse. The colony of muscle cells that are a human heart normally contract in unity, constrained by an electrical pulse, a message from higher in the system. Their unity creates a strong heartbeat. When the electrical message is absent, the cells go on contracting on their own. The heart quivers in an uncoordinated and ineffective way the French call ventricular anarchy. Lay people call it a heart attack. When most people no longer accept constraining messages that unify them to a common set of principles, the community soon suffers its own cataclysms.

Though the modern world is highly organized, it is not very orderly. People are held together, barely in many cases, by a thousand subtle forms of coercion, but their individual wills are not in harmony. In this our world is becoming somewhat more like a war than a community. Organizations to promote the interests of this or that group proliferate like billboards. For the most part, these organizations are shamelessly competitive, seeking not justice or some view of the common good that most people could join, though they often use such language. Instead, they seek their own interests, which they define mostly as accumulating wealth in their own coffers and deflecting costs to some other group.

The shrill polarization that results from arguments designed to win rather than to clarify the truth has led many Americans to become cynical 'about the public realm and the contests that are fought there. As discourse, is more and more often used to deceive rather than to reveal, more and more people withdraw from taking any arguments seriously, and we gradually lose the power of discourse which we need if we are to live together. Instead of struggling for honest discourse, people merely pay union dues or send checks to lobbying organizations that protect their interests.

Teachers, more than any other group, have a moral responsibility to reject this approach for themselves. Teachers need to be committed to truth in somewhat the same way physicians need to be committed to health. Before physicians are admitted to their profession, they must take an oath to "First, do no harm." The analogous oath for teachers would be, "First, tell no fibs." If teachers took such an oath and struggled to honor it, this by itself would revolutionize our schools.

For a long time I thought the oath should be, "Always tell the truth," but though we always know when we are lying (which is one of the strongest arguments against those who would deny the whole concept of truth), to tell the truth we have to know the truth, but it is seldom easy to know, and sometimes it is impossible. Being committed to pursuing the truth isn't the same as claiming a final possession of it. No one has ultimate knowledge of the truth.

The various academic disciplines, however, represent our best approach to it. Their standards and methods are neither arbitrary nor capricious. They've been developed through centuries of hard work. Keeping these standards and passing them on in good working order is the unique stewardship of teachers. Since the truth is too various and complex to be contained within the bounds of any one discipline, we have developed diverse disciplines of math, science, literature, history, and art. All are important, but beyond the diversity lies

a unity that our teacher John Dewey, among others, has urged us to remember: "There is only one genuine discipline," he said. "Namely, that which takes effect in producing habits of observation and judgment that ensure intelligent desires."

Teachers, like everyone else, face temptations to say what will be popular or further their cause rather than what they honestly believe. Intelligent desire will help them see that if they are seduced by dreams of success and power, they become merely another special interest group, and they give up the authority that should be especially theirs: the authority of a commitment to finding the truth. The more they are motivated by self-interest, the less reason parents or students have to respect them. As they trade the authority of teachers for that of controllers, parents and students will organize to resist them.

Unfortunately, truth-sayers are sometimes ignored until catastrophe becomes their ally. Dust from Colorado blew through the halls of Congress in Washington, D.C., before a bill was passed in March 1935 creating the Soil Conservation Service. April 14 of that year was called Black Sunday. The soil was lifted from the dry plains of Kansas and Colorado by raging winds that continued for hours. Livestock and wildlife perished as mud filled their lungs and their hides were sandblasted. Humans caught outside had only minutes to find shelter, and driving was impossible. The earth had become uninhabitable.

The next day, with dust still hanging in the air, Aldo Leopold at the University of Wisconsin said that "society had developed an unstable adjustment to its environment, from which both must eventually suffer damage or even ruin." After asking whether the ruin could be made to sustain life, he asked, "yet who wants to be a cell in that kind of a body politic? I for one do not." In that speech, he first used the phrase "land ethic" and began teaching that we need to learn to judge our actions by their effect on the earth, since our entire society is embedded in nature in much the way each of us is embedded in society. What we do to the earth happens to us.

This, too, is the work of the teacher: to take from catastrophe not despair but further learning and to go on articulating the way a better world could work, refusing to abandon hope even as things seem to be falling apart. In hard times, nothing is so vital as an unyielding commitment to better times.

We have among us plenty of people who lower their aim to sell their wares. A speaker brought into my community recently to discuss AIDS sparked a controversy when he chose to use violently obscene language to shock students into noticing him. Those who defended his presentation said that people had to be "realistic" about kids these days, pointing out that the students had heard such language before.

During the debate, my thoughts returned to April and a dozen other students similar to her. It was true they had heard such language. They knew all about violent language and violent sex. But they had heard far too little language that placed sex in a different context, that created a different order, a different reality. She would not be free to choose until she was presented with a powerfully articulated and powerfully lived alternative, a real order that adults created, sustained, and offered. We were failing to do that.

To do it, we need to care enough about such an order to practice it as a daily habit. Many schools are failing to create human environments where joy and peace and compassion are realities for the students. Building such an environment is the most important work of schools. If it doesn't exist, the students are unlikely to choose to join. Fortunately, one joyful, peaceful, and compassionate teacher can create such an environment for at least a few students and can even buffer them somewhat from a routinized, contentious, and impersonal bureaucracy. However, working contrary to an organization's norms takes tremendous energy, like staying warm above the Arctic circle.

By ignoring ecological principles and designing our schools as bureaucracies of unrelated specialties rather than as unified hierarchies of stewardship, like families, we've made the best teaching very difficult. At the same time, many of us have turned our families into adjuncts to the economy, living lives too far away for our children to join. Excluded from real worlds both at home and at school, they've turned to the corporate storytellers of music and movies for moral guidance, and they've turned to unintelligent peer cultures for a sense of belonging.

This amounts to cultural suicide. We now face a moral dust bowl of bad practices repaid with a vengeance, in the form of illegitimate births, violence, drug wars, and homelessness. The crime in our cities has crept into our suburbs and is emerging in our most rural areas. And we continue to think of education as a service provided by the government rather than as an activity through which we live, both as teachers and as learners. Leopold came to see that conservation — finding a way to live in balance and harmony — could not ultimately be accomplished by government action because "the real substance" did not lie in "the physical processes of government, but in the mental processes of citizens."

He stressed that "the basic defect [in our approach] is this: We have not asked the citizen to assume any real

responsibility. We have told him that if he will vote right, obey the law, join some organizations... the government will do the rest.

"The formula is too easy to accomplish anything worthwhile. It calls for no effort or sacrifice; no change in our philosophy of values.... No important change in human conduct is ever accomplished without an internal change in our intellectual emphases, our loyalties, our affections, and our convictions."

Unity and the search for truth

These are troubled times. They have to be. We insist on it. But we are free whenever we so choose to walk out of our noisy contentions, to interrupt our endless tasks and listen to each other, not just the chatter about the incessant rush of events, but the slower and quieter talk that lies behind it about what we hope and what we fear and what we want. We are free to talk less about the world that surrounds us and more about the world we would like to build. We are free to plan with others ways of moving closer to that world. We are free to commune not just with those who are here now, but with those who have been here before, to search the world for sacred writings, for any text that advances our understanding, for all the forms of scripture, all the ways the voice of the divine is filtered through the human voices of this realm.

We are free to struggle not against some human enemy who needs to be destroyed but against the anger and hurt and selfishness in our own hearts that makes us want to win and against the unholiness that runs through our whole history as individuals and as a world, which destroys us as we try to destroy it but that lets us go as we let it go. We are free to live not in fear, not in loneliness, not in endless strategies to protect ourselves and get our share, but as students, accepting the gifts that others bring, and as teachers, giving away what we have been given. And we are free to invite our children, all our children, to join us. If we do, we will be okay, and when we are, they will be.

We live and work in a world with many children like April who lead lives marred by violence and destruction, bringing pain to themselves and all those around them. We hear on the news of hunger and homelessness and war around the world, and nations conduct their business according to the wisdom of men, meeting evil with evil and balancing terror with terror.

In such a world, we can build only one enduring community: the community of fellow seekers of the truth. People who want lesser things — acclaim, money, popularity, success, security — will be easily pitted against one another in hard times, but a person who honestly desires understanding has no need of enemies. It is as hard for many people to live without enemies as it is to live without money. People won't live without meaning, and contention fills empty lives with purpose.

Our loneliness and urgency lead us to look for large, quick solutions. When I was a principal, I created and partially implemented a schoolwide reform plan that changed the curriculum, the teacher evaluation system, the student assessment procedures, and the structure of the school day. I put on workshops, I made fundamental changes to the schedule, and I established a host of new policies. As I watched who was threatened and why, I came to the conclusion that although organizational structures can help and hinder our work, the homely truth was that good people could make the traditional structure work, and that weak people could subvert any new structure that was created. I became more and more convinced that the hard work in education was not reforming institutions but helping people grow. This can only be done one person at a time. The solutions to our problems will not come quickly from political action, but slowly, from teaching.

I also learned that to do the real work, no one needs to await better times. We can follow nature's model for creating a new order. Entire plant communities are regularly displaced by new communities, but this isn't done in a grand gesture with trumpets and proclamations. It often happens so gradually that an unobservant stroller may be unaware that he is standing in the midst of momentous changes. Nature does her work through principles we can all use.

I call it the knapweed strategy. A few years ago, knapweed was nonexistent in western Montana. Today, it has displaced other plants on thousands of acres. Knapweed's first principle is alertness to opportunity. Any disturbance to the land is viewed as a possible chance to get a toehold. No opening is too slight for at least an attempt. A single plant may produce 20,000 seeds, broadcasting them everywhere in a biological form of hope that a few might take root. If the first knapweed plant could consider the vast expanse before it and could think of all that had to be done, it would tend toward despair.

This is closely related to the second principle: patience. Knapweed colonies don't take over entire prairies in a single season. Seeds may remain in the soil for 15 years, awaiting the right conditions to germinate. Deep social changes don't come about because someone pushes a political lever. They come about because individuals, one by one, change their hearts and minds. Changing hearts and minds may be slow work, but it's the only work that ultimately matters. For teachers, it's the only real work.

And it is accomplished through the third principle: faith in small things. Accepting any tiny toehold they are given, knapweed plants put their resources to work establishing their roots and making seeds to scatter freely wherever they can. They aren't distracted from doing what they can by thinking about all that they can't do.

Even the knapweed strategy requires courage, though. Teachers who talk about goodness and truth as if they matter will invite ridicule from educationists who think they have a technique that trumps personal relationship, from therapists who specialize in skills and are alarmed by talk of principles, by academics who fear stepping out of the refuge of objectivity, and from administrators who are stressed and annoyed by complexity.

We can restore our courage by seeking out colleagues who share our hopes. If we can't find them, we can seek the company of books and essays written by kindred spirits. Courage, like other virtues, can be learned and practiced. It amounts, finally, to admitting to ourselves and then to others what we honestly do love and what we honestly do care about.

Thankfully, we are sometimes blessed with other moments that bolster our courage. Last week, I ran into April again. She's in her early twenties now, with a child of her own. She crossed the lobby of a busy theater to come see me. She had a charming smile and wanted to tell me what she's doing. She's taking classes part time at a junior college, she has a steady job, and her life has a fair amount of stability and order. It would be easy to find graduates who have accomplished more by the world's usual way of reckoning, but a more important measure is that her life has more light, more grace, and more hope than her mother's life.

I was touched that she wanted to tell me, that she believed I would care. Never once in my conversations with her at school did she smile or meet my overtures with anything but hostility. But at some level, she heard.

I choose to believe that my clumsy and inarticulate efforts to tell her that I knew of a better world and that I wanted her to live in it with me were a part of helping her. I now think that the worst mistake I made with her was that out of fear of seeming unprofessional, of being mocked, of being misunderstood and a dozen other similar weaknesses, I never told her that I loved her. Thankfully, young people often hear such things, even when we don't say them. The important thing is that we make them true.

Book Reviews

A Field Guide to Educational Renewal

by the Vermont Restructuring Collabortive

Published by Holistic Education Press (P.O. Box 328, Brandon, VT 05733-0328), 1994; 347 pages, paperback, $22.50.

Reviewed by Wendy Mobilia

Change that meaningfully touches children is often individual and insular. Like chick embryos feeding on surrounding nutrients, motivated teachers throughout the past decade have proven themselves capable of considerable growth within their classroom shells. With knowledge gained through staff development or other catalytic experiences, these teachers have quietly and individually grown and evolved in their interactions with children — coaching rather than telling, encouraging cooperative and collaborative work and play in learning communities, creating experiential challenges that allow performance demonstrations, building respect for diversity, fostering the development of essential skills and ethical perspectives, looking at assessment as far more than a process of narrowly defined ranking, and so much more.

Change that occurs at the point of teacher-student interaction is the change that ultimately matters. Yet predictably, there are limitations to the growth that is possible in the insular and compact environments of individual classrooms. There comes a time when further growth requires that the educator peck through the shell — to discover new light, new sustenance, and the value of contact and interplay with colleagues — to enter into the development process that will make it possible to create new embryos and to produce the critical mass that widespread reform demands.

One of the most significant impediments to deep and meaningful educational restructuring of our schools has been the lack of a hospitable and nurturing environment outside the classroom. It can sometimes be difficult simply for teachers to breathe. A general lack of vision, mistrusting and fearful colleagues, "by-the-book" administrators, disinterested or hostile community members, an absence of planning time, and rigid grading and reporting structures are all worst-case examples of environmental poisons that encourage innovative teachers to remain in their embryonic phase or even to quietly expire in their shells.

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Over the past several years, educational leaders in the state of Vermont have recognized the need for environmental renewal and have assumed the hard work of creating a healthy medium for sustained growth. In *The Field Guide to Educational Renewal*, a cadre of administrators committed to reform, brought together by the University of Vermont, have paused reflectively to catch their breath from their collaborative efforts and to recount the emerging stories of their continuing labor. The stated purpose of the telling is "to offer a cohesive rationale and philosophical direction for educational reform, to identify initiatives that have been successful in advancing these reform directions, and to illustrate how these activities can be successfully implemented in the real world of education."

The authors do this with competence. They do indeed describe a clear rationale for change and have a shared sense of direction for reform. They offer a number of practical, even inspiring examples of restructuring efforts. There is a high level of self-awareness, both in terms of what has been successful and what remains to be done. William Mathis creates an accurate portrayal in the opening chapter when he says, "In many ways, this book is a record of a number of field educators who have embarked on new and unknown paths in restructuring and renewing the schools for which they are responsible.... They are certain of the demands which drive them forward.." But, as he continues, "they are far less certain of the paths they should take." Indeed, the book describes a diversity of reform efforts, which are at different stages of development and which employ a variety of strategic planning, leadership, and implementation models.

The different strategies of environmental renewal in Vermont exhibit both strengths and weaknesses. Reform efforts have taken advantage of a variety of entry points. Some districts have formed partnerships with higher education institutions — building capacity for change through staff development and through consultation that supports the entire school system. Others have focused on assessment processes as the driving force behind reform. Leadership training, inclusion, technology, instructional methodology, budgets, and governance structures have each served either as stimuli or sustenance in Vermont school districts.

These efforts reveal the valuable potential in matching strategies with local conditions of readiness. Sharing these experiences among the authoring leadership group has strengthened and facilitated change processes in individual schools and districts. They've learned

from one another's efforts and responded with flexibility as they have felt their way through change. The documentation of the thinking behind this diversity of approaches has the potential to similarly reward readers enmeshed in restructuring.

The reality of the educational environment of which we are all aware is characterized by a complexity of conditions, approaches, choices, and forces for change. To begin to make sense of it all and move themselves forward, the authoring group reached consensus on a set of guiding principles. At the heart of these principles is the straightforward and demanding requirement for "success for every student — no exceptions, no excuses." Some of the others are: higher-order skills, emphasis on cooperation, active and interdisciplinary learning, and early education. It is an admirable list, but it reveals a weakness. A set of common directions that is founded largely on educational strategies and mechanisms falls short of a true vision of what Vermont educators and other citizens really want as ultimate outcomes for their children. The broad range of paths that schools have taken to effect reform may be as much a result of this lack of common vision as it is a result of differing local conditions. The authors appear to be aware of a need for such a vision. They included in their discussions a short piece by Richard Mills, Vermont's Commissioner of Education. However, the vision he describes narrowly focuses on what children, teachers, administrators, and parents will be "doing" within the school context. It would be of far greater value if he extended his dream to include a sense of who children will *be* while they are in school and when they leave it. What will they be like? What should they know and be able to do? How will they connect to their world?

These are most certainly difficult questions. They are tough to answer within a system as small as a family. Answering them at a state level in the absence of any real agreement on a societal level regarding common values may be an unrealistic expectation (although I will ever continue to believe that it can be done). However, this lack of a coherent vision, which places children at the center, highlights a nagging and generalized concern that developed as I read the book. The authors are consciously and commendably grappling with the environmental issues within which education takes place. They offer some wonderful ideas, have had significant results, and, perhaps, are evolving toward a vision. Understandably, such an environmental focus by administrators results in a concentration on concepts and approaches that are somewhat at a distance from the reality of "the child." But, I would caution that because the environment and the people who interact with it are so interdependent, taking action on one without a conscious awareness of connection to the other may well prove to be a formidable obstacle to truly meaningful and coherent change. A great deal can occur under the auspices of common principles and still work toward very different results for children. Authentic reform demands a crystal-clear image of ultimate outcomes.

Because the book has a number of individual authors, some articles are more readable, utilitarian or thought-provoking than others. It may not be best approached as cover-to-cover reading. Janet Jamieson's chapter on "Leadership for Systemic Change" discusses a particularly valuable set of leadership qualities from which administrators can learn. The descriptions of school and higher education partnerships provide a provocative model of how higher education can effectively move from the fragmented role of "education vendor" to one of a fully involved colleagial guide.

The process of reform is well under way in Vermont, and it is interesting to note that the work of educational renewal has been facilitated by some rather remarkable conditions. The Vermont State Department of Education is not only described as supportive and involved, it has demonstrated that it encourages and stimulates individual initiative. The statewide portfolio venture, now several years old, has become an irresistible force for unanticipated reform. The University of Vermont has engaged in the processes of school improvement with a set of innovative program designs. And, the overall spirit of reform is marked by a straightforward northern New England spirit of "just do it" volunteer-

ism, which has allowed for rapid educational transformation in many communities without an extensive influx of dollars. An environmental cleanup in other states and regions will most certainly look quite different. Yet, the principles are applicable. The driving forces are more than familiar. The need for teachers to break out of their isolated shells to a fully nurturing environment is urgent. *The Field Guide to Educational Renewal* is well worth consideration as a resource for anyone involved in the processes of educational reform.

The Contemplative Practitioner: Meditation in Education and the Professions

by John P. Miller

Published by Bergin & Garvey (Westport, CT), 1994

Reviewed by Dale T. Snauwaert

In *The Contemplative Practitioner*, John Miller points us in a very important direction beyond technical rationality and even reflective practice toward a contemplative orientation. Recent books such as Thomas Moore's *Care of the Soul* and Sogyal Rinpoche's *The Tibetan Book of Living and Dying* powerfully assert the significance of living a soulful life, a life that is deeply contemplative. From this perspective, it is Being or Soul that is the most important element in our lives in that the quality of our inner life determines our conceptions of, and practices in, the world. In *The Contemplative Practitioner* John Miller attempts to integrate such a perspective into our educational thought.

Miller situates contemplative practice in Donald Schon's notion of the reflective practitioner. Schon attempts to move beyond technical rationality, an approach to professionalism that is based upon instrumental problem solving, disciplinary authority, and a dualism between theory and practice. Schon opposes technical rationality as a model for professional practice on the grounds that it neglects and distorts the organic nature of practice. He favors an approach that is more artistic and intuitive, based upon elements of tacit knowing as a fundamental guide to successful practice. From this perspective, theory and practice are integrated on the basis of an intuitive grasp of the organic unity between knowledge and action.

Miller, while recognizing the value of reflection, maintains that it does not go far enough. Miller argues that reflection is inherently dualistic for it entails, by definition, a separation between the subject and object of reflection. For Miller, this leads down the road toward fragmentation and compartmentalization. Reflection does not provide Miller the integration, the unity, that he is looking for. What it lacks is a foundation in the very essence of Being. It recognizes the importance of intuition but does not recognize the significance of maintaining an awareness of Being in action, or rather the significance of performing action while established in Being.

Contemplation in this sense is synthetic and holistic: it recognizes the fundamental interconnectedness of things; it fulfills our need for integration and unity and is based upon a radical openness to experience. It is a state of what can be called "ontological knowing," reminiscent of St. Bonaventure's eye of contemplation and/or the experience of the pristine state of mind Tibetan Buddhists refer to as *rigpa*. Miller maintains that such an awareness, developed through the contemplative practices of various systems of meditation, is essential for living a full and meaningful life.

This is a very important and significant issue, for it brings soulfulness and spirituality (as opposed to religion) into our thinking about education. We are faced with myriad social and educational problems (injustice, poverty, cultural decay, ecological destruction, rampant individualism, fragmentation, etc.), which can only be met with an expanded and peaceful sense of compassion. As Buddhists suggest: the social face of wisdom is compassion, and wisdom entails self-knowledge. How can we know ourselves, and thus develop the compassion necessary to meet our troubled times, without contemplative experience?

While Miller points us in this direction, crucial questions are left open. For example, what is, in detail, the relationship between the triad of Being, theory, and practice? What would a contemplative pedagogical practice entail? Is contemplation central to holistic conceptions of education? What place does "interconnection" and "fundamental unity" have in curriculum organization and school organization more generally?

What Miller provides is a useful introduction to contemplative practice: presenting the beginnings of a rationale for contemplative practice, providing a useful discussion of several meditation techniques, describing the importance of contemplative practice in the lives of well-known contemplatives, and discussing his experience and use of meditation in higher education. However, the analytically trained skeptic and those with a sophisticated interest in meditation and holistic education will leave the book yearning for a more detailed defense and explication of the philosophical foundations of contemplative practice.

Making a Difference College Guide: Education for a Better World

Edited by Miriam Weinstein

Published by Sage Press (524 San Anselmo Ave. #225, San Anselmo, CA 94960, 800-218-4242), 214 pages, paperback, $12.95.

Reviewed by Gael Rockwell Minton

The process of education, ideally, is rooted in a vision of making a difference. Changing a single person's life affects other individuals, communities, regions, a nation, and the global community. As this century and millennium come to an end, there is great restlessness in the human community, driven partly by increasing awareness of connectedness and dependence of all on the same life-support system of earth. For many, this restlessness involves hope more than despair. A hope grounded in commitment, challenge, and caring with a sense that in crisis there is opportunity. Reading Miriam Weinstein's *Making a Difference College Guide: Education for a Better World* stimulates a consciousness of a multiplicity of opportunities.

This modest paperback is bursting with the visions and offerings of 70 United States colleges and universities in 29 states. Beginning with a desire to provide information for young adults on socially and environmentally responsible undergraduate programs, Weinstein polled selected schools with a number of questions including:

- How do you integrate your institution's mission with your educational approach?
- How do you foster sensitivity to minority and other worldviews?
- How do you foster ethics, critical thinking, social activism, and responsibility to community, the Earth, and future generations?
- What is the percentage of male, female, and minority faculty?

The schools are presented alphabetically ending with an index by state. The general format begins with the size, location, and admissions policy. The latter identifies whether admissions is noncompetitive, not selective, or minimally, moderately, very, highly, or most selective. Second, there is a description of the school's philosophy, setting, and campus environment followed by a section called "Making a Difference Studies" with degree concentrations, requirements, and names of courses. Finally, there is factual information on students, faculty, tuition costs, and admissions deadlines and the address and phone number. There are also several request-more-information tear-out cards at the end of the book.

Gael Rockwell Minton, M.S.W., M.S., is a doctoral student in environmental health sciences at the Union Institute Graduate School. She is Director of Admissions and Adjunct Faculty at Antioch New England Graduate School in Keene, NH, and Vice President of the National Association of Graduate Admissions Professionals.

Weinstein has brought together several education experts whose opening essays speak to values of environmental protection, social equity, and conflict resolution, connecting education and future employment and community service training. The list of 52 "Making a Difference" career areas gives a sense of the broad scope as well as allows any prospective student to identify their particular interests and inclinations. Especially useful are Martin Nemko's "The College Report Card: A Tool For Choosing From Among Your Top-Choice Colleges" and "How to Test-Drive a College." The former has 47 profound questions while the latter is filled with humor and gems like Nemko's recommended chant "Better good teachers in wooden buildings than wooden teachers in good buildings" (pp. 11–17).

There is a balance of colleges: small to large, rural and urban, low to high cost, traditional with innovative programs, well-known, less well-known, and even unknown to some readers. For example, Northland College (Ashland, Wisconsin) has a fine statement of purpose and an impressive range of technical, practical, and philosophical courses in environmental and social fields. Another school new to this reader, Jordan College Energy Institute (Comstock Park, Michigan), provides a $2400 grant to every student who does not qualify for financial aid. Many schools offer global, population, or biosphere ecology, and it is encouraging to see that there are opportunities not only to learn basic sciences but to think about the meaning and application of science in courses entitled: Feminist Science, World Science and Social Change: Then and Now, and Holistic Science: An Analysis of Science in Contemporary Society. Most of the colleges included in this guide offer opportunities for internships, community service work-for-credit, and international work and study. Morris Mitchell, founder of little-known Friends World Program at Long Island University, emphasizes that "while all life is being threatened by increasing military might and ecological ruin, a rising tide of quiet voices from all parts of the world reminds us that only knowledge inspired by justice and compassion has the power to save us and save the life-sustaining power of the earth" (p. 111). This volume is testimony to the fact that higher education is responding to the demands of students and the need for a future where human society can sustain itself in relation to the natural environment.

For a nominal fee and completion of a brief questionnaire (included in the book), a prospective student may take advantage of editor Weinstein's knowledge and experience to have a personalized college search.

Finally, this reviewer hopes that Weinstein plans to do regular updates and additions to this first edition. New Hampshire is noticeably missing as are 20 other states, and the District of Columbia. Among colleges not included in this first edition are the University of New Hampshire with its "Gaia Education Outreach Institute" offering an international communities semester and The Union Institute in Cincinnati, with independently designed undergraduate degrees committed to social relevance. A future edition might also include more reference to availability of adult learner undergraduate programs. There would, I am confident, even be a demand for a *Making a Difference Graduate School Guide*. Weinstein is to be commended for launching a valuable and inspiring work first for young adults and second for all of us. Reading this book is to be moved to choose a challenging path.

Lessons of the Locker Room: The Myth of School Sports

by Andrew Miracle and Roger Rees

Published by Prometheus Books (Amherst, NY), 229 pages.

Reviewed by Leah Holland Fiorentino

In *Lessons of the Locker Room: The Myth of School Sports*, the reader is introduced to a different perspective on the nature and structure of school sports. In a rather concise format, Miracle and Rees follow the historical development of sport cultures fromtheir origins in British boarding schools to intercollegiate and interscholastic athletic programs in existence today. They then move on to explore how sport gained in stature based upon the notion that participation in sport is a requirement for good moral development. Miracle and Rees question this elevation in status and present data that suggests just the opposite, that in fact sport could have a questionable effect upon athletes.

The book further exposes popular misconceptions regarding sport participation and delinquency, the misrepresentation of material gains resulting from sport successes, and the juxtaposition of educational goals and athletic goals. The authors present data that contradicts the notion that participation in sports prevents delinquency. They also contend that athletes are misled by coaches and sport organizers with respect to "the pay-offs" of sports, and the potential life successes available to those that excel. In addition, they present arguments that alert the reader to the contradictions of athletic and educational goals in schools today as students are forced to choose between "real improvement and the short-lived glory of athletic success."

Dr. Leah Holland Fiorentino is a Clinical Professor in the Department of Physical Education and Human Performance Science at Adelphi University. She serves as the director of clinical services for the SUPPORT-PE network, which has collaborated with over 200 schools on Long Island and in the New York metropolitan area since 1989.

Having made sport participation an integral part of my life, I was totally committed to ensuring that, when old enough, my children would also be involved in sports. Recollections of my sports career are for the most part positive. Although interspersed with faded incidents that caused minor concerns, they are in general positive enough that I believed everyone should engage in some sort of sporting activity. Although memories of record times come to mind faster as veterans approach their fortieth birthday, as do the number of goals scored, gymnastic tricks performed, and assists recorded, I did have questions and concerns about the actual experiences my children would have in the world of sport and what role sport would come to play in their lives.

In this book, Miracle and Rees not only have researched the importance of sport in contemporary society but have also anticipated the types of questions and concerns that parents, teachers, administrators, and spectators may ask of the American sport structure. Their notion of the value placed on the "process" of sport (i.e., how athletes are socialized) as contrasted with the value placed on the "product" of sport (i.e., the loss of a championship game) leads readers to reflect upon their own experiences and balance their perspectives between the two extremes. As a parent, the specific questions that arose for me with respect to this balance included: Would sport have the positive influence on my children that it did on me? Would their coaches be positive motivators who cared about athletes as people and nurtured them as they would their own children? Would the end results of winning or losing make them stronger and better prepared for life? And, how would I react as a parent to this world of sport? I had been prepared as an athlete, a coach, a sports official, a physical educator, an athletic administrator, and a teacher educator, but I had no formal education as a sport parent.

Miracle and Rees investigate the concerns that many parents, coaches, and community members have with respect to the value of sport in modern society. Their notion that sport has maintained a priority status in many communities as a result of the "positive influ-

ence" of participating on a team is well substantiated by their research. The thought that athletics occupy the primary focus of schools and communities, while not the case in all communities, is true enough that it should be honestly confronted by the school administrators. In searching my own value system I wondered, would my children be able to compete in team sports or would they be more inclined to work individually? What about the interactions they would have with their peers? Would they be positive and supportive? Would they help others to achieve at the expense of their own visible success?

Miracle and Rees have developed a unique method to introduce several different societal concerns. The reader is immediately drawn into a scenario from an imaginary community that illustrates a specific point of discussion for each chapter. The introduction to the book begins with a Friday night championship football game in a small town in the Midwest. The scene is set in a fashion that we can all identify with and encourages the readers to continue with the chapter as the authors expand upon the initial notion of "Sports build character." The readers have the opportunity to identify with any of the characters in the scenarios and develop a personal relationship to each chapter. The "pep rally" scenario, which introduces the chapter on "Sport and School Unity," is particularly interesting to individuals who question the role and status that sport (including athletes, coaches, and competition) is attributed in schools today. The descriptions of the final practice for seniors initiates the discussion of the impact that sport has upon a community and the resultant stress that accompanies community support of sport. The opportunity for each reader to establish his or her own identity within the text makes the content applicable for a variety of audiences.

These opportunities to attach personal meaning to more global concerns raised additional questions in my mind as parent, coach, and teacher. Miracle and Rees succeeded in leading me to these questions through the unique manner in which they frame the information on the "process" of sport building character. Reflecting upon my own years as an athlete, I became intensely aware that the most memorable (good and bad) moments were not the result of a win, a medal, or setting a record; the moments that stand out are my interactions with other individuals, athletes, parents, coaches, officials, and the media. These areas actually shaped my

professional orientation and created the parental support that I have for children in sport. As I continued through *Lessons of the Locker Room*, I realized that the societal and social influences that surround sport are out of my direct control. I realized that those influences (not me) were going to affect my children the most.

Miracle and Rees are masters at providing enough historical background to frame the present situation without losing the more "entertainment-directed" reader. The historical background is intermingled with excerpts, quotes from various well-known individuals, and literary analyses, which give the reader enough information to follow the authors' sociological connections of sport with topics such as: rituals and social status, the invention of traditions, identity development and group identification, deviance and delinquency, and the development of ethics within the social structure of sport. Readers are continually challenged to question their own thoughts on the major issues of the existence of the myth that "sports build character," the place sport should take in a school system, the role sport plays in the formation of personal meanings for participants, the effect sport has on communities, and the resultant effects that sport models have on corporations and industry. The final sections of the book discuss the possibilities for the future of sport in relation to schools and society.

Undeniably, a sport experience does have an influence on the children that live through it, but the experience has a much wider impact than previously acknowledged by the general public. After reading *Lessons from the Locker Room*, I had the chance to reflect upon the concerns I had for my own children. The types of experiences my children will have in school sport will be shaped by the professionals entering the current school systems. My hope is that these professionals will all have time to read this book and consider the impact that organized athletics has on children as they make decisions that will directly impact my children. Miracle and Rees offer several options for professionals to consider with respect to the future of school sport programs; one suggests schools without sports, another sports without schools, another to begin to restructure the school sport programs that currently exist so that the focus is on the process of athletics not merely the product of athletics. I hope readers of the book will take on the challenge of redesigning school sport programs that will "... bring school athletics more in line with the goals of education... " and "... see the value in sport, but not accept the current mythology surrounding it."