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Editorial

The Silent Dialogue

In a bright, clean, colorful classroom, the teacher explained the day's schedule to an attentive group of third graders. All the while, between the thumb and index finger of her left hand, she shook, as if to speed thawing, a plastic bag containing a frozen half-section fecal pig. Through the clear plastic, the exterior face and form of the animal could be seen intact as could the cross section of the spine and interior organs when the package shifted.

In all classrooms, at all times, there is a silent dialogue — a tacit stream of meaning in which children ask and teachers respond to the most essential questions of human existence. This unspoken conversation articulates a student's spiritual life with greater force and on a greater scale than a lifetime of spiritual oratory.

The questions children ask arise from the immediate and miraculous experience that they exist — that they are immersed in a world filled with light and sound; warmth and cold; wind, sun, and rain; grasses and trees; sparrows and dogs; and an expanding community of other human beings. The questions they ask arise from their experience of their physiology woven through with expanding consciousness. They find themselves and the world in constant transformation; some horizons fade into the distance as new horizons open. Question upon question arises, circles upon circles without beginning or end: what is the world, why am I here, what am I to do? As I look at the world around me, is there any source of hope? How can I grow surrounded by violence? What can I do to overcome my experience of being alone?

These silent questions children ask are not abstractions but expressions of the worldly emergence of self. These questions rarely will submit to words or confine themselves to the explicit content of the sentence. They are evident in eyes bright in anticipation of discovery or blank with confusion; they are evident in children's stories of hope and fear, in their humor and melancholy, in their schoolyard brawls and sacred ceremonies. These questions are so fundamental that they, like rays of light, illuminate all that may be seen but are themselves invisible. They are at the center of the child's search for coherence and flow directly from his/her Being as it attempts to understand itself. When the search for coherence is overcome by confusion and when attempts at understanding bring only pain, the questions children ask are transmuted into commitments — commitments to bury themselves in sex, drugs, gangs, and the ideology of a future without hope.

The answers teachers give have little to do with the explicit content of the lessons we present. Rather, they primarily consist of the generative assumptions, beliefs, and modes of understanding conveyed through the experiences we create for our students. As we would have them develop understanding of themselves and the world through particular kinds of activity at particular times in their development, so we inform them spiritually.

The answers teachers give take the form that we give to our students' experiences — to the particular constellation of encounters we create. How do we greet the day? each other? How do we know the grasses and trees? How do we seek understanding of the animals — through studying the flight of sparrows, or the movements in muscles of horses in full stride, or the slicing of intestinal tissue from a split section of a frozen fecal pig.

The answers we as teachers provide are not abstractions but contexts and relations we promote between the children and themselves individually as well as the children and the world. As children live in relation, so they take form, so their capacities for interaction assume scope, so their motivations emerge, so their understanding unfolds. These answers are found in "the great between," not to be found either in the content of teachers' sentences or even in the world itself. They are to be found in the way we, as teachers, have children meet the worlds within and without. These answers are so fundamental that they not only bathe the world in a select spectrum but determine those aspects of existence left in shadow or utter darkness. Collectively, they respond to the child: "This is the world. This is who

you are. This is what you should do in order to become."

This silent dialogue constitutes the spiritual foundations of the curriculum. These spiritual foundations are not necessarily related to an expressed system of beliefs or values — their definitions do not hinge on distinctions between secular and religious perspectives. A study of religion or religious practice can deliver the same spiritual message as the most reductionistic, materialistic of science lessons. The message, the spiritual meaning, that children derive is a function of the contexts and relations fostered through their educational experience.

These spiritual lessons are generative, significantly influencing children's characters as they contend with both the practicalities of the day and, with varying degrees of intensity, the fundamental questions of existence. It is through the modes of relation that children learn to perceive both themselves and the world, that they create themselves and participate in the continuous creation of the world. In these contexts, children learn to experience, to translate experience into understanding, and to establish generative attitudes — attitudes that beyond all training in critical thinking give rise to the values that actually guide their judgment.

This is not to say that the fundamental issues of life ever appear as conscious speculations in the minds of either the student or the teacher or that they are given so much as five minutes of serious consideration in the course of one's life. Rather the point here is that the experiences we provide contribute to the fundamental way children, as human beings, learn to stand in and make sense of the world.

All curricula are spiritual to the extent that they constitute answers to these questions not so much in the specifics of their content but in the manner they would have the student address the world and his or her self. Along with particular skills in mathematics or reading, along with the facts of history or science, we teach children about how they may experience, interpret, and act in the world. Whether we begin with an attitude of doubt or faith, whether we seek and appreciate mystery or pure economy of effort, whether we understand that beauty abounds only to be recognized or that aesthetics is both tertiary and subjective, whether engagement or detachment yields the truth, whether we stand silent in mystery or in mystery about silence, whether we see ourselves as guided by persons and community or under the authority of bureaucracy, whether morality stems from love or self-interest, whether "right" and "wrong" are terms of transcendent substance or circumstance alone, whether we measure ourselves by the divine within us or our marketability — we teach children what the world is, who they are, and how both are to be known.

These generative assumptions, these modes of address are the medium rather than the content of education. They, to paraphrase McLuhan, "are the message." Consider, by way of example, the arguments that have raged regarding children's television. Numerous educational and parental groups have long argued that television violence encourages violence and, at best, an insensitivity to violence. While there is considerable merit in these arguments, few teachers and educators have yet recognized that television as a *medium* exerts a far more profound influence on child development than does its content. Television viewing — a passive experience depending heavily on the processing of visual imagery rather than language — consumes between 20 and 25 hours a week of the average American child's life. How does such a substantial amount of experience — with a pace designed by producers to minimize the possibility that a viewer might "wander" from the screen — affect children's capacities to think, to ponder, to wonder, to engage in dialogue, to attend to something over time, to meaningfully respond to another person, to articulate his/her own experience, to experience events with depth and recognition of wider context, to muster the will to turn the set off let alone to read, play an instrument, or simply converse with family members over a meal? Such questions demand that we transcend the issue of content and explore the tacit, formative influence that television exerts in shaping the way children learn to experience themselves and the world as well as the particular constellation of human qualities they develop as growing human beings.

The experiences we provide, whether in classrooms or via television, engage the capacities to be quickened and leave others to atrophy. The animating, generative capacities of the individual are given

shape. Explicit ideas follow as symbolic representations of such lessons — sometimes to open yet new horizons, sometimes to redirect one's intellectual efforts to more pragmatic concerns.

We, as educators, may wish to relegate spiritual matters to the home and church, or to brush aside the speculative philosophy as pragmatically irrelevant. We may wish to teach values through exercises in critical thinking and to encourage strong world character solely through the psychological dynamics of our relationships with our students. However, we delude ourselves in believing that the silent dialogue will succumb to our wishes. We deceive ourselves in believing that we can relegate values or issues of character to specific corners of the curriculum or class schedule or to personality alone. The silent dialogue is forever spoken despite our inclinations and intentions. It exists as one of the defining elements of education itself.

Tacitly, children ask the ultimate questions, each in their own way and with their own passions. Tacitly, we respond through the assumptions, beliefs, and modes of understanding and relation we foster as teachers. Such silent dialogue is at the spiritual center of all educational experience — it most fundamentally shapes the way children learn to experience, think, and act as human beings.

In the opening paragraph, we describe a most ordinary moment in an ordinary day in a third-grade class. The unspoken questions the children asked, however obscure or unimpassioned they might have been at that moment, were nonetheless answered. What indeed were they were told about animal life and nature? What is it that they were learning inwardly about the value of nonhuman life and the fundamentals of biological study? What were the attitudes and dispositions that will be encouraged? How might a third grader have lost something of the joy and beauty in returning home to greet the family dog?

— Jeffrey Kane

Education for the 21st Century
A Conference

Earlier versions of the articles in this section of the *Review* (Elkind, Barnes, Pearce, Almon) were initially presented by their authors in a conference held at Teachers College, Columbia University, on the topic, "Education for the 21st Century: Toward the Renewal of Thinking." The conference was organized by the Center for the Study of the Spiritual Foundations of Education at Teachers College. The Center seeks to provide a forum within mainstream American education where central questions about the nature of an education for the whole human being can be raised and pursued. The aim is to identify the imaginative, ethical, aesthetic, and spiritual capacities our critical times require, and to explore the ways our educational and social institutions can actually nourish and reflect those capacities. For further information about the work of the Center write to Douglas Sloan, Director, Center for the Study of the Spiritual Foundations of Education, Teachers College, Columbia University, New York, NY 10027.

Educational Reform
Modern and Postmodern

David Elkind

Of the three major educational reform movements — systemic, teacher professionalization, and school network — only the last embodies the postmodern ideas of difference, particularity, and irregularity.

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Since mid-century, American education has been painted and redecorated by a number of reform movements. While these renovations often changed the appearance of education, they did not alter its basic character. Two of the contemporary reform initiatives continue to address the cosmetic features of education and not its underlying structure. There is, however, one current reform initiative that does address the framework of education and not just its appearance. While a number of books and articles have discussed the relevance of the postmodern to education, (e.g., Giroux, 1988; Avonowitz & Giroux, 1991) these are often at a fairly abstract and academic level. In this essay I want to demonstrate the practical relevance of postmodern thinking to the current debate on educational reform.

The three major contemporary reform movements have been labeled the *systemic*, the *teacher professionalization*, and the *school network* initiatives (Sykes & Plastic, 1993). Systemic reforms are concerned with

the processes and products of education. This approach is represented by the recent passage of legislation regarding national standards, as well as programs such as the National Standards Project (NSP) (National Council of Teachers of Mathematics, 1989) concerned with creating and implementing these standards. In contrast, the teacher professionalization model (Darlington-Hammond, 1990) seeks to reform education by upgrading the selection, training, and licensing requirements for teachers. The network reform models are school consortiums that attempt to individualize reform and adapt it to the particular needs and circumstances of each school.

These reform network models, while aided and abetted by the relatively poor performance of American students by international comparisons, were motivated primarily by domestic happenings. A number of domestic events, such as the civil rights and the women's movements, challenged our long accepted ways of thinking about ourselves and our world. The critique of modern ideas has been labeled *postmodern.*

My argument is that it is only the school network models that incorporate the postmodern assumptions that have already permeated many of our other social institutions including the arts, industry, and science. To substantiate this thesis, I will first briefly summarize the change from modern to postmodern society; I will then demonstrate how the systemic and professional models are primarily modern, whereas the reform network models are largely postmodern. It is important to add that the postmodern is not a revolt against the modern but rather a critique of it. As such, it can accept and incorporate those aspects of the modern that are effective and beneficial. Postmodernism is a correction to, not a rejection of, the modern.

For purposes of space, I will limit the discussion to the major themes and central beliefs that undergirded our life in the modern world and to those that have now replaced them in the postmodern world. Then we can look at how modern themes and beliefs are reflected in modern education and how the network reform models mirror postmodern themes. For purposes of clarity, I have drawn the distinctions a little more sharply than they are in fact, but in so doing, I do not believe that I have greatly exaggerated or distorted the views represented.

The foundation beliefs of modernity

It is not possible here to give anything similar to a complete discussion of the movement from modernism to postmodernism, nor of the debates that the use of these terms has engendered. For our purposes, we can assume a fundamental paradigmatic shift in our abiding worldview.

In the broadest sense, modernity arose as a revolt against the autocracy of the premodern world. It eventually overturned the medieval forms of government, religion, science, art, and education. Modernity was a continuing revolution in the sense that it did not occur all at once, nor did it occur in one particular country or in one specific domain of society. Rationalism, humanism, democracy, individualism, and romanticism were all modern ideas that took root and flourished at different times and in different places. Moreover, modernism was largely a Western phenomenon, and even today, in some parts of the world, one can still find societies that are more feudal than modern.

Although modernity emerged at different times and in different places, it did have a single, unifying motif. It celebrated the individual over established authority. René Descartes is often credited with being among the first to express this faith in human thought with his assertion, "I think therefore I am," Descartes rooted authority not in objective agencies but in subjective thought and reasoning. The supremacy of reason, of the individual, and of individual freedom have been the abiding tenets of modernity. Protestantism in religion, self-expression in the arts, experimentation in science, and democracy in government all echo these modern themes.

As modernity grew and spread in Western society, it established three basic beliefs that were the foundation for our modern perception and understanding of the world. The first of these was the belief in the concept of social progress, the idea that society, and the lot of individuals within it, is gradually improving. The vision of social progress was closely tied up with the belief in the growth of scientific knowledge and of its necessary benefits for mankind. With the modern focus upon progress, the medieval idea of a fixed body of knowledge, provided by an

authoritative text, was abandoned. In the modern world, knowledge is cumulative, a product of scientific endeavor. Through the growth of knowledge and understanding, humankind can move toward a world in which all individuals can enjoy the rights to life, liberty, and the pursuit of happiness.

A second "self-evident" truth was the belief in universals. The modern belief in universal "natural" laws was a repudiation of the medieval laws promulgated on the basis of the "divine right" of kings or of high church officials. It was the belief in universal natural laws that encouraged the "grand" theories in science such of those of Newton, Darwin, Marx, Freud, and Einstein — all of whom believed they had discovered universal principles of nature. The belief that individual rational and creative thought could transcend social historical boundaries was an assumption common to workers in the arts as well as in the sciences.

The third foundation belief of modernity was that of regularity. The belief in the regularity and predictability of natural phenomena was a reaction against the often arbitrary and willful dictates of premodern authorities. Modern science was established as the search for the universal and regular "natural" laws that governed the physical and social worlds. Newtonian physics was perhaps the first great accomplishment of modernity and established the regularity of celestial phenomena based on the principles of gravitation. In a like manner, Darwin later established the regularity of biological phenomenon with his concepts of variation and natural selection. In chemistry, the construction of the periodic tables of the elements was but another evidence of the regularity within the natural world.

The belief in regularity was translated, in later modernity, into a levels conception of causality. Irregular surface events could always be explained by underlying regular laws and principles. A good example is Mendelian genetics wherein irregular surface features or phenotypes, such as eye color, are explained by underlying microscopic events, namely genotypes. The molecular and atomic theories of matter are other examples of explaining events at one level of observation by reference to events at another level of observation. In psychiatry, Freud introduced the levels type of explanation when he attributed irregular surface events, such as slips of the tongue and pen, to underlying regularities, specifically, abiding unconscious sexual impulses and wishes.

Modernity and modern education

The three basic beliefs of progress, universality, and regularity were the foundation assumptions of our modern system of education.

Progress

The modern assumption of uniform human progress, for example, underlies the belief that education is to be equated with the progressive accumulation of knowledge, skills, and values. And it is the belief in uniform progress that explains our deep concern over the poor performance of American students vis-à-vis those of other countries. When students in other countries progress more rapidly in these domains than do students in the U.S., we assume this lack of progress is a reflection of defective educational practice and seek to remedy it. This has been the dominant rationale for the process/product reform initiatives. Their aim is "to create a strong system of standards around student learning, the heart of which is guidance on curriculum goals and content coupled with new forms of assessment" (Simmons & Resnick, 1993).

The establishment of national standards, however broad and general they may be, still suggests that education should be geared toward having all children within the society progress toward common goals. Although participation in the national standards program is voluntary, federal funds will only be available to those states that participate. It is likely, therefore, that most if not all states will attempt to set up statewide general standards.

Although it is quite different from the product/process approach, the teacher professionalization model also presupposes a notion of progress. The guiding idea behind the teacher professionalization initiative is that education can best be improved by upgrading the selection, training, and licensing of teachers. If teaching is regarded as a profession, like other professions, then the best way to ensure quality outcomes is to have quality professionals. Neither doctors nor lawyers can guarantee uniformly successful outcomes. Nonetheless, by close monitoring of selection, training, and licensing, a high level of

practice is established and this approach has the highest probability of ensuring uniformly high outcomes.

At the forefront of the teacher professionalization model is the idea of professional progress ensured by standards for the selection of teachers, teacher licensure, and advanced certification. In this model, the teaching profession itself must take responsibility for the definition, transmittal, and enforcement of professional standards, practice, and ethics. There is, however, a problem with this model. Unlike law and medicine, there is no agreed upon body of knowledge, skills, and values to make up a curriculum for teacher training. Indeed, many states have done away with the undergraduate major in education. How can one have a profession without consensus upon what constitutes the database of knowledge, skills, and values of teacher preparation and the appropriate measures of teacher competence?

Universality

The modern idea of universality is embedded in the systemic reform model's assumption of uniform standards that should hold for all children across the nation. The National Council of Teachers of Mathematics (NCTM) has already come up with national standards in regards to curriculum, evaluation, teaching, evaluation of teaching, professional development of teachers, and support and development. Other groups (particularly the NSP) are actively working to establish national standards in other subject areas. The assumption is that uniform standards will have a motivating and challenging impact upon students and teachers.

Even in the most innovative aspects of the systemic reform model, the underlying belief in uniformity is still evident. For example, the emphasis is upon reinventing learning and teaching and encouraging student's active construction of knowledge, through engagement in real tasks and problems. Yet a true constructivist approach entails the recognition that constructing reality is a creative process with no guaranteed similar outcomes. There is an inherent contradiction in advocating both constructivism and uniform standards. Likewise, the emphasis upon making learning relevant to life outside of school would entail a tremendous diversity of experiences tailored to local circumstances. This again would seem to contradict the aim of uniform national standards. One can only combine universality and diversity by defining the universal so that it takes account of the particular. This has yet to be done by the systemic reformers.

The teacher professionalization model also presupposes universality, particularly role differentiation. The role differentiation conception was a derivative of the Darwinian notion of evolution as it applied to society. The idea was that society, like a species, evolved in the direction of increased specialization of function. The wings of birds, like the claws of squirrels, are highly specialized and adaptive. As society evolved, it too became increasingly complex and increasingly specialized.

In the case of society, however, this evolution occurred in the functions to be performed by individuals within the society. Rather than one person performing many different functions, specialization resulted in each person performing only one function or a related set of functions. This specialization of functions within a society was described as a process of role differentiation. Although societies evolved at different rates, all were assumed to move toward increasing role differentiation.

Sociologist Talcott Parsons was one of the many advocates of the role differentiation theory. In his later writing, for example, Parsons contended that the premodern, multiroled, priest, magician, mathematician, medicine-man has evolved, in modern times, into a number of individuals each of whom takes on one and only one of these roles. Such "role differentiation," Parsons argued, allows advanced societies to attain levels of cultural and economic productivity that were not possible in earlier societies with multiroled individuals.

As it applies to education, role differentiation has led to sharp boundaries between teachers, administrators, and parents. The teacher professionalization model builds upon this modern conception of role differentiation. It presupposes that teachers will be more professional and more effective to the extent that they are specialists in a particular subject matter. In effect, however, this would make all teachers subject-matter specialists rather than teaching specialists. If the teacher professionalization model is followed, then the elementary school would become

more like the high school with teacher's identified with a particular discipline, e.g., English, math, social studies, and science, rather than with teaching. If elementary school teachers shifted their emphasis from teaching children to teaching subjects, it would be a great loss for children.

Regularity

The assumption of regularity is the foundation assumption that underlies our use of tests to assess and grades to report academic progress. Tests presuppose a regularity in student achievement and comprehension such that all students will interpret and answer questions from a common perspective. IQ tests are grounded on the same assumption. Regularity also entails the belief that there is a common relationship between test scores and ability. Likewise, the use of grades to report student achievement presupposes that grades have a uniform meaning. That is to say, the use of grades assumes a regularity and a uniformity in assigning grades such an A is an A is an A, regardless of who gives it or in what context it is given.

Although the systemic reform movement is trying to move away from tests to the three P's (portfolios, performance, and projects), they are actually making most progress in constructing matrix exams (much like traditional tests) and less progress in establishing norms for portfolios, performance, and projects.

The problem here is exactly the same as that with progress and yet it remains to be seriously addressed. How do you combine universality with diversity, uniformity with a respect for individual differences in ability, learning style, and cultural orientation? The three Ps would lose most of their value if they were to be totally defined in advance.

Regularity operates for teachers as well as for students. In many schools, teachers who are innovative and who do not run their classrooms "by the book" are often looked upon as not only irregular but deviant. The uniformity imposed by systemwide-adopted textbooks places many pressures upon teachers to follow the "regular" curriculum routines and to eschew innovation and creativity. Such curricula provide little leeway for children who learn in "irregular" ways. There is little provision in either the systemic or the teacher professionalization initiative to deal with the issue of educational publishing. Yet statewide adoption of developmentally inappropriate curriculum materials is one of the greatest barriers to true educational reform. In many respects, therefore, the modern assumption of regularity, like that of progress and universality, not only dictates practice but also becomes a value or standard against which to compare teacher competency and student achievement.

In the foregoing analyses, I have suggested only some of ways in which the modern assumptions of progress, universality, and regularity are embodied in modern education and are perpetuated by the systemic and teacher professionalization reform initiatives. A more complete survey would require book-length treatment.

Foundation beliefs of postmodernity

Postmodernism has been germinating for a long time. It was not, however, a revolt against the beliefs of modernity. Rather, it is perhaps best regarded as a set of attitudes and efforts to correct and modify modern ideas that have been perverted and modern beliefs that have proved to be overly broad or overly narrow. To illustrate, while modernism regarded reason as the engine of human progress, rational arguments have also been used to justify barriers to human progress such as slavery, colonialism, imperialism, and Fascism. Likewise, modernity stressed the freedom of the individual but this was often a male, Anglo-Saxon, Christian individual freedom. The modern belief in the unmitigated benefits of science and technology did not anticipate their use to create ever more powerful weapons of human destruction, nor their contribution to the degradation of the environment. Modern beliefs were not entirely wrong, but they were often overly idealized and blind to the dark side of human nature, scientific discovery, and technological development.

Like modernism, the rise of postmodernism is largely a Western phenomenon. And, as happened with modernism, it is not happening all at once but at different times, in different places, and in a variety of social institutions. Nonetheless, it has its own basic model and correlated themes. Modernity celebrated reason and paid homage to the ideal of liberty and freedom for all individuals. Postmodernism venerates language, rather than thought, and honors

human diversity as much as it does our human individuality.

The ascendance of language over reason as the true groundwork of human existence began in the last century. Nineteenth-century philosophers such as Nietzsche, Wittgenstein, and the religious philosopher Kierkegaard all played "language games" to demonstrate that there is no such thing as "pure" reason and that our thinking can never be abstracted from our language. Through their use of parody, irony, and satire, they demonstrated that language is inherently ambiguous and that the truths of reason, which employ language, must therefore be ambiguous as well.

Difference

When language, rather than reason, is taken as the foundation model for how the world works, a different set of themes moves into prominence. Languages do not progress, or at least necessarily progress in a positive way. For example, Franglais and TexMex are language developments that many would not regard as evidence of linguistic progress. Rather, what characterizes languages are their differences from one another and their embeddedness within a social, cultural, and historical context. Even within the same country language varies greatly depending on the community in which it is employed. Postmodern writers are, in general, much more concerned with elucidating our social-cultural differences than in demonstrating unilinear progress.

Secondly, although reason may be taken as universal to mankind, language surely is not. Language is always particular to a given culture at a given time. To be sure, the potential for language is a human characteristic and is universal in that sense, but in the real world there is not one language common to all. Likewise, even though languages can be translated, every language contains much surplus cultural meaning that cannot be conveyed by words. Correspondingly, postmodern writers are much more concerned with the particular, with domain-specific issues and discourses, rather than with grand universals.

Irregularity

Finally, language — in contrast to reason — is often as irregular as it is regular. Of course, there are regular grammatical and spelling rules, but there are also many exceptions. Pluralization is a good example. While boy and girl are regularly pluralized as boys and girls; man and woman are irregularly pluralized as men and women. Indeed, regularity in language can sometimes be a negative. "Trite" and "hackneyed" phrases and metaphors are examples of the adverse valence regularity may have in the realm of language. Accordingly, many postmodern writers deal with the irregular (in science with the chaotic) as legitimate and as worthy of exploration as the regular.

These postmodern themes of embeddedness, particularity, and irregularity are increasingly being assimilated into postmodern social institutions such as the arts and industry. Only the school network reforms, however, are translating these ideas into educational practice.

Postmodernity and postmodern education

Modernity saw itself as superior to premodernity, and it rejected all that came from the previous era as primitive and unworthy of emulation. In contrast, postmodernism recognizes that there is much to value in the old as well as the new. Postmodern architecture, for example, is a pastiche of architectural styles and may include Greek columns and atria, as well as modern glass and steel. In the same way, many of the school network reforms incorporate ideas that were first introduced in the last century by Froebel and Montessori. They also incorporate some of Dewey's progressive education concepts along with a number of new postmodern themes.

Embeddedness

One of the common themes of the network reform movement is the need for an integrated curriculum. The idea is that the divisions between math and science, history and art are artificial and that the science of a particular period reflects the art, philosophy, and literature of the time and vice versa. The philosopher Kant, for example, based his categories of knowing on the physics of his time. Freud, in turn, based his theory of the "family romance" upon the prevalent nuclear family, not imagining that any other form might prevail. Darwin was influenced by economic theory in his principles of competitive

advantage and survival of the fittest. No matter what line of endeavor we pursue, we reflect the time and discourses that prevail in our immediate society.

The idea of the integrated curriculum is far from new on the educational horizon. In its earliest form, it appeared as Froebel's "gifts," a ball that could teach the child notions from roundness, to the idea of the earth and even to the notion of God. In Dewey's able hands, Froebel's gifts became the "project" method. Children would engage in a project such as learning the Knights of the Round Table. They read medieval literature and history. They made swords, shields, and lances and in so doing learned measurement and mechanics. In putting on a play about the Knights, they also learned new language and social skills. The project method is a clear recognition of the embeddedness of our knowledge.

It should be said that the integrated curriculum can be also be used in a mindless way. In some schools I have heard math teachers complain that they have to do math problems about birds because that is what the children are studying in literature and science. It is very easy to sabotage efforts at integrating the curriculum. True integration requires cooperation, planning, and preparation among teachers, it is not a forced, superficial similarity of content. Truly integrative teaching involves a commitment to understanding the social historical embeddedness of our knowledge and to communicating that understanding to students. Truly integrative curricula will be facilitated by the information superhighways that are a model for the integration of hitherto diverse and separate contents and learning modalities.

Particularity

Another principle of the reform network movement is the recognition of the particularity of each school. "There is no one best model ... each school must be shaped by its own people and respect the community it serves" (Sizer, 1992). Each school must develop at its own pace and in its own time. While there are certain principles that all schools share in common, these common principles further diversity rather than conformity to a single standard. In these network reform models, the postmodern ideas of difference and particularity are reflected in the emphasis upon constructing academic expectations and standards from the community context in which the school is situated.

In the same way, the modern notion of role differentiation has given way in the reform network model to role dedifferentiation, where teachers and administrators play many roles, not just one. Although they may put it somewhat differently, Comer, Levin, and Sizer all emphasize the sharing of school governance among teachers, administrators, and parents. Comer advocates a "governance and management" team of parents, teachers, administrators, and support staff to develop overriding goals and plans for the school. Levin emphasizes "empowerment" of the key participants in the school community. Sizer outlines new roles and responsibilities for principals, teachers, and students.

A somewhat different example of the postmodern theme of particularity comes from the contemporary research on learning. In the modern era, it was long believed that there were universal principles of learning that could be applied across many different domains of learning. The merits of "mass" versus "distributed" learning, for example, were widely debated.

Currently, the emphasis upon teaching "thinking skills" reflects this belief in universal skills that can be used independently of the content area. Increasingly, however, we are beginning to appreciate that thinking is domain-specific. Although Piaget argued for stages of development, he also said that each subject matter area had to be conquered in its own way and on its own terms. Gardner's recent work on multiple intelligences is but another example of the postmodern emphasis upon domain-specific learning and ability.

Irregularity

Recognizing that children learn in irregular ways and that this is the very nature of learning, the network reform models do not advocate standard methods of assessment. Like the systemic programs, they emphasize portfolios and projects that the students themselves have undertaken. Portfolios of a child's work show the patterns of the child's learning, the steps forward as well as the steps back. Portfolios also show the different ways children can approach the same subject matter and the different paths to

solutions that they can take. As Sizer puts it, the measure of student success will be a "final demonstration of mastery for graduation — an exhibition" (Sizer, 1992). What separates the school network use of performance, projects, and portfolios from those of the systemic reformers is that the school network approach accepts the normality of irregularity. The systemic approach uses these methods to insure universality and regularity.

To say that learning is irregular is not to imply that all learning is chaotic and that there are no ways to assess progress or to have standards. Postmodernism is not a rejection of regularity, just a demand that irregularity be accepted as well. Once it is recognized that children can get to a common goal by different paths, at different rates, and by different means, it is still possible to have common goals as long as these are appropriate to the particular school and the individual community. The real task is not to do away with norms of regularity but to sufficiently broaden these so that they incorporate the wide range of human individual differences.

Likewise there is a place for well-constructed, carefully administered and scored, and cautiously interpreted tests. Used judiciously, such tests can be a useful educational tool. In the same way, some rote learning has a place in education. It is very useful to know the multiplication tables by heart, and there is no other way to learn the lines of a play, a meaningful quotation, or a beloved poem other than by rote repetition. Postmodernism is not a rejection of modern education, but only of those parts of modern education that took away from providing all children with the best opportunities to learn in their own way and at their own pace.

Conclusion

Over the last half century, our society has undergone a major shift in the ways in which we think about ourselves and our world. This shift reflects some of the failures and inadequacies of the concepts that undergirded the modern world. Nonetheless, of the current major educational reform movements, only the school network model embodies the postmodern ideas of difference, particularity, and irregularity. Despite all of the energy and money being spent on the systemic reform initiative, including the development of national standards, these reforms are likely to fail. To the extent that they presuppose progress, uniformity, and regularity within education, they out of step with what is happening in the rest of society.

This is not to say that the school network model has all the answers, it clearly does not. The real issue of postmodern education is the translation of the notion of general progress into the different kinds of progress made by different children in different educational settings. Equally difficult is the reconciliation of universal standards with particular achievements and attainments. And there has to be a recognition of the normality of the irregular; the average or the norm is, after all, the product of the deviations from the norm. The school network initiatives are addressing these matters but have yet to resolve them.

Education has to do with people dealing with people, it is first and foremost a service industry. Education has too often looked at itself as a product industry. Yet today, even product industries, such as automobile manufacturing, are recognizing that they are more service industries than product industries. Customer satisfaction is becoming the most important principle guiding industrial practice. We need to begin to look at education as a service industry as well as a product enterprise, and as having its goal customer satisfaction as well as student achievement. When we do that we can begin to resolve some of the issues of progress/difference, universality/particularity, regularity/irregularity. That will move us far along the highway to a truly postmodern education.

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Toward the Renewal of Thinking

Henry Barnes

Only a renewal of thinking at its very roots can dispell the illusions created by a thinking that is blind to the realities of our existence. The task of the educator should be to challenge students to exercise and strengthen their ability to think, thereby nurturing emerging individuality.

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It was during the winter of 1917–1918 that a chubby five-year-old stood on a sidewalk in New York City and watched with astonishment as a fleet of the grand old double-decker Fifth Avenue buses rolled down Park Avenue, loaded with young men all dressed alike in khaki uniforms, who were having the time of their life waving to the crowd and singing such stirring songs as "It's a long, long way to Tipperary!" and "Mademoiselle of Armentieres, parlez vous?" When the youngster asked where they were going, he was told they were going to France to fight a war so that there would never have to be another war, not ever again! And a few months later, in November, that same youngster, now enrolled as a first grader in a new school that had opened just one year earlier — the Lincoln School of Teachers College — was swept out of class one morning on a tidal wave of excitement and enthusiasm to celebrate the end of that same war. Only the celebration proved to have been a mistake — it had been a false rumor — and the real armistice was signed, with ironic precision, a few days later at the eleventh hour, of the eleventh day, of the eleventh month! And now, on June 28, 1994, the world noted — or may have ignored — the eightieth anniversary of the event that had triggered that conflict: the 1914 assassination of the Archduke and Archduchess of Austria-Hungary on a street corner in Sarajevo by a young Serbian idealist who had pledged his life for the realization of the dream of a "Greater Serbia." And, as this is written, the children, grandchildren, and great-grandchildren of the Sarajevans of 1914 are creeping out of the ruins of their city to test the reality of the truce that may lead to peace in their tragic, war-torn land!

What have we learned?

Future historians may well write of the twentieth century as the century of the great illusions! Think of the enthusiasm, of the hope born of despair that greeted Woodrow Wilson's proclamation of the "Fourteen Points" on which, he claimed, a just and lasting peace could alone be based. And, of these, none spoke more eloquently to the passionate long-

ings and bitter antagonisms of the hopelessly intermixed ethnic, religious, and cultural peoples of southeastern Europe than the doctrine of the "right of self-determination of nations." How right! Of course all peoples should be free to choose their own government. But, how do you do it when, in a given community, 45 percent may be ethnic Serbs, devoted to the Greek Orthodox religion, 30 percent may be Croats, loyal adherents of the Roman Church, and the remaining 25 percent may, for centuries, have been true believers of the Islamic faith? And further, when in 1914 Franz Joseph, Austria's aging emperor, had to mobilize his armies to fight Russia in the oncoming war, the mobilization orders had to be published in 12 languages in order to be intelligible to all his loyal subjects! In such an ethnic and cultural melting pot, how do you ensure the right that each "nation" determine the government, language, and laws under which it wishes to live? Hailed as the "savior of mankind" by the war-weary crowds in Paris, London, and Rome in 1919, Wilson's "grand illusion" — his brilliant, but theoretical principle of national self-determination — is the ghost that still haunts the ethnic and religious fanatics who slaughter one another all over the world.

Logically, Wilson's thinking was unflawed, but life follows another logic! And how do we learn to distinguish one logic from the other? How else, except through thinking? But then, perhaps, thinking itself must change. And with this we are at the heart of the question to which this symposium is directed.

We have just heard from Joseph Chilton Pearce (see pp. 18–24 below) a fact-packed summary of some of the extraordinary insights arising from work at the cutting edge of neurological research; insights that provide the necessary clues to a fundamental reevaluation of our understanding of child development (See Pearce, this issue). But the question arises: Who is it who thinks? Is it, in fact, the brain? Or is the brain the miraculously adapted instrument, shaped and developed by the activity of thinking itself? And, if so, who is this thinker? And how does she or he enter into the exercise and control of this wonderful instrument?

It is, I believe, in relation to just these questions that the work of Rudolf Steiner (1861–1925) is coming to be recognized as of decisive significance. Let me try briefly to sketch for you how Rudolf Steiner describes the step-by-step entry of "the thinker" into the full possession of her or his instrument. He describes four births on the way to becoming an independent, potentially self-directed human being, a *thinker* in the true sense of the word.

The first birth is the one with which we are all familiar but rarely appreciate in its marvelous complexity and synchronicity. Thanks to the fact that the newborn child now has this wonderful instrument of a physical body, he or she can begin to explore the world into which he or she has entered. The child learns to know the world — to cognize it — by "digesting" it, by becoming one with it through the least conscious but most active faculty of knowledge available to us as human beings. The small child slips out of himself through the activity of seeing, hearing, touching, and tasting and slips over into the gesture, tone, movement, and mood of the human world around him — or into the mechanical world that may assault the child from every side. Through this most fundamental learning, which we know as *imitation*, the infant and young child experiences the environment by becoming one with it, through the activity of will.

During these earliest years in which the child is "digesting" his environment by imitating it, within the organism physiological processes of immense importance are underway. It is as if an "invisible sculptor," working downward from the head, were individualizing, were shaping, the bodily organs in the image of a hidden blueprint of this human being's unique character and needs. The inherited organism is gradually transformed by these formative, sculptural forces, and when they have penetrated into the densest substance of the body, the change of teeth occurs as the outer milestone marking the major completion of this first developmental phase. No longer needed to the same extent within the organism itself, an important part of these formative forces is released from organic activity and becomes available to the growing child for a new kind of activity at the level of the soul. These forces, nevertheless, retain their characteristic image-forming, shaping, sculptural quality at the new level of experience, and we recognize them in the child as the dawning faculty of *imagination*.

Just as the very young child digested and explored her immediate environment through the medium of her senses by imitating it, so now the six-, seven-, eight-year-old begins to digest and explore the world around him or her through the newly awakening faculty of imagination. What formerly engaged and spoke to his or her active will, now speaks more directly to his or her feelings. What happened

instinctively, with little consciousness, now is experienced more as a waking dream. Just as the parent's and the preschool teacher's task was to provide, as far as possible, an environment that the child could take into him or herself — right down to the formation of the physical organism — in a health-giving, upbuilding way, so now the primary task of the elementary school teacher is to find ways to transform all that the child needs to learn about in this second great voyage of discovery into experiences that speak to the imagination. In no sense does this imply a sacrifice of responsibility to reality, to objective fact, for the imagination can be as discriminating, accurate, and responsible as any other form of intelligence, but it is a faculty of cognition, of thinking, if you will, into which the elementary-age child can enter with his or her whole being. And it is here that the teacher must awaken the artist in her or himself, for what captures the full attention of the children at this age is what speaks through pictures, stories, drama, and the arts.

While the child is exploring the world in this new way through imagination, processes of a different kind are at work within the organism. If one could rightly speak of the "invisible sculptor" active during the earliest years, one can now think of an "inaudible musician" working at the organic level. It is no longer a shaping of the organs themselves but a fine-tuning of their functional relationships that is unfolding.

It is during these years that the rhythmic patterns are established that can contribute so greatly to the health and stability of emotional and bodily life, or, conversely, to their instability and impairment. Circulation and breathing find their individual balance, penetrating the entire organism and harmonizing metabolic and neural activities. The outer developmental milestone expressing the major completion of these rhythmic, functional maturations are the physiological changes in puberty. And, once again, a significant part of these more "musical" forces that have been active in organic development are freed to become available to the young adolescent as forces of awareness, or consciousness, and expression. We recognize them on the one hand as the forces of intellectual cognition and, on the other hand, as powers of personal feeling, of sentient experience.

It is at this critical juncture that we, as educators, face a decisive challenge. The question arises: with the birth of the personality at puberty is the human being now fully *there*, or is there some further human element still waiting to be born?

While the young person, the teenager, is busy "trying on" his or her newly acquired personality, enjoying the exercise of new intellectual fencing skills, as well as exploring the new heights and depths of emotional experience, there is quietly ripening behind the outer facade a hidden observer, one who not only "knows," but is beginning to "know that he knows!" This maturing "organizer and evaluator" of experience is more deeply and truly individual than anything that has come to expression so far.

Language itself can give us the clue. Personality derives from the Latin "per-sonare," to "sound through," and goes back to the origins of the Greek drama, where the actor, impersonating a god, spoke through the mask that both revealed and concealed his true identity. And we characterize the one who speaks through the outer, so very apparent personality as the one who cannot be "divided further," the intrinsic, indivisible *individuality*, the ego, the one who I truly am. And Spiritual Science, as interpreted by Rudolf Steiner, describes the individual, this human ego, as a spiritual being who enters life independent of the forces of heredity and the determining influences of the environment, who, nevertheless, takes hold of and uses these forces as his or her instrument for life.

To summarize, we have in Steiner's developmental concept a human being who is "born" four times on the way to maturity: physical birth, in which the biological organism is freed from the maternal womb; the birth around the seventh year, in which the formative, shaping forces — the human *etheric body* in Steiner's characterization — is liberated from its physical sheath and becomes available for the child's use as the invisible, bodily instrument for imagination, memory, habits, etc. The third birth occurs at puberty, when the "musical soul forces" — the human *astral body* in Steiner's description — are released from the their physical and etheric sheaths and become the instrument for intellectual thought and for personal soul experience; and finally, around the age of 21, the traditional time of coming of age, when the ego, the individuality, is born out of its astral, etheric, and physical sheaths, enabling the young adult to exercise a new quality of consciousness, the consciousness of *self*. And in the light of this development, it is only now that the human being is truly, and potentially, fully there. The "charioteer" into whose hands are given the reins of potential

responsibility and mastery over the three soul steeds of will, feeling, and thought, has, at last, emerged from his enveloping, sustaining sheaths and can begin to work toward the ultimate goal of all education — the education of oneself.

If, indeed, the developmental picture is valid, which has been briefly sketched on the basis of Rudolf Steiner's extensive spiritual–scientific research, then the task of the educator in the adolescent years, both in high school and beyond, must be to serve the emerging individuality in the most effective and best possible way. And, clearly, one of the most central of these pedagogical tasks should be to guide and challenge the young person to exercise and to strengthen his or her ability to think. If the individual comes of age with no well-grounded confidence in thinking, he or she will inevitably fall prey to those instinctive drives, those emotional and willful powers that rise up from below the threshold of consciousness and are so ruthlessly exploited by civilization today. For we human beings are "reality hungry" and we *will* seek the realities of experience, no matter out of what regions they may arise. An active, self-directed, disciplined, and objective thinking is the only sure means we have to distinguish reality from illusion, which can guide us out of dependence toward ultimate independence and human freedom. Not only the would-be high school teacher but the prospective teacher at the undergraduate college level as well should be challenged to wrestle in practical pedagogical ways with this fundamental issue.

If we agree, as was stated above, that the goal of education is self-education, then we must ask how the newly emancipated ego can take up the task and begin the lifelong process of making the soul capacities — the thinking, feeling, and willing — that have been awakened, challenged, and nurtured within through earlier education truly his or her own?

In the years that immediately follow the coming of age, the ego, has to learn inwardly how to stand upright, to walk, talk, and think. And the infant does so in close union with the life of the soul from whose womb the child has only recently emerged. If one can say that the early years were years of apprenticeship, one might well say that the next 21 years are years of the journeyman. We bind ourselves for shorter or longer periods to different life-masters, learning, one hopes, the skills and absorbing the insights that each destiny situation can teach. In the twenties, it is primarily our feelings that lead us hither and yon — Steiner speaks of these as the years of the sentient, the feeling soul, in which an instinctive, but hopefully wise, guidance takes us, often by the scruff of our neck, and leads us where we need to go (Steiner, 1965).

The journeyman moves on. A more directed, analytical thinking begins to search for meaning, for structure, in the multiplicity of experiences. The colorful feeling–thinking of the twenties gives way to the more focused, increasingly transparent thought–light of the thirties. The ego is no longer fully satisfied with the rich tapestry of perceptive experience but probes for the invisible laws that reveal relationships, the hidden connections. The gain is objectivity, and the price can be — perhaps has to be — isolation, a sense of drying up, of dying away, of mid-life crisis. But it is just in the midst of this outer impoverishment and inner isolation that the inwardly active ego can wake up in a new way. The transparent light of thinking with which I have penetrated, illumined, and explored the whole world of phenomena, both outer and inner, this inquisitive capacity of thought, can, itself, be brought into the center of my attention. I can clear an inner space, exclude everything that crowds in from outside, or rises up from within, and into this space I can summon the very activity that, as thinking subject, I have directed outward and, by an act of will, place it at the focal point of consciousness. And, by thus summoning my inmost activity, I can bring my thinking to bear — on itself! As active thinker, I observe my own thinking. For the first time, the object of my attention is no longer something "given," but something that I have myself produced and *know* because it is I who brought it, step by step, into being. When the ego, as thinker, awakes to itself at the center of consciousness and lays hold on its own activity of thought, nothing unknown intervenes between myself, as thinking subject, and the thinking activity that I have myself produced which is now its object. Subject and object are, for the first time, one.

This moment of self-awareness in thinking is the needle's eye through which the thinker enters a new world of cognition from which the knowledge he gains can no longer be driven by doubt. Rudolf Steiner (1986) describes this moment in his fundamental philosophical work, *The Philosophy of Spiritual Activity* or *The Philosophy of Freedom*. In this work, he shows that the ego who awakes to itself in thinking has taken the first crucial step on the road that can lead the human being to the experience of freedom

and to truly moral action. In his later spiritual–scientific work, Steiner characterizes this inner awakening as the passage from the life of the rational or intellectual soul to the ego's awaking within the consciousness or spiritual soul. This is the step that can lead the journeyman to mastery.

If I can summon the willpower to repeat this experience until it becomes an exercise, my thinking becomes more and more imbued with active will and takes on a tactile quality so that it becomes an organ of inner touching, of "supersensible" sense perception, less and less determined by and dependent on the neural activity of the brain as its instrument. Thinking becomes seeing, becomes meditative practice, leading sooner or later to a new experience of cognition, to a first stage of higher knowledge designated, in a formal sense, as *imagination*. Conceptual thinking gives way to a means of knowing that expresses itself in colorful, inwardly mobile pictures that transform themselves in endless metamorphoses, revealing in images the phenomena of the living world.

For the individual who has embarked on the path of spiritual development, it becomes gradually clearer that the pictures in which the world reveals itself at the level of imagination are not yet realities in themselves, but images of that reality. To ascend beyond imaginative picture experience requires a new level of inner concentration. The images must be brought to rest in an experience of inner quiet, of a silence deeper than outer stillness, into which the world of spirit being itself can speak and sound. Spiritual science characterizes this level of cognition as *inspiration*, and beyond this lies the further level of *intuition* in which being experiences being. Knowledge, at this stage, takes on the character of selfless love.

Briefly sketched, these are the stages of higher cognition that open up for the thinker who wakes to the possibility that he or she can take his own thinking in hand and can develop it step by step to levels of knowing that are less and less dependent on the bodily, physical organism. Their achievement depends on the free decision of the individual to set foot on the path.

What distinguishes this path today from the forms of spiritual discipline that have existed in the past is that it can be undertaken in full waking consciousness and deserves, in this sense, the recognition of being a *science* of the spirit. We have too easily accepted the dogma that what makes science scientific is its exclusive reliance on data gained from sense-perceptible and statistically quantifiable experience rather than realizing that it is the *methods* of scientific inquiry and not their content that distinguishes science from nonscientific investigation. It is in this sense that Steiner asked that his research be judged and accepted or rejected as a science of the spirit. He said: I ask to be understood, not to be believed. As the motto for his *Philosophy of Spiritual Activity*, he chose: "The results of soul-spiritual research gained by the methods of natural science."

The call that sounds from the tragic depths of the conflicts that confront us on every hand is: Will we awake to the realization that the future is in our hands and that only a renewal of thinking at its very roots can lead us out of the illusions that we have spun for ourselves with a thinking that is blind to the reality of human and world existence.

Standing behind every form of education, whether its practitioners are conscious of it or not, is an idea of what it means to be a human being. Who is this child and this young person whom we accompany into life? Whence does she or he come? What meaning is there in the life for which we seek to prepare them?

Until we educators are ready to fight this existential battle for the meaning of life and can stand before our students, perhaps bloodied but unbowed, we will not win the deeper trust, the heartfelt confidence that will, in the years to come, be the only ground on which we can stand firm as the children's teachers against the onslaughts of inhumanity. At the deepest level, this is the challenge that Rudolf Steiner's research places at the center of the struggle for the renewal of education in our time. Until we fight these battles of insight and meaning on the battlefield of our own souls, we must be prepared to see them fought out with guns and with the weapons of political and economic power in every corner of the globe. This battle is, I would say, the unfinished business of the twentieth century.

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Education for Higher Stages of Development

A Survey of the Evolution, Biology, and Development of the Spirit

Joseph Chilton Pearce

To prepare for the later development of the spirit, each of the stages of development observed by Steiner, Montessori, and Piaget must be nurtured and fulfilled.

"Truly barren is profane education, always in labor but never giving birth." So wrote Gregory of Nyzza early in the fifth century. By "profane" he meant an education that ignores the human spirit and concentrates only on the material aspects of life. Surely the late twentieth century writhes in an educational labor that has not and cannot give birth. Ironically, an education opening to the spirit would include every aspect of the profane we pursue so frenetically. An education on behalf of the spirit faces two hurdles, however: we equate education with schooling and spirit with religion, two monstrous misunderstandings.

Early in the twentieth century, the German scientific–mystic Rudolf Steiner, the Italian medical doctor Maria Montessori, and later her protégé, the Swiss biologist-turned-child developmentalist, Jean Piaget offered educational formats and views of child development that prepare for life in the world as well as for a life of spirit. Their contributions center on the stages of development genetically inherent and manifesting from birth.

Consider: Baby teeth appear around age one, followed by molars at six years, molars at twelve years, and around age eighteen, wisdom teeth. We find this time agenda in all children around the world, and note that nature doesn't delay those new molars until a good diet is provided or proper toothpaste is applied; each new set of teeth appears at its appointed time, ready or not, regardless of conditions. Now the same goes for mental–emotional–physical development, as well as for the spirit or soul.

This article is largely drawn from the author's book, *Evolution's End* (Harper: SanFrancisco, 1992) and was presented in part as an address for the Teachers College Conference "Education for the 21st Century: Toward the Renewal of Thinking" at Columbia University in February 1994.

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Stages of development unfold at birth, age one, four, seven, eleven, and concluding (for now) at age fifteen. Except for birth, the ages listed are statistical averages. Any child may vary from them as much as a year, but the universality of the stages themselves is beyond question. Ignoring the actual content of each development stage, the following are a few generalizations about each stage:

1. Each stage consists of a block of potential intelligences and/or abilities appropriate to that age. For optimal development, those abilities must be stimulated and nurtured within the time frame of that stage.

2. Stimulus-nurturing requires an inviolate *model imperative* that underlies all growth. Just as no teeth could ever unfold unless the new infant is nourished, and the condition of those teeth will be largely determined by the nature of that nourishment, no intelligence or ability will unfold unless given a like stimulus from the environment. Not even the physical senses can function until the infant is given sufficient physical–sensory stimuli. The affective system unfolds and functions according to the nature of emotional nurturing provided. No intelligence can unfold unless the child is given an appropriate environmental model of that intelligence — someone who has themselves developed that intelligence and, in turn, provides the child with both initial stimulus and ongoing guidance in his or her own development of it. There are no exceptions to this model imperative.

3. As part of nature's *model imperative* (and the environment and its people constitute the model pool), the nature, character, and quality of the model determines to an indeterminable extent the nature, character, and quality of the unfolding intelligence-ability of the child. Children don't become who we tell them to be but who we are.

4. Each new block of possibilities is discontinuous with what comes before that stage or after. That is, the new potential is absolutely new, not an extension or elaboration or synthesis of what comes before.

5. Yet, each stage is critically dependent on the completion of the preceding one, and each is foundational to the next.

6. A brain growth spurt ushers in the stages of birth, age one, four, and seven. New neural materials appear for the new constructions of knowledge that open at these times.

7. The overall progression of development is from the concrete to the abstract. Each stage is progressively less involved with the purely physical and more involved with emotional–intellectual–creative functions.

8. Nevertheless, the first 15 years centers on successful physical survival. Even the highly abstract intellect of the late operational stage is but a refined form of survival strategies, as exemplified in our sciences and technologies.

9. The brain–mind entrains or focuses its energies on the developmental agenda in process — the infant on the sensory world, the early child on affective, or emotional, development, and so on.

10. Self-awareness identifies with such entrainment: we *are* our developmental stages. Thus the early child is completely identified with the concrete world of the senses, with no distinction between subject–self and object–world. The two-year-old is identical to his or her emotional state, a subject–self evaluating its experiences with an object–world; the four-year-old doesn't have a tantrum, but *is* that tantrum; and so on with each stage.

11. "Intent precedes the ability to do." Nature continually prepares for developments far in the future, even though later intelligences are discontinuous with anything coming before them. For instance, some incidental behavior of the three-year-old might be foundational for a highly abstract action of mind some 12 years later.

12. Yet each stage is complete within itself: the three-year-old is not an incomplete five-year-old, but a perfect three-year-old. All preparations for the future are provided for by the simple act of living fully in the moment of each stage. For a successful maturity, allow the child to be completely a child.

13. Though discontinuous, each new stage incorporates the developments of the previous stage into its service, and, *when a higher development incorporates a lower into its service, it transforms the nature of the lower into that of the higher.* The willfulness of the terrible twos, for instance, is eventually incorporated into and plays a vital role in a mature will, one able to overcome obstacles or persevere in adversity.

14. If a higher stage is *not* developed, the lower stage or stages remain(s) in its (their) primitive forms (wherein our downfall as a species lies).

15. Education — leading forth into knowledge — begins at birth, a point Maria Montessori, as a pediatrician, tried to get across.

16. No higher stages of development can unfold fully until the lower stages are sufficiently estab-

lished. For instance, without the foundation of a functional stage one, in effect, stage two cannot unfold properly. Again, nature's preset timetable can't account for stage-failure or incompleteness. As with the growth of teeth: ready or not, here each stage comes.

17. If a primary stage *is* poorly developed, when the next stage opens, as it must on schedule, the child's system can't entrain on the task at hand but is torn between trying to get that incomplete first agenda functional and tend to the needs of the newly opened stage at the same time. Energy is split between competing drives, both stages fail to develop sufficiently, the third stage will, by default, open within a doubly fragmented system, and the child will be falling more and more behind.

18. Thus a major challenge in the quest for change that a viable education would have to bring about is that *a majority of educational expenditures — time, money, research, effort, intellect — would have to center on the earliest years of life, with most emphasis on the first three years after birth and on, a gradual scaling-down, to "formal operational thinking" around age 11.* Were nature's opening agendas met with appropriate nurturing responses, only a small outlay would be needed for what we consider higher education. (This would entail a radical upset of entrenched positions and I am under no illusion about its practicality in a commercial world.)

Following are a few summary statements concerning the contents of the early stages:

1. In our first seven years we construct a knowledge of the physical world; our emotional world of relationships; our resulting sense of self; a language appropriate to these structures; and nature's greatest achievement, a parallel development that is integral with all constructions from birth: *imagination*, the ability to create internal images not present in the external world. The ability to create and then superimpose internal images onto the external world, and play in the resulting modulated reality (the child's synthesis of inner creation and external reality), is the primary target of the first seven years of life and continues to grow in magnitude as the foundation of all higher forms of intelligence.

2. Development of imagination depends on its necessary correlate: *play*, the overriding intelligence by which all development takes place. Nature's *model-imperative* holds, however. As Howard Gardner put it, the child not played with (not given the appropriate model stimuli) cannot learn to play and will remain identified with the earliest and most primitive forms of survival behavior. This breeds a victim mentality fearing a hostile world over which it has no control or effect. Thus another major imperative: *In the first 11 years, all learning centers on and depends on the creative function of play.*

3. Ages seven to fourteen center on concrete and formal operational thinking. Concrete operations can be summarized as "making things and singing" so splendidly met by Waldorf Education. The child's inner images both overlay and modulate his world, but can now change actual concrete aspects of the physical world through those images. (Our highest neural structure is causal and can act on the relational functions of brain, and changing relationships change the world presented to our senses. Through this people walk on fire, bend metal without touching it, heal diseases without medicines, and other occultic–esoteric embarrassments to contemporary academia.) Fantasy and magical heroes larger than life dominate the years from seven to eleven, the child daydreaming his own models.

4. Formal operations of mind open around age 12 — the ability to stand outside one's own thought process, so to speak, analyze, take apart, and change the very nature of thought (and so reality). This is contingent on semantic language, a language of abstract meanings, which becomes functional at this stage. Through abstract language, the young person can build a structure of his society's body of knowledge, knowledge based on *abstract* ideas — ideas about the physical world and coming into dominion over it (crafts, sciences, agricultures, technologies), ideas expressing our relationships to world, others, and self (the creative arts in all their dimensions), ideas about the broad spectrum of life and its meaning (philosophies, political systems, religions).

After age 15, developmentalists (except Steiner) find no further stages, but this is because no models are provided for higher stages of growth. Nature's plan is for young people to take their place in society, during these adolescent years, wherein the great mature developments, recognized by Steiner, should unfold. (Nature did not provide for a long holding-tank for unwanted, unproductive young people.)

The biology of the brain and its unfolding hold the key to and throw light on these developmental stages — showing why they are discontinuous yet critically dependent on preceding stages — and give hints as to what our spirit and its stage-specific time for unfolding *for* development might be and why the

inviolate law of the *model imperative* holds even for this highest endeavor, spiritual development.

First, our brain is made of three parts in a nested hierarchy that is evolutionary and quite topographical. Specific neural areas are necessary to specific functions, though all the brain is indirectly involved in any area's specific production. (Earlier researchers thought the brain was largely homogenized in function, rather than so specific.)

We inherited the first primary brain from evolution's reptilian–amphibian period. This brain presents us with our basic physical world, and its sole concern is maintenance of this physical experience. Thus, this reptilian system is our survival mode of mind and it has neither emotion nor logic, simply blind urges and drives.

Superimposed on this most ancient structure is an old mammalian brain that is our affective system, source of all relational capacities, and our sense of emotion, the qualitative value we place on our relational experiences. Learning and memory involve this brain; our immunities, healing capacities, and, above all, human relations — hates, loves, and fears, considering an experience rewarding or punishing — arise here, as well as our primary will and its drive toward goals that are rewarding.

The third brain, evolution's latest addition, surrounds the two primary, or animal, brains; it is our intellectual, creative, and causal brain. Primarily a reflective process, here we can stand outside the first two and make critical analyses, and bring about radical mutations, of the presentations of the first two (that is, change our emotional–relational structure and thus the sensory world-experience itself). This third brain is causal, as the second is subtle and the first physical.

All three brains are interdependent and interactive, yet they are uniquely different and capable of independent action. Any of these three can, through the appropriate neurotransmitters, entrain the other two to its own service. We can lose ourselves in thought, get caught up in an emotion, or forget everything except some particular physical task at hand (as great athletes demonstrate). Any activity by any of the three systems will involve the totality of all three sooner or later, and all three operate as a unit from the time the brain forms in utero.

While all three respond as a unit from the beginning of life, these systems can be *developed* as functional structures only in their hierarchical evolutionary order. That is, the primary sensory-world brain must be developed first in order to interpret or translate the experience needed by the more advanced systems waiting to develop. The highest, intellectual–creative brain can only be developed after the two primary brains are functional, though that highest brain responds as a limited cooperative member from the beginning, as needed for its eventual full development. Use and development are not the same. We use all brain systems by default, but we must develop each for full intelligent production.

As each higher structure of brain is developed, it incorporates the lower structures into its service, changing the nature of those lower systems into that of the higher incorporating them. This same phenomenon was observed in the stages of development, which leads to the next point, the major purpose of the preceding: *The developmental stages observed by Steiner and Piaget are synonymous with the opening, activating, and completing of each of these three neural structures, in part or whole, and in their respective evolutionary order.* And herein we find the reason for the discontinuities between stages and the critical necessity of full development of the lower before trying to employ the higher. You simply can't get *to* the emotional–cognitive limbic system until a sufficiently developed sensory world system is functional.

The growth of certain brain structures themselves clearly demonstrate nature's inviolate stages of development:

1. In utero, specific brain structures grow for specific uterine needs and must be "disassembled" before birth, clearing the decks for that brain growth-spurt at birth that provides those new neural systems capable of building the new structures of knowledge that the post-birth period entails. Should such uterine structures continue operation, absorbing energy *after* birth, when the products of those structures are no longer needed and entrainment of all energy *is* needed for establishing the physical–sensory body and world, we would have a seriously dysfunctional infant. (Again, note how carefully nature prepares for each unfolding stage.)

2. The mysterious cerebellum is involved in coordinating body movement, speech, and a host of other complexities. This huge structure doesn't even *begin* its growth until the early "in-arms" period has brought completion of the visual system, around eight or nine months after birth. Then the cerebellum appears and grows with astonishing speed. Nature doesn't bring the cerebellum into being until needed lest it drain energies away from development of the

very structures which it, in turn, coordinates and amplifies.

3. With the growth of the cerebellum, the crawling infant is impelled to get upright and explore its world, early language begins, will and emotion enter the scene (prelude to the "terrible twos"). Nature has concentrated on the primitive physical brain until it is functional enough to allow a parallel development of the emotional brain and its qualitative evaluations of the sensory experience that the physical brain provides.

4. Soon after age one, the *corpus callosum* begins its growth. This large bridge of nerves connects the right and left hemispheres of our neocortex. This bridge is not complete until somewhere between age four and five, by which time some 80 percent of our world, self, affective or relational knowledge, and concrete language are complete. If the bridge between hemispheres were to be completed too soon, again energy would be diverted from those abilities the two hemispheres will need for the cooperative actions possible *over* that bridge. Jean Piaget was struck by the discontinuity between the first six years and this operational logic that suddenly appears around age seven. Brain research gives the reason. Operational logic involves a dynamic between hemispheres that, while it opens a radically new mode of thought, must await growth and development of the necessary prerequisites. None of these foundational intelligences can indicate the new function since they are products of more ancient neural structures. Again, when evolution added new structure, she added a new block of potentials not found previously.

5. The prefrontal lobes of our new brain are an even later addition evolution has made, at least in size and function. While the lowest portions of these lobes are partially functional from the beginning, the structure as a whole is still "laying down its neural tracks" in late childhood and adolescence, and is not complete until around the *twenty-first year of life*, a fact of profound significance. Why the extraordinary delay? As with the cerebellum, or the bridge between hemispheres, the higher doesn't unfold for development until its foundational intelligences are functional, in this case, not until around full maturity. This indicates that all the developmental periods studied to date, covering childhood and adolescence, are but a prelude to an entirely new block of potentials connected with maturity.

6. Research shows that the lower portions of these prefrontal lobes are involved in all computation, reasoning, and logic of our earlier years, right up through formal operational thinking and late adolescence. But the majority of the structure is "silent," apparently inoperative, its purpose a matter of speculation. Years ago, brain researcher Paul MacLean traced direct connections between these prefrontal lobes and the cyngulate gyrus section of the emotional system. He proposed that this circuit was associated with empathy, sympathy, compassion, love, and all the higher human virtues, yet he believed this could open for full development only in late adolescence. New research validates MacLean's brilliant intuitive hunch. That these brain areas remain largely "silent" and apparently inactive throughout life, however, marks an evolutionary failure and our species-wide tragedy, since we do poorly without those virtues.

Early in this century, Rudolf Steiner stated that the true or mature ego "descends" around age 21. Again, this depends, I must add, on the lower stages having been successful and an appropriate model and nurturing environment given for that mature potential. Steiner's "mature ego" marks the beginning of the development of spirit — evolution's greatest achievement, the purpose of our huge neocortex, and indeed of our life itself, and made possible only by *employment* of those missing virtues. Yet this too is feasible only when the whole gamut of physical intelligences are established well enough to free the energy for such an undertaking. Steiner and Montessori worked to provide this foundation.

So we see that our developmental stages are clearly related to the periodic unfolding of our neural system. Each new evolutionary structure of brain has inherent within it a new evolutionary potential, all leading from concreteness, or the purely physical, to abstraction, or the purely mental, paving the way for a radically discontinuous development, that of spirit, an ongoing open-ended venture.

Finally, and of major significance, our heart, old thumper in the chest, has direct, unmediated neural connections with the limbic system of brain (the emotional–cognitive structure). A specific hormone, ANF, produced from the atrium area of the heart impacts and determines the function of the entire emotional brain. The emotional brain, in turn, controls the adrenals and endocrine glandular functions, the pineal body and bodily rhythms, learning and memory, the immune system, all relationships, loves, hates, and reward systems that drive us. The heart is a nonverbal, nonpersonal intelligence, working for

the balance of our body functions and physical well-being throughout the first major growth period, as research indicates. I add to this that the heart is designed to develop from this cellular–molecular function into a universal intelligence that maintains the same balance in our development of spirit.

The success or failure of our life is a balanced dialogue between this universal intelligence of heart and individual ego–intellect of mind. Our brain–mind, I propose, is the heart's organ of experience and expression, as the body is the brain–mind's instrument of interaction with its physical world. But, as in all nature, the dynamic between heart and mind determines the growth or development of both structures.

Again, use and development are fundamentally different. Whether the heart is developed beyond its basic intelligence for our physical well-being and opens to the unknown depths of universality depends on the development of its instrument the brain–mind, whose development depends, in turn, on nature's *model imperative*. Do we have models for such a venture — are we given the appropriate environmental stimuli and nurturing? Steiner and Montessori took steps in just this direction. Blue Rock School in Nyack, New York, has an equal, if unique, approach.

The growing consensus of brain researchers is that we have knowledge of only 15 percent or so of the human brain. This is that percentage involved in the creation of and our response to a physical–sensory world, and research people confess they have no notion of what the other 85 percent of the brain might be for. These unknown areas are "wired only to themselves," as Gary Snyder of University of California at Irvine points out, and are unavailable to our scientific analysis. Having no connection with the outside, which means the lower neural systems and their supportive structures in the neocortex, indicates a self-contained, independent system, existing for its own purposes, which, by the very biology of the parts involved, has no bearing on and plays no part in our physical–sensory world experience. What it is for, however, is clearly indicated.

Consider that the focus of the first 15 years of life is to establish our structures of knowledge of world, self, relationships, creative–abstract thinking concerning that physical experience, and all inherited ideas relevant to it. All this concerns our inherited world. At maturity we should stand in dominion over that physical domain. Our survival–maintenance intelligences, under the guidance of the intelligence of the heart, should then take care of the mechanics of life, so we need take no thought of the morrow. Free to explore the world of delight we have constructed throughout childhood and adolescence, such employment (as with all stages) would automatically prepare for an ongoing life of spirit inherent within those undeveloped and so "silent structures" of brain. Were it developed, the higher would incorporate the lower into its service and we would use our physical structures of knowledge as the launching platform to go beyond those very structures.

The simplest logic implies that the vast bulk of the brain is for an experience totally discontinuous with all coming before it, precisely as found in all preceding stages. By its nature, however, this experience could not be known ahead of time, as our physical world so readily was, since the higher stage is simply a movement into the unknown. Its development would involve process, creation itself rather than the recreative means to perceive previously established creations. For this reason an "education *of* the spirit" is a misnomer. No one could lead another into knowledge of the spirit since this is a creative process that can't repeat itself. It unfolds uniquely according to the individual brain–mind in dynamic with it.

Rudolf Steiner saw that we develop our knowledge of the physical world as we do in order that "higher worlds" might be entered at the stage-specific time. The educational system he designed for children builds a sound knowledge of our physical world and prepares us for the higher stage at the same time. (Montessori did the same.) Our entire adult life should then be spent exploring this realm of the spirit, with which we should identify and phase into as the physical body ages away.

Examine, then, three characteristics of teenagers that clearly point toward further development:

1. Somewhere around age 12 the young person becomes intensely *idealistic*, with a passionate sense of justice and virtue, and begins to search the environment for a corresponding model. (He or she doesn't find this since you can't make a nickel off virtue. It has no dollar commodity value at all. Only its opposite has, thus our models keep our young locked into identity with the early maintenance system.)

2. Secondly, somewhere around age 15, a youngster is gripped by an intense *yearning*, expressed as "a great expectation that something tremendous is sup-

posed to happen." Young people wait for that immensity moment by moment (as most of us wait lifelong).

3. Thirdly, the adolescent has a feeling of *hidden greatness*, a potential within of such magnitude that no career available could possibly express it.

Now all three of these characteristics seem to generate in and center around the heart, toward which the young person gestures when trying to articulate these inarticulate feelings. Nature's model imperative holds in all aspects of our development, however, including that of the heart, which, as an intelligence, must also undergo its development. It does this through its organ of action and consciousness, the brain–mind. The brain–mind, however, can exercise its end of the bargain only to the extent that it receives *its* appropriate modeling and environmental stimuli.

The nameless longing of the adolescent, that "ache of heart," is, I propose, that young person longing for completion, development of the 85 percent or so of the brain still incomplete, and all of which is the heart's organ of expression. The heart, in effect, longs for its own completion, which requires that its instrument, the individual, be furnished with the appropriate environmental model and stimulus that will activate and develop that other 85 percent of self. The adolescent looks for such model stimuli, finds only models of economic expediency, that make of him or her but a dollar commodity value in the gross national product. These are models of degradation, even depravity, and lapses into bitterness, anger, fear, and hopelessness may eventually take over. The youngster opts for models who are, on the surface, antisocial, even nihilistic, but at least representative of an inner rage and rebellion. (Needless to say these antisocial models are themselves creations of the commercial culture, ways to capitalize on the teenager's yearning, make large fortunes, and lock the teenager into those lowest survival-maintenance systems and so serve the commercial system.)

At any rate, a proper education in those first 15 years would provide the foundation needed for an eventual ongoing development of the spirit, the journey into God or the unknown, the only game in town once glimpsed, and the only game that utilizes our unused 85 percent potential. The rest is but the mechanics of survival that we should be able to count on without question by the time we are grown. Instead we are conditioned to keep manipulating each other and the physical world all our life, in fear of a breakdown of our maintenance–survival, which is both comic and tragic. The dominion we have in potential is for both exploring the delights of our world and going beyond it when the time comes. We can educate our children for this higher state only as we ourselves have discovered and opened to it. Children can only become what they behold, not what they are told. The *model imperative* rests with, indeed, us.

The Needs of the Children in the 1990s

Nurturing the Creative Spirit

Joan Almon

A new approach to childhood and education based on the three "golden rules" of Rudolf Steiner will help our children weave through the obstacle-laden path that lies before them.

"Every human being is an artist." This statement was the center of the philosophy and life of Joseph Beuys, a well-known artist of this century. Beuys worked hard to awaken the artistic nature in his students and in his public, and as one stands before his works, one can feel the stirrings of that inner creative spirit that dwells in us all. No matter how buried it may be by modern life and modern education, it is nonetheless there in every human being, and in today's complex world, the need for human beings to live up to their potential as awakened, creative beings is greater than ever. One sees the spark glowing strongly in every healthy young child, and it is a joy to watch it reawaken in the adult who thought it was lost forever. The essence of education — and of life — is to find a way to keep that flame of creative spirit alive and to help the child learn to cherish and guard it so that it neither dies out nor burns so wildly as to be all-consuming.

Modern societies, as a whole, do not do well in regard to the spiritual nature of the human being. Ancient societies recognized the existence of a heavenly world and that every human being had a relationship to it. They recognized this reality, and their members experienced the spiritual at work within themselves. It was an experiential understanding in most cases rather than a conscious understanding. Modern humanity moves along a path of greater and greater consciousness regarding every sphere of life. But along the way, it lost its experience of the divine, and now it stands at a critical point. It has achieved tremendous consciousness in all realms of earthly life. Can it become conscious of the spiritual as well?

To cultivate such a consciousness was the mission of Rudolf Steiner (1861–1925), an Austrian philosopher, scientist, and man of profound insights into the spiritual aspects of life. He is relatively well known as the founder of Waldorf education, but the overall thrust of his work was the development of spiritual science, a path of knowledge that consciously strives

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to understand the spiritual side of life, even as natural science strives to understand the earthly side. He recognized that humanity was moving into a new era of understanding and that a new form of education would be needed. His insight was the origin of Waldorf education, which seeks to educate the whole child — body, soul, and spirit — in such a way that the child can unfold and grow into his or her own unique self. Much of this growth takes place during the first 21 years, but it is only the preparation for the full growth of the mature individual, which begins around age 21 and lasts a lifetime. Then one sees if the creative spark of the individual is alive and ready to burn brightly or whether it has been smothered.

To appreciate the new directions that Rudolf Steiner has brought to education on behalf of children and families, it is best to look first at some of the forms of educational thought that have prevailed in the past 30 years.

Conventional views of the child

I vividly recall from my college years during the early 1960s the enthusiasm in the psychology department for the work of B. F. Skinner. It was thought that behaviorism would save the day and would reach children in new and profound ways, bringing healing for many troubled children and getting healthy children off to a good start. I do not recall anyone speaking of the underlying view of the human being out of which behaviorism arose, but it was surely that the human being was basically an animal. True, we could stand upright, but we were still viewed as having a very close relationship to the animal kingdom. Behaviorism and laboratory research on animals were closely linked, and if experiments worked on rats then it was assumed they would work on children. No one was so forthright as to describe children as two-legged rats, but the notion of the human being as a "naked ape" was much discussed at the same time.

In the early 1970s when I began teaching young children and discovered Waldorf education, behavioral techniques were widely used in educational settings. I recall conversations with behaviorists as to why Waldorf education did not want to take a behavioral approach. They often could not understand what our difficulty was, and it became clear that there was not only a fundamental difference in our understanding of education, but also — and more importantly — in our view of the human being. We wanted to educate children according to the classical sense of the word *educere*, meaning to draw out or lead forth. This approach assumes there is something of great value in the child that needs to be cultivated and drawn out. That is very different from the old *tabula rasa* idea of the child as a blank slate to be written upon, or the behaviorist approach of trading one set of behaviors for another, and presumably better, set.

Today one rarely hears of Skinner or his philosophy, yet it lingers on and there is much current debate as to whether creativity in children is heightened or diminished when rewards are offered. Studies have yielded somewhat conflicting results, but generally it is felt that the deeper processes of creativity are hindered by offering children rewards. It is only the more superficial acts of creativity that are positively influenced by rewards.

Although behaviorism lingers on, and with it the view of the human being as close kin to the animal, it has been largely replaced in the 1980s and 1990s with a mechanistic view of the human being. We have long been told that our heart, an organ of incredible sensitivity and beauty, is nothing more than a pump; but this image was only the beginning of a growing view that the human being is basically a complex machine. The popularity of the computer and the powerful images associated with it have greatly influenced this view. Now one frequently hears the brain described in computer terms, and an assumption is growing that the computer is really much more powerful and efficient than the brain. The next step will be to wonder, why bother to think, why not let the computer do it for us?

What is missing in this view is a recognition of different levels of thinking, some of which may be quite mechanical while others call for tremendous activity on the part of the human spirit. While one can see that computers can process numbers much more quickly than human beings can, that is only one level of thinking, and at that level it is true that computers can sort and organize tremendous amounts of information. But in the end, the computer can only link existing bits into countless new possibilities. It cannot awaken in the night having had a "Eureka" experience during which the mind leaps to a new level of insight. There are higher levels of our everyday thinking that are beyond the ability of any computer. In addition, there are higher forms of consciousness, which Rudolf Steiner describes as Imagination, Inspiration, and Intuition, that are far beyond the ken of any machine. The current tragedy

is that higher forms of thinking are not understood and it is all too easy to educate children only with lower forms of thinking in mind.

As the mechanistic view of the human being takes hold, we must ask ourselves what implications it holds for educators, for families, and especially for children. The education for the child of the cybernetic age is an education that places a computer on every desk and diminishes the task of the teacher. Such education is lauded as being the most efficient and cost-effective form of education. When Chris Whittle first announced his intent to found hundreds of for-profit schools, he described his schools as having one teacher for every 60 children, and the major thrust of instruction was to come from the child's computer. The teacher was there essentially to monitor the child's work with the computer.

It is easy to imagine such an approach to education. As computer programs become even more clever than they are now, they will allow for a tailor-made approach to learning. Children will have their own educational plans according to their individual strengths and weaknesses. It will be hard for parents and educators to argue that there is something wrong with this approach, for it will seem so logical and rational. Many will sense in their hearts that there is something wrong with the mechanistic approach to education, but they will be hard-pressed to find reasons.

Even when the modern child goes home, he is not free to unfold in a purely human way for, in many families, the computer has been embraced and given great importance just as the media has been for the past 40 years. It is becoming increasingly rare for American families to sit around the table and engage in the lively exchanges that were once common in premedia days. Much of the home-learning for today's children takes place in front of the screen, be it television or computer, and less and less occurs with the parent in conversation or in work. We look to machines as educators both at home and in the school, but we are blind to the fact that, in the end, a machine can only educate the machine-like in us. It is not within the capacity of a machine to experience love, creativity, or morality, and it is unable to share these qualities with children. They can only be cultivated in the warmth and love between one human being and another. A child can learn to be an upright human being only from another upright human being.

To appreciate the life, spirit, and creativity of the child means finding a whole new view of the human being. At first this appears to be a radical step and one that is greatly resisted, for if we begin to see the human being as having spirit as well as body and soul, then every facet of life must be reconsidered. At present, for instance, American education gives lip-service to the idea of developmentally appropriate curriculum but, in fact, arbitrarily assigns curriculum areas to whatever age it wants. The general guideline in teaching reading, mathematics, and many other subjects seems to be "the sooner the better," and the result is a hurried curriculum as well as a hurried child. When one takes into account the full nature of the child, however, then a feeling of reverence awakens for the spirit in the child, and one is called upon to create a curriculum that honors the unfoldment of that creative spirit. This leads to an entirely new approach to education in which a deep concern for the child's growth and well-being lies at the center. Let us now explore such an approach.

Striving toward a new understanding of the child

How wonderful it is to hold an infant and wonder about the new gifts that the child has brought to earth. To be in the presence of the newborn is like stepping into the fairy tale of Sleeping Beauty and watching the 12 wise women come forward to bestow their special gifts upon the child. But as with Sleeping Beauty, all the good gifts in the world can be undone by the thirteenth who in her anger and rage said that in her fifteenth year, the child would prick her finger on a spindle and fall down dead. When we think of the child as animal-like or machine-like, we play the role of this thirteenth wise woman who wished death upon the child without the possibility of transformation or metamorphosis.

Fortunately, in the fairy tale, the twelfth wise woman had not yet made her wish and she now came forward. The story says she could not take away the evil sentence, but she could soften it, and she said, "There shall be no death but a deep sleep of 100 years." We are being asked to be the twelfth wise women for today's children, taking away the sting of materialism, the denial of the spirit, which so threatens the creative spirit of childhood. We are being asked to soften the spell of modern life so that when the prick of consciousness comes in adolescence, it does not bring death to the spirit but a deep sleep, like the butterfly sleeping in the cocoon, awaiting its transformation. Then the soul and spirit, for that is what the princess and prince represent in fairy tales, can be united at last.

All of this weaves around us when we gaze at a newborn child, and if we fail to recognize the spirit alive in each child, we inadvertently begin to destroy it. Fortunately, during the past 20 years, more and more parents have begun to recognize the spirit inherent in their children. We see this in Waldorf education through the tremendous growth in the number of schools in North America from about 12 in 1974 to 120 or more in 1994. Worldwide one sees a similar growth, especially in eastern Europe where the newly emerging spirit hungers for an appropriate education. These parents — and perhaps we should call them the postmodern parents — embrace a sincere desire to see their children unfold and become all that they can be as individuals.

A parent recently described to me what had drawn her to Waldorf education. She herself was going through a process of spiritual awakening while pregnant with her first child. One night she dreamt of him, and he was a radiant child, full of the forces of the Sun. In her dream she watched him blossom and grow, but when he was six, she saw him being put into a box that prevented further growth of his sun-like nature. She awoke trembling and resolved never to do such a thing to her child. She began then to search for an education that would allow her child to grow for a lifetime and beyond.

To receive each child with reverence is the first of the three golden rules that Rudolf Steiner offered to every Waldorf teacher, but it applies to every parent as well. When a child comes to earth we cannot help but wonder, from where has this child come? Where did it dwell before it entered its physical body? For it is hard to imagine that this wondrous being had its start at physical conception, that it came into being through the interaction of mother and father alone. For those who gaze lovingly at the newborn there is a sense that a mystery of tremendous magnitude exists here. Poets have sought to grasp this wonder, and the words of William Wordsworth (in Cook, 1958) stand out:

> Our birth is but a sleep and a forgetting;
> The Soul that rises with us, our life's Star,
> Hath had elsewhere its setting
> And cometh from afar;
> Not in entire forgetfulness,
> And not in utter nakedness,
> But trailing clouds of glory do we come
> From God who is our home:
> Heaven lies about us in our infancy!

George MacDonald, the author of children's books and adult fantasies whose work inspired C. S. Lewis (in Sylvester, 1922) and other great writers, also captures this mood in his poem called "The Baby."

> Where did you come from, baby dear?
> Out of the everywhere into the here.
> Where did you get your eyes so blue?
> Out of the sky as I came through.
> What makes the light of them sparkle and spin?
> Some of the starry spikes left in....
> Where did you get that pearly ear?
> God spoke, and it came out to hear....

Although the journey to birth is a profound event in every child's life, children are rarely able to speak of it, for a veil shrouds their conscious memory of it. An example of this was given by a four-year-old who whispered to her newborn sibling, "Tell me about God. I'm forgetting." Yet the memory lives somewhere within each child, and many feel it emerges in the form of drawings, especially of rainbows, which young children love to draw. What do these rainbows signify? Might they be a memory in picture form of the rainbow bridge that every soul is said to cross on the way to earth. That was clearly the thought of a four-year-old who saw a rainbow in the sky and exclaimed to his mother, "Oh look, Mommy, a baby is being born!"

The second of Rudolf Steiner's golden rules for working with children is to educate the child with love. Some children are easy to love, but others are difficult and challenge us to deepen and extend our capacity to love. For me, one such child was Alan, who entered my kindergarten many years ago. His mother had married at age 16, became pregnant, and was widowed during pregnancy, her husband having died a drug-related death. She herself used drugs during pregnancy and in the months after birth. Her parents helped her raise the child whose life had such a difficult beginning.

Alan's mother was open with me about her background, but even if she had not been, my first meeting with Alan would have revealed a serious problem. We met when he was four. He walked straight toward me in the hall outside the kindergarten room and, without a moment's hesitation, kicked me in the shins! He was strong and it hurt, but fortunately it never occurred to me to turn him away. His was a difficult destiny, but he had a strength and a courage that one had to admire. He was not going to take his fate lying down, and he expressed this very clearly one day to a friend after hearing me recite the nursery rhyme of "Humpty Dumpty," with its wonderful picture of the fall.

Humpty Dumpty sat on the wall.
Humpty Dumpty had a great fall.
All the Kings' horses and all the kings' men
Couldn't put Humpty together again."

"You know," said Alan to his friend, "I don't think Humpty Dumpty fell at all." "You don't," said his friend, clearly shocked that anyone would doubt Mother Goose. "No," said Alan, quite firmly, "I think he jumped!"

I've often thought about Alan and that spirit within him that jumped into life despite all its difficulties. Did he stand on the far side of the rainbow bridge and preview all the tragedy that was going to happen to him when he landed on the earth? Rather than turning back or simply falling into his fate, did he say, "Oh, what the heck!" and jump anyway? When I think of the force of his little feet kicking me as he entered our kindergarten, it's easy to see that his first gesture in new situations was a jump and a kick.

I last saw Alan when he was about 21. He was a wonderfully tall and handsome fellow who showed much promise but hadn't quite settled down yet. In a way, he was still jumping and kicking. Sometimes people felt the pain of his kicks and turned their backs on him, but he was fortunate to have family and teachers who saw the courage behind the gesture and who were able to educate him with love.

The third golden rule that Rudolf Steiner offered was to let the child go forth in freedom. How are we to understand this? All too often the idea of freedom is applied too early and children are given choice after choice at a very young age, long before they have the insights to make wise choices. All they learn from this experience is that it is all right to make choices out of whim and willfulness, and parents soon wonder why their child has become so dictatorial. Educating a child toward freedom requires a sensitive balance between holding the child within protective boundaries and, at the same time, encouraging steps toward independence.

There is no single formula regarding the child's freedom, and it is a matter of some complexity for the situation varies from one culture to another. In a tribal or traditional culture, for example, there is less room for individuality and freedom than in a modern culture. In a traditional culture, one is expected to carry out the ideas and practices of the tradition, and the consequences can be severe if one seeks too much independence. In such cultures or even in traditional religious groups in a modern culture, one can be banned or expelled from the community for showing too much freedom of thought or for breaking with the traditions.

In our times, however, the development of the free individual is of the greatest importance, and one seeks ways to help the child toward freedom yet with due regard for the social life around one.

One of the problems facing educators and parents today is how to approach tradition and ritual, for young children are in need of a life suffused with beautiful traditions and rituals, yet one does not want to bind the child to the traditional life. The key here is in the word *bind*. Traditional life did bind children to family, religion, and culture, and it was considered a tragedy if the child broke free. The healthy modern life can offer young children the strength of family, religion, and culture but in such a way that the child is nourished by them but not bound by them. The difference generally lies in the orientation of the parents and teachers and their hopes and expectations for the child. At the same time that Rudolf Steiner gave his three golden rules, he also warned adults not to make children into copies of themselves. He said that one should never use force or tyranny to perpetuate in the children that which dwells in us. The children of every time period bring something new to the earth, and it is especially important now when so much social and individual renewal is needed that we not expect our children to perpetuate the past.

In *The Prophet*, Kahlil Gibran (1965) eloquently describes the need to let children go forth in freedom. In the section on children he says:

Your children are not your children.
They are the sons and daughters of Life's longing for itself....
You may give them your love but not your thoughts,
For they have their own thoughts.
You may house their bodies but not their souls,
For their souls dwell in the house of tomorrow, which you cannot visit,
not even in your dreams.
You may strive to be like them, but seek not to make them like you.
For life goes not backward nor tarries with yesterday.
You are the bows from which your children as living arrows
are sent forth....

These beautiful words describe the background for letting children go forth in freedom. Yet there is another aspect to human freedom and that is the actual deed of going forth in freedom, a task that the young person himself or herself must undertake. True freedom is ultimately attained by facing an

abyss and crossing a threshold. One does not go easily step by step into freedom. The process is more like that of the caterpillar spinning its cocoon of darkness, dissolving its old form and emerging in a new, more lifted and radiant way.

This is transformative growth. It is one thing for a caterpillar to do, for it knows no other way. It is quite another matter when a human being, in early adulthood or later, faces this call to freedom. It then takes courage to take the necessary steps. The seeds for such courage, however, are planted in childhood, and all the great fairy tales, myths, and legends relate the story of human souls who take such steps into freedom. The stories of the great heroes of all ages also tell this tale. The hero is the one who breaks free and gains new ground for himself or herself as well as for humanity. To offer children such stories at appropriate ages is to plant seeds for the future, when as adolescents or young adults they will be faced with difficult choices. Then the stories come to mind again, and the young person may feel "Ah ha, so that is what that story was all about!" With the memory an impulse toward courageous action arises, and this courage is much needed in our times.

The path that lies before the feet of our children is littered with the obstacles and stumbling blocks left there by an unwise society that did not understand the true nature of its children. Wherever one looks — at school, home, or community — one sees barriers standing in the way of the children's development. Today's children need not only the normal courage for unfoldment but also an added element to overcome the problems of families in disarray, communities torn apart by violence or permeated with an apathy toward the well-being of their citizens, and schools that often seem more concerned with test scores and internal politics than with human lives. If society had deliberately intended to make the unfoldment of the creative spirit as difficult as possible, it could not have accomplished much more than it has done through innocence and ignorance. We have left our children with an unprecedented amount of work to do in overcoming these obstacles. There are ways to help them, however, and ways to improve the situation for future generations.

The needs of children today

What is it that children need from adults today if they are to grow up as healthy, creative human beings? As said before, the children of this decade are faced with tremendous challenges, for their families, communities, and societies are often undergoing high levels of stress. In addition, the children's own creative strength is eroded daily through immersion in a technological, media-oriented culture. But perhaps most debilitating is the fact that the adults around them — families, teachers, and community members — look at them and see only a fragment of who they are. Their inner substance, their creative spirit is overlooked and denigrated. It is hard enough for an adult not to be recognized or affirmed at an inner level; it is disastrous for children. The self-fulfilling prophecy comes into action, and the child who has been thought of as animal-like tends to act like an animal, overcome by drives, passions, and instinctual behaviors. The child who is viewed as a machine, tends to become dry and sclerotic, immensely clever but without heart or compassion. It is the children who are treasured for their true human qualities who have a chance of unfolding to their full potential, with a balance of mental, emotional, and physical capacities. Then their own "I" or individuality can shine forth and engage in a lifetime of growth.

People frequently ask if children are different today from what they were 20 years ago. It is easy to say "yes" and to point to the added stress and difficulties that plague them. One also feels, however, that they are different in another and subtler way. I have known a number of young children in the past ten years, for example, who have become vegetarians on their own, without encouragement from their parents who were not themselves vegetarians. At age five, or even younger, the children have decided not to eat meat, usually out of concern for the animals. Every generation brings its own qualities to the earth, but this generation of children and young people seems to have brought a strong but loving concern for the earth. There are also many children who have been prematurely awakened to the problems of the world that they then carry as a burden and a sorrow. This is unhealthy, but I am not speaking now of those children, but of the ones who carry a concern for the world in them in a childlike way that is not too great a burden for their growing soul forces. They are basically happy children, and one feels they are happy to be on the earth helping to take care of it.

The last decade of this century is proving to be a very dramatic time for humanity. We are faced with enormous social choices, and at times we fall into the abyss of hatred and destruction as in Bosnia or Rwanda. At other times, however, we have risen to new heights of social transformation as in the peace-

ful revolutions of eastern Europe and the end of apartheid in South Africa. Today's children have come to earth at a remarkable time, and as each generation brings new gifts to the earth, one hopes that they have brought the capacities needed for a new social order, one based not on warfare but on peace and freedom. One looks at the children and wonders in what ways are they different from earlier generations and what gifts have they brought to the earth? Will they be able to unfold those gifts for the benefit of humanity, or will they encounter obstacle after obstacle that prevent these gifts from coming to the fore? That would be a tragedy for us all.

In addition to speaking of the three golden rules of education — to receive the child in reverence, to educate the child in love, and to let the child go forth in freedom — Rudolf Steiner also admonished adults to be aware of the obstacles that hinder the development of the child and to work energetically to remove those obstacles. Without our help, the child cannot develop in a free and healthy way.

"One needs to be able to educate a child in such a way that one recognizes that in every age each child steps onto the earth and brings something new from the cosmic world order with it. The educator needs to remove the obstacles that stand in the way of the child's body and soul development in order to create an environment for the little one in which his or her spirit can in full freedom step forth into life" (Steiner, 1990).

Today's children will reach maturity in the next century, the next millennium. We cannot be certain what their future holds or what their challenges will be. Our way of helping them is to remove the obstacles that hinder their development. The greatest of these obstacles is denial of their spiritual being. With sufficient love, wisdom, and courage we shall find ways to bring out that being. Then the creative spirit of the children, the artist who dwells within, shall be able to shine forth and help create new possibilities on the earth.

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Voice and Empowerment in the Classroom

Learning About Integration From a Fifth-Grade Student

Cheryl L. Rosaen

An account of a fifth-grade student's development of "knowledge and ways of knowing," and "ways of being in a learning community" in the context of a writers' workshop.

Learning communities in which activities center around a constructivist view of the learner provide rich opportunities for students to develop a sense of voice and become empowered, both in and out of school. In such classrooms, students' ideas are valued and listened to and they are encouraged to construct knowledge, not merely receive it. Students' literacy learning is enhanced through opportunities to pursue their interests, make choices and decisions, and become involved in setting and pursuing their own learning goals. When reading, writing, speaking, and listening are integral aspects of the learning process, students' thinking and sense of empowerment are also enhanced. How can teachers document and describe students' development of voice and empowerment in the learning community? What are examples of students becoming empowered and making their voices heard? How does such empowerment relate to literacy learning?

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This article tells the story of 10-year-old Brenda's participation and learning within and across three subject matter areas — writing, science, and social studies — and illustrates her developing sense of voice and empowerment throughout her fifth-grade year. This description is based on research findings from a year-long inquiry in which I collaborated with a group of educators to explore ways to engage students genuinely in their learning and to create classrooms that are learning settings for *all* students. With a fifth-grade teacher, I took on a teacher-researcher role to learn new ways to study students' literacy learning in a classroom setting and to study our own teaching practice. Different members of our group taught the same 47 fifth-grade students in three subject matter contexts (science, social studies, writing), studying students' learning within and across the subject matter areas.

Our group discovered that many of the *conceptual understandings, ways of knowing,* and *ways of being in a learning community* that we saw particular students develop in one context played important roles in their learning in other subject matter contexts. These areas of growth thus became more than developing *understandings* that students used in multiple contexts; they also included *transformations* in values, attitudes, and interests (Jackson, 1986) that influenced further learning within and across subject matter areas. By focusing on the meaning students constructed over time, we gained insights into ways in which *students constructed their own integration* across the subject matter areas and ways in which their learning experiences supported *expression of thought and a sense of empowerment* (Belenky, Clinchy, Goldberger, & Tarule, 1986; Gilligan, 1982). Our close look at how students made sense of their learning experiences also helped us identify *qualities of the learning setting* that supported students' learning and development of voice and empowerment.

We explored new ways to think about meaningful learning *within and across* subject matter areas and the role voice and empowerment might play in students' learning. We wondered how the concept of integration could help us pursue such efforts.

Integration as combining into an integral whole

> **Integration**: 1. the act or instance of combining into an integral whole; 2. behavior, as in an individual, that is in harmony with the environment; 3. Psychology: the organization of the constituent elements of the personality into a coordinated harmonious whole. (*The Random House Dictionary of the English Language,* Unabridged edition, 1971)

Cognitive science research and research on literacy acquisition and development informed our thinking about the learning process and the role integration might play in the process. For example, cognitive research on subject matter learning and learning strategies (e.g., Posner, 1989; Pressley & Levin, 1983) and on literacy learning (e.g., Pearson & Johnson, 1978; Rumelhart, 1980; Smith, 1982a, 1982b) has informed educators' understandings of learners and the learning process. Through transactions with the environment, learners change their knowledge structures and construct new knowledge (Carey, 1988; Vosniadou & Brewer, 1987). From this view, children learn to use writing, written text, and discourse as learning tools, not as ends in themselves. Literacy includes reasoning, problem solving, and critical and creative thinking as ways to generate new knowledge and new skills (Brown, 1991; Michaels & O'Connor, 1990). Research on literacy acquisition and development also describes ways in which children's knowledge construction through transactions with text and through discourse are shaped by the prior knowledge and experiences they bring to literacy events (e.g., Halliday, 1978; Rosenblatt, 1938, 1978; Teale & Sulzby, 1986; Wells, 1981, 1986). Thus, the learner plays a significant role by bringing together different aspects that enter into the learning process, constructing meaning, and combining different parts into a "unified whole."

Drawing on these lines of research, many thoughtful educators have argued for an integrated approach to fostering and supporting students' literacy development and learning in other subject matter areas. This approach seemed worth pursuing in our teaching, since it acknowledges the learner as playing a central role in constructing meaning and therefore playing a central role in the extent to which experiences in one learning context (e.g., writing) are connected to experiences in another (e.g., science or social studies). For example, when the four language modes (listening, reading, writing, and speaking) are used as the means to support children's inquiry into particular topics across the disciplines, they become more than ends in and of themselves. As children use the language modes in an integrated fashion in real language use, their language capabilities also progress (e.g., Atwell, 1989, 1990; Fulwiler & Young, 1982; Hill, 1986; Hynds & Rubin, 1990; Jensen, 1989). Moreover, authentic literacy experiences have the potential to promote (or not promote) students' voices and

power in the classroom (Delpit, 1986, 1988; Shannon, 1989). This approach to literacy instruction is sometimes called a "transactional approach" (Weaver, 1988), or a "whole-language approach" (Goodman, 1986). Also drawing on these lines of research, some educators recommend using broad themes or issues as a means to organize an integrated approach to literacy instruction, thereby opening up the subject matter content to include exploration of concepts and issues in other disciplines (e.g., Moss, 1984, 1990; Pappas, Kiefer, & Levstik, 1990; Rudman, 1984; Walmsley & Walp, 1990).

Thus, combining teaching and learning into a "unified whole" could involve creating opportunities for students to develop knowledge and skills in one area as they use them to pursue learning in another. Because different members of our group were responsible for teaching in different subject matter areas during different time blocks during the school day, we explored ways to collaborate as teachers to support students' learning and create a "unified whole" across the school day instead of attempting to create a series of integrated thematic units.

Integrated teaching and integrated learning

As we began the year teaching and researching in our respective subject matter areas, we often noted that although our subject matter goals were distinct, there were similarities in several qualities of the learning environment we were trying to develop and characteristics in learners we were trying to nurture. We explored ways to capture simultaneously the social, interactive, cognitive, and affective dimensions of teaching and learning in our classrooms, and to think about ways in which teaching and learning in each subject matter area may be similar or different. These explorations led us to develop two metaphors that described the kind of learning environment we were trying to create and helped us define the nature of knowledge, ways of knowing, and qualities of learners that are integral aspects of developing significant understandings in science, social studies, and writing: a learning place metaphor and a quilting metaphor.[1] When we began to ask questions about integrated learning and student empowerment, we identified a third metaphor that described more explicitly the richness of the learning we saw going on: a metaphor of transformation.

A learning place metaphor to highlight the social context. Hermine Marshall's (1990) distinction between viewing the classroom as a *workplace* compared to a *learning place* was helpful to us in defining the emphasis we value in our teaching of science, social studies, and writing. We used this distinction as a starting point to develop our own ideas regarding subject matter knowledge, skills, dispositions, teacher and student roles, and what would represent learning. In traditional classrooms, getting work done is emphasized over what is actually learned from getting the work done, and subject matter is neatly packaged and defined and ready to be "delivered" to students. In a learning setting, knowledge is constructed socially by people. Evidence, not authority, is used to construct new knowledge and judge the merits of ideas. This places each person in the position of sharing expertise rather than limiting expertise to knowledge found in texts or in the teacher's head. Thinking, questioning, discussing, learning from mistakes, trying new ideas, and so on are valued and rewarded as much as completing a finished product. Students focus on learning particular subject matter concepts and knowing how and why certain concepts and ideas are connected and useful. Understanding what it means to be a scientist, a historian, or a writer is part of the subject matter "content" in a learning place. Taking risks, challenging ideas, listening, collaborating, appreciating diversity, as well as responding to and respecting others' ideas are important social behaviors in the learning place, since they are necessary aspects of constructing knowledge. The learner feels a sense of ownership and commitment to his or her own learning, expresses ideas, asks questions, and has the disposition to inquire and ask why.

A quilting metaphor to highlight the social construction of knowledge. To capture our goals for teaching for understanding in our teaching, we used quilting as a metaphor to represent both the process and product involved in teaching and learning for understanding. The multiple layers in a quilt represent the complexity of teaching for understanding. In quilting, the process is just as important as finishing the quilt. The uniqueness of each quilt emphasizes how each quilter (students and teachers) has unique experiences and constructed unique understandings, skills, and dispositions. The stitches in the quilt represent the qualities of the learning place we discussed above. We think of the quilt backing as our learning community and the stitches that hold the quilt together as the qualities of the learning setting that are created over time as students and teachers engage in learning activities together.

This image of teaching and learning is an alternative view of the typical notion of teacher as someone who imparts knowledge or skills to students, and it rests on a *fundamentally different relationship* among teachers and students. Instead of imparting knowledge, teaching for understanding is geared toward empowering and enabling learners to construct their own meaning so that the learning is relevant and useful and so that learners have the desire and know how to go on learning.

The metaphor of transformation to highlight the learner. The learning place and quilting metaphors were not as powerful in helping us think about how *individuals* construct meaning in the social context. Jackson's (1986) notion of "transformative teaching" derives from the metaphor of the learner undergoing a metamorphosis — a transformation, a profound and enduring change, often of dramatic proportion. For this kind of growth to take place, Jackson asserted that students and teachers engage in both a psychological and epistemological relationship and that the relationship brings about modifications in attitudes, values, and interests as they relate to subject matter.

This image of students undergoing a "transformation" captured many of the kinds of changes we were seeing in our classrooms. We were seeing empowered students who voiced their ideas: talking with each other rather than through the teacher as mediator; challenging each others' thinking; showing genuine interest in each other's writing; using evidence to explain and defend their ideas; asking to spend more time writing; bringing writing in from home and talking on the phone to each other at night about pieces they were writing. We were also seeing them use concepts, ideas, values, and interests they had learned or developed in one subject matter context in other contexts. They were not only learning within each subject matter area, they were becoming *qualitatively different people*, which also shaped their further learning. As we investigated what may have brought about such "transformations," we discovered three kinds of connections that influenced these changes.

Making connections within subject matter areas. Within each subject matter area, we were helping students develop particular knowledge, skills, and dispositions and see their learning as connected and useful. In the area of writing, for example, we wanted students to understand what it means to be a writer. This entails developing particular knowledge (e.g., characteristics of quality literature; language for discussing response to literature; knowledge of descriptive writing techniques and particular forms of writing), skills (e.g., ability to use descriptive writing techniques; ability to write in a variety of forms), and ways of knowing (e.g., using literature as a source of writing ideas and techniques; using a journal as a place to generate and store writing ideas). It also entails developing the disposition to write, to use their knowledge of good writing as they write, and to participate in a writing community so others can learn from them. If students were to make rich connections among these different areas — if they were to be "transformed" — they would behave differently as writers and as learners. They would, for example, choose to write, seek writing ideas from each other and literature, choose to help others with their writing, and so on.

Making connections as a learner. In all three subject matter contexts, we wanted students to learn how to learn (e.g., using writing to think, asking questions, questioning the authority for knowledge), and we wanted their growing awareness and use of such strategies to become apparent across their school day. In addition, we wanted students to learn to behave socially in a community of learners (e.g., taking risks, challenging ideas, responding to others, respecting others' ideas, appreciating diversity, collaborating). We tried to foster transformations in their level of ownership of ideas, their commitment to their own learning and the learning of others, and their tendency to reflect and think. We wanted the to develop qualities that are required of people who are in a learning place (e.g., Can I have more time to work on a piece I started at home?) and shed qualities of task-oriented workplace participants (e.g., How long does my story have to be and when is it due?).

Making connections across subject matter areas. From studying our students' learning and participation in the learning community, we began to understand a third kind of transformation. Learners who experience transformations in one subject matter area will come to other learning contexts as different people (although this does not occur in a linear fashion). As our students changed as writers (e.g., experimenting with new forms of writing, learning to make their own decisions as writers, learning to talk about writing among each other), they also changed as learners of science and social studies. For example, as students learned new concepts and skills in social studies (e.g., concepts such as racism, sexism, discrimina-

tion, justice, equality; skills such as critical reading of text) and in science (e.g., the nature of scientific inquiry, use of argument and evidence, the language of science), new understandings, attitudes, and values that stemmed from their learning in science and social studies began to emerge in our discussions of literature and student writing.

Research questions

We know a great deal about children's development as writers (e.g., Bissex & Bullock, 1987; Calkins, 1983; Newkirk, 1989), their development as readers (e.g., Clay, 1979; Langer, 1990; Lehr, 1991), and the interaction among the language modes in children's literacy development (e.g., Hansen, 1987; Langer, 1986; Langer & Applebee, 1987; Loban, 1976). Likewise, ways in which students' understandings have developed through use of various language modes have been well researched (e.g., Barnes, 1976; Blake, 1990; Hynds & Rubin, 1990). However, research is needed on how instruction that is intended to support students' literacy development in several areas as well as subject matter learning is actually interpreted and integrated by students into a "unified whole." How effective is this approach to organizing and implementing literacy instruction in furthering students' language capabilities, furthering their sense of voice and empowerment, and supporting subject matter learning? From the students' perspectives, what meaning do they construct, in what ways is the meaning integrated, and to what extent and how are learners transformed?

Our year-long study examined the following questions: (a) *Knowledge, Skills, and Ways of Knowing*: How did the students participate in literacy activities and the writing process? What qualitative changes were evident in written products over the year? What knowledge, skills, and dispositions were developed? (b) *Ways of Being in a Learning Community*: How did students interpret and participate in the social context in which the literacy learning took place? How did their interpretation and participation shape their writing knowledge and skills and their disposition to write? (c) *Ways of Integrating*: In what ways did students construct meaning across subject matter areas? To what extent did they integrate meaning constructed through experiences in one subject matter context with meaning constructed in another subject matter context? From the students' perspectives, to what extent did understandings, approaches to learning, and social norms in the learning community in each subject matter area become integrated or form a "unified whole"? In what ways were learners "transformed," and how did transformations in one area influence learning in another? Brenda's story illustrates what we learned.[2]

Brenda's story: Making women and girls visible

To introduce Brenda, I begin with a short vignette describing an incident that took place during "authors' day," a weekly routine we introduced in November.

> It is February 6 and as they do each Wednesday, students in this fifth-grade classroom are sharing their writing on authors' day. It is Tim's turn to share a story he has been working on for some time — a story about some murders that took place at the school. Since he has such a long story and there are several others who also are waiting to share, Rosaen suggests that he select one part of the story and ask his audience to respond to that part of the story for a particular purpose. After reading a portion of the story and discussing the similes he used in his piece, Tim continues reading quite a long segment, and then asks for questions or comments.
>
> Brenda: How come there was only boys in it? There wasn't one girl.
> (Many overlapping comments)
> Casey: We're in communication arts, not social studies!
> Rosaen: Tim, can I ask you a question?
> Tim: Yeah.
> Rosaen: What do you make of Brenda's comment as far as thinking about yourself as an author and finding out how people in the world are responding to your writing? What do you make of her comment?
> Tim: Well, as Johnny said, it is my story and I can put what I want in it and I think maybe I should put some girls in it.
> (There is more discussion of how to use this as feedback for the author.)
> Rosaen: Casey, one other comment that I wanted to make note of is that you said, I heard you say, "This is communication arts, not social studies." ... Can you say more about why you made that comment? What reminded you of that?
> Arthur: Because in social studies we were talking about sexism...
> Rusty: And discrimination all across the fall...
> Rosaen: So can we bring in ideas from social studies in here? Was that helpful to your discussion?
> Casey: She never would have said that, probably, if we hadn't been studying that in social studies.

We were very excited to see Brenda bring up an idea from social studies in our sharing time during writers' workshop. After all, we hoped that issues they were exploring in social studies would have relevance and meaning in other contexts in their lives.

But how do we know Casey was correct in his hunch that Brenda would not have brought up this issue if they hadn't been talking about sexism in social studies? How do we know if taking the risk to challenge Timmy surrounding this topic is a real "transformation" in Brenda — a change that will last and endure — and not just a coincidence, or something that was on her mind for the moment, or not just a brief and fleeting interest that lasted only a month? We examined whether this was an example of how she had personally integrated her learning from social studies into her participation in the writing community.

Brenda's starting points as a learner in science, social studies, and writing

Brenda's progress as a learner came up often during the early fall months, mostly because of contrasts we saw in her class participation in science and writing. She is a soft-spoken, cooperative student who began the year completing assignments willingly. However, in science, she spoke more frequently and played a leadership role in her small group work. She was more engaged in the questions being pursued, which included taking her science journal home at night to discuss ideas with her mother. In social studies, she also seemed more easily engaged in the topics under discussion, such as when she discussed the role of collaboration in history:

> When the settlers got to north america and met the indians, they collaborated on how to help crops grow, by putting 3 fish in a hole with the seeds as fertilizer. Another example the indians and settlers brainstormed collaborated on how to use nets to catch fish. Another example that the indians and settlers collaborated about was how to live on nuts and berries if were lost or food was dying off.
> They also collaborated on how to build housed and what kind of housed to build. They desided to use big leaves for waterproof roofes and the best logs for building the body of the house. (November 14, 1990 entry)[3]

In writers' workshop, Brenda did contribute occasionally to whole-class discussions and followed through quietly on small-group assignments. She fit the image of a typical "work setting" student who did her assigned work and worked more in parallel with her peers rather than collaboratively. The first assigned writing of the year required students to revise a piece they wrote about themselves. Yet her final copy ended up including few details and did not seem to show much commitment to improved writing or ownership of the piece; it was rather a school assignment she finished by a due date.

Brenda's transformations as a writer

Brenda grew as a writer across the year in many ways. Although Brenda began the year doing her work in parallel with other students, she began to see the value of sharing with others to improve the quality of her writing:

> Well it has something to do with collaborating, because they would explain to you what they felt or what they think you could do to improve your work or what you might be able to take out that would improve your work." (Group interview, May 29, 1991).
>
> I like knowing what people around me think.... I want other people to want to read my books.... (Individual interview, May 31, 1991)

Learning how to improve the quality of her writing was an important theme that Brenda was aware of:

> I've started realizing how much description counts in a book and how much explaining counts in a book. (Individual interview, May 31, 1991)

In addition, Brenda tried out and valued some techniques for improving her writing we had discussed, and she used them to write her mystery story:

> And sometimes ... I like sitting on the beach and looking into this because it makes it easier. Especially if I'm gonna make the outing at a lake, I think it would be interesting looking at our lake and adding some details ... because I can't really think of a lake and add details without looking at it. (Writing conference, May 14, 1991)

Brenda also found value in using literature as a source of ideas and as a source of good writing:

> Because I'll read a book and I'll think that they, I thought that the writer did a really nice job and I'll write down some of the things that I liked about it, sometimes, and then I'll look back in it and I'll write questions about it, about how I could do that. And then I'll go back when I'm looking for ideas and I'll look what I had written down earlier and sometimes I'll use that information.... I usually don't throw it away because I'll want to keep it in case I have another book that I might want to use that sort of information for. (Individual interview, May 31, 1991)

During the composing process, Brenda sought ideas and techniques from books. Compared to other pieces she wrote across the year, she thought her mystery story was the one she had learned the most from because, "Well, I have more to think about, 'cause it's such a, it's a chapter book and I have to think harder about what I want to do with it" (Individual Interview, May 31, 1991). When she was hav-

ing trouble proceeding, she turned to literature for help:

> I read a bunch of the beginnings of the [mystery] books because I couldn't think of a beginning ... every night I go in my room and I read more of my mystery books ... and I, I try and get ideas from my book. (Individual interview, May 31, 1991)

Brenda came to see that writing a good piece takes time and that the quality of one's writing is more important than the quantity:

> 'Cause you might have only one or two really good stories. And that's better than having ten or twelve really bad stories.... No, I mean they wouldn't know they were bad but they don't add as much description 'cause they don't take as much time with them. (Group interview, May 29, 1991)

When asked, in a group interview, if students considered themselves to be authors, Brenda was among three (out of five) who were quite definite in saying they were:

> Brenda: I just think that anyone can be an author if they write something. I don't think it has to be published ... or that it has to be out on the market just to make you an author.
> Iris: I think that I'm sort of an author now that I have heard what they said 'cause sometimes I write a lot of poetry and um I think I'm an author because I have been writing a lot for writing workshop so I sort of think I am and sort of think I'm not.
> Brenda: Why do you think you're not? I don't understand how you don't think you are.
> Iris: Well, sometimes I can't think of anything to write.
> Brenda: I don't think that authors always have something in mind that they want to write. (Group interview, May 29, 1991)

Brenda's self-assurance that she is a writer and her willingness to challenge her peer in a group setting show a transformation in her commitment to writing compared to her approach to writing in the fall.

These examples show clearly that there were several areas of growth or transformation for Brenda as a writer: her more active participation in the writing community, her knowledge and use of writing techniques, her commitment to improving the quality of her writing and taking on further challenges. We investigated whether some of these changes were influenced by her learning in science and social studies. It became apparent that Brenda's growing understanding of and commitment to the visibility of women — in history, in science, and in writing — influenced her participation in the writing community. She constructed her own integration — a personal understanding and connection with this issue — across the three subject matter areas to become a more committed writer and a more empowered participant in the writing community.

Women and girls become visible

What may have influenced Brenda to ask Tim why he did not include any girls in his story? The visibility of women is an issue that was treated explicitly in both science and social studies class, so we explored connections Brenda made within science and social studies regarding this issue and then considered how she might have made connections across the three subject matter areas.

Women as scientists. In September, Brenda's science class studied the nature of scientific inquiry and focused on what it means to be a scientist. When asked to draw a picture of a scientist at work and describe what the scientist is doing, Brenda portrayed a male scientist. After discussing and writing about different aspects of scientists' work, students were asked to write about a picture of Dorothy Hodgkin at work and write whether they think the person is a scientist. Brenda wrote: "I think she is because she's is investigating about something like a scientist." Although Brenda did not address explicitly her change in thinking, she opened up her thinking to include women as scientists. The following day, she pursued this connection:

> I am like a scientist because I
> — study things
> — read
> — write journals
> — do research about what I want to know about
> — share my discovery's with others
> — Go to meetings (at school)
> — talk (to teacher & friends about important things, even problems I might have)
> — invent things
>
> I am not like a scientist because I...
> 1) don't travel to share my ideas
> 2) talk to public about my idea's

Just as she was being supported to think of herself as an author in writers' workshop, Brenda was being encouraged to think about ways in which her own behaviors are like that of men and women scientists. Women and girls were becoming visible to her in ways she had not previously thought of. She also saw Peasley, her female science teacher, as a scientist and wrote about entering a scientific community: "I liked when you said you thought of the same things I did because its neat to have a real scientists think what I think."

Women and girls as makers of history. While Brenda was experiencing what it meant to be an author and

a scientist, she also was experiencing what it meant to be a historian in social studies class, taught by Hoekwater and Hasbach. The role of women in history was treated explicitly in December when the class studied social issues and the meaning of central concepts such as: empathy, discrimination, prejudice, rights, duties, justice, equality, racism, sexism, ageism, ableism, democracy, exploitation, social conflict. This study was followed by a series of discussions designed to bring people who our society treats as invisible — women, Africans, Native Americans, Hispanics — to the foreground.

When we studied Brenda's writing and participation in social studies class, two things stood out: Brenda's "way of knowing" in social studies and concepts that were salient for her. An important theme in social studies class was the idea that history is socially constructed, not "out there" to be received. Brenda embraced this idea and adopted it as a "way of knowing" for herself. This perspective was revealed when she was interviewed about social studies at the end of the year:

> At school:
> They tell me about their book and I tell them about my book you know what happened or we let each other read each other's journals every day, you know, before the teacher reads them ... so you don't have to read every single book, you know, you could just learn about it from — journals or from them instead of having to read the book.
>
> At home:
> Every night, every night I talk with my mom and my dad and my brother and my uncle ... we'll get a turn to say what we did during the day. My mom and dad usually ask me about social studies and because they think that it's neat what we're studying about.
>
> Outside school with friends:
> Me and Clare talk about it a lot with Laurie ... we'll go out in someone's backyard during the day, you know, and we'll ask each other questions about what happened in certain subjects.

Brenda appreciated and valued the role that sharing ideas played in her learning. These comments also show that she was disposed to spend time talking about social studies issues and concepts, that she was engaged in her learning.

Another quality of Brenda's approach to learning was her use of empathy to understand others' perspectives. Brenda defined empathy as, "to try and feel like someone else or to be in their shoes...." She reminded us of the women described in Belenky, Clinchy, Goldberger, and Tarule (1986) who "integrate their voices," construct their own knowledge, and become an intimate part of the known. For example, when her class learned about the conditions under which enslaved people were transported to the colonies, she purposely tried to become an intimate part of what she was learning:

> And we learned how jammed they were and so me and a friend went outside for recess.... and we just, we just sat there and it was really hard, I mean we were like, "Oh! I want to move! I want to move!" because we were trying to find out what it was like.... I can't imagine doing that for two months ... we wanted to know what it was really like because we're going, "Well, I don't think it would be too bad, I mean I've been crunched in a car before and it wasn't too bad because it was only a little while...." But we found out what that was like and that was terrible....

Brenda extended her empathy to her classmates as well. When asked if there was anyone in the class who she would consider "invisible," she named Roxanne and explained:

> She's visible but invisible. People make fun of her, which means that they see her and they notice her but they don't notice her as being good, just because she's overweight or something they make fun of her. But I think that she can be really nice if you give her a chance.... I notice her as a nice person.... She's invisible because no one notices her because she's nice.

As the class studied the ways in which particular groups of people have not been prominent or visible in history (e.g., women, Africans, Native Americans, Hispanics), Brenda began to see the impact on her own understanding of important issues. She was *learning a language and developing her own voice* for discussing such issues. When asked why it is important to study social studies, she replied,

> Because we have to learn about what other people in our history have done and what wrongs — to make them right.... I never would have known to be against it [slavery] if I hadn't learned about what happened to some of the slaves and stuff.

She also showed conviction about whether and how women are included in historical accounts and textbooks:

> They should just include women.... I've been reading some books at home and I, I've noticed that and it's like, well, I never would have noticed that before. I think it's good that I notice it now because it's important.
>
> When they talk about people like Phyllis Wheatly or Harriet Tubman, don't put them on a whole separate page.... I wish they would just include the women ... I mean invisible is like only having a few sentences or not even a paragraph.

Brenda's new understandings of the role of women in history and ways in which their contributions have been invisible in some historical accounts supported new attitudes and values about what should

happen in the future. The new language she was learning and its connection to history gave her words to express her feelings and attitudes, and may also have contributed to giving her her own voice, her *own visibility and empowerment* in the classroom.

Brenda's visibility and empowerment in writers' workshop. As women and girls became visible for Brenda in science and social studies class, *she became a more visible and empowered girl* in writers' workshop when she challenged Tim to explain why he did not include girls in his story. She *noticed* that girls were invisible and *voiced* her concern about it. Given our deeper understandings of Brenda as a learner in science and social studies, this writers' workshop incident is a convincing illustration of Brenda's many transformations coming together into a unified whole, coming together as "integrated voices" (Belenky et al., 1986) to challenge a classmate about an issue that had become a personal part of her knowing. More went into her transformation than merely talking about sexism in social studies. She made connections in three areas: within writers' workshop, for herself as a learner, and across subject matter areas.

Learning from Brenda

What can be learned from one student's story? In each learning community — science, social studies, and writing — there was an emphasis on several "ways of being" that supported Brenda's transformations. Public sharing and revision of ideas were key characteristics — supporting students in making their ideas explicit (through talk and writing), examining thinking through asking questions, and learning to use evidence and shared expertise to construct new knowledge. Students learned to collaborate, not just in getting work done but in thinking together, and they came to value the diversity of backgrounds, ideas, and talents their classmates had to offer. They learned to value and respect each others' ideas and to trust each other that they could take risks in trying out their ideas. Inquiry and asking questions, not just giving right answers, helped students to engage in meaningful and authentic problems. They became involved in setting their own goals for learning, which required ownership and commitment to actual learning, not just completing assignments. Brenda not only learned important concepts and skills in the different subject matters, but she also learned to approach future learning differently than she had before. Without a community in which these kinds of behaviors were not only encouraged and rewarded but were actually happening, Brenda may not have had the opportunities to change and grow in these directions.

Becoming aware of and learning new language to express and examine her ideas were key factors in the way she participated in the learning community and the meanings she constructed through her participation. Brenda acted on her new knowledge and became more visible in the learning community. Developing language helped her raise and discuss issues. The emphasis on personal sense-making and respect for each person's ideas enabled Brenda to develop her own interests, attitudes, and values in relation to the subject matter being taught, rather than feeling that there was a "party line" to which she must subscribe.

Teachers should pay attention to students' thinking. Brenda's participation and learning illustrates the value in providing opportunities for students to examine and share ideas about their learning, to create ways for them to set some of their own learning goals and pursue their own interests so their learning can become personally meaningful. She reminded us of the power of collaboration and social interaction in bringing about significant understandings within and across subject matters. And she helped us see integrated teaching and learning in richer ways. These types of understandings help teachers know more about ways to support students' continued and unique growth. While teachers can purposefully plan their instruction so that students use concepts and skills learned in one subject matter context in other contexts (in and out of school), opening up the learning community to allow for personal choices and sense-making within specific subject matter areas can empower students to construct their own integration and act on their new learnings in ways that complement their current knowledge, interests, and values.

Notes

1. These metaphors were developed collaboratively by all project members.

2. Also see the following reports, which provide cases of additional students' learning: Hasbach, Hazelwood, Hoekwater, Roth, & Michel (1992); Hasbach, Roth, Hoekwater, & Rosaen (1993); Rosaen, Lindquist, Peasley, & Hazelwood (1992); Roth, Peasley, & Hazelwood (1992).

3. Students' own spellings, punctuation, and usage are printed as found in their written work. Cross-outs and ideas edited out by students on drafts are not included.

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The Wedge Between Emotion and Cognition

Feminism, Knowledge, and Power

Judith S. Kaufman

Challenging the prevailing definition of legitimate knowledge by integrating the emotional and the cognitive has significant implications for education.

This article is based on a paper presented at the 1993 JCT Conference on Curriculum Theory and Classroom Practice in Dayton, Ohio.

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Werner Heisenberg was on a walking tour with Niels Bohr in Denmark, Bohr's homeland, when they came upon Hamlet's castle. Heisenberg recorded Bohr's reaction to the castle.

> Isn't it strange how this castle changes as soon as one imagines that Hamlet lived here. As scientists we believe that a castle consists only of stones, and admire the way the architect put them together. The stone, the green roof with its patina, the wood carvings in the church, constitute the whole castle. None of this should be changed by the fact that Hamlet lived here, and yet it is changed completely. Suddenly the walls and the ramparts speak a different language. The courtyard becomes an entire world, a dark corner reminds us of the darkness of the human soul, we hear Hamlet's "To be or not to be." Yet all we really know about Hamlet is that his name appears in a thirteenth-century chronicle. No one can prove that he really lived here. But everyone knows the questions Shakespeare had him ask, the human depths he was made to reveal, and so he too had to be found in a place on earth, here in Kronberg. (Mills, 1976)

In this passage, Bohr is talking about how his perception is altered by his belief that Hamlet lived in this castle. He knows the story of Hamlet and the metaphors of the play, and so the castle takes on a sense of familiarity. It has more meaning than the stone and mortar that hold it together. Bohr feels something about the castle, perhaps because he has a personal connection, and that connection is his history and experience with the play.

Bohr's reaction to Kronberg castle illustrates the unity of emotion and cognition. It reveals the idea that the things we think about are not only informed by what we know and how we know, but also by what we feel. Certainly, this is not a new idea or a new experience for most of us, but it is an idea that stands in contrast to the customary wedge that we as a culture place between emotion and cognition.

In this paper, I will explore two issues related to the wedge, or separation, between cognition and emotion. The first issue concerns why we distinguish between the two and what function the wedge serves. This functional analysis is placed in the historical context of science and empiricism. I consider a functional analysis because the understanding that results can strengthen arguments for a holistic approach to knowledge. Additionally, such an analysis can inform our vision of the changes that could result if we accept the unity of cognition and emotion. Secondly, I explore what it would mean to regard knowledge as something that is constructed out of both emotion and cognition and what this would mean for the way in which we approach teaching and curriculum.

A functional analysis

From a holistic perspective, it makes no sense to separate emotion from cognition as each constitutes the other and would have no definitional reality without the other. The dichotomy resembles that constructed between nature and nurture which, similar to emotion and cognition, arises out of a science that reduces and carves up the world and assigns greater value to one member of a dichotomy. From a contextual and holistic view, nature and nurture are "mutually involved to an extent that precludes regarding them as independently definable" (Rogoff, 1990, p. 28).

A brief overview of the history of epistemology and science from a feminist perspective will help to understand the function of the wedge between emotion and cognition. In the Western philosophical tradition dating back to Aristotle, emotion has historically been considered subversive of knowledge, whereas reason untainted by passion or emotion is regarded as indispensable to acquiring knowledge. Along with this idea is a deeply rooted mythology that casts objectivity, reason, and mind as male and subjectivity, feeling, and nature as female (Bordo, 1987; Jaggar, 1989; Keller, 1985; Lloyd, 1984; Ruddick, 1980; Solomon, 1983). Keller explains that, in this division of emotional and intellectual labor, women have been the protectors and guarantors of the personal, the emotional, and the particular. Science, which has been the preserve of men, encompasses the impersonal, the rational, and the general.

It is ironic that the rise of science was originally couched in a context of social, political, and educational reform. Scientific empiricism and experimentalism was anti-elitist and anti-authoritarian and, thus, challenged the authority of the church. However, science was soon separated from reform in order to gain the benefits of institutionalization offered by the newly formed Royal Society of London in 1662 (Bleier, 1986). In the separation, the emphasis on empiricism and experimentation was retained along with the metaphor of science or mind as male and nature as female.

Nature was passive in this conception, and it held no intrinsic value. It was no longer a living, breathing organism with dynamically related elements making up a larger universal whole. In the mechanical worldview, nature functioned within a universal Newtonian clock; a machine with no intrinsic worth that could be easily repaired or manipulated through the replacement of parts or by redesign. The separation of nature from value had implications for the study of nature. It meant that reason, if it was to provide trustworthy insight into reality or nature, had to be uncontaminated by value (Jaggar, 1989), and this, of course, strengthened the opposition between mind as male and nature as female.

The Romantic movement of the late eighteenth and early nineteenth centuries challenged the mechanistic ideas of the scientific revolution. Individuals such as Thoreau, Emerson, and Muir in the U.S. embraced the organic worldview that had preceded the idea of the universe as a machine. Merchant (1980) describes organicism as "a vital animating principle binding together the whole created world" (p. 100). However, even the Romantics, despite their holism, held on to the idea that mind was opposed to feeling (Crawford, Kippax, Onyx, Gault, & Benton, 1992; Solomon, 1983).

Current conceptions of knowledge rest on this opposition between mind and emotion, so that today, all "true" knowledge or reason can only be derived through "objective" and rational (read non-emotional) means. It is a given that discovery involves emotion and passion. However, once the heat of the moment has passed, the investigator must justify the discovery through the scientific method. This method mysteriously neutralizes the idiosyncratic values or feelings that have shaped the investigator's perspective toward the object of his or her discovery (Johnson, 1987).

The claim, that knowledge "discovered" through the scientific method is transcendent, untainted by human passion, and aboriginal is a very powerful one. Such a claim carries a stamp of authority not

only for the knowledge discovered through science, but also for those who discovered it. Knowledge acquired in this way is "truth," it has ontological status, and it is not tied to any one person. As a result of this belief, the methods of science are regarded as the most highly esteemed ways of knowing in Western culture, and all other ways of knowing are considered to be inferior.

What function does the myth of aboriginal knowledge serve? For one thing, it perpetuates the idea that the split between emotion and cognition is essential. This is a useful idea in a society where, as Jaggar (1989) points out, not everyone is seen as equally emotional. Reason is associated with members of dominant groups, and emotion is associated with members of subordinate groups. "Prominent among those subordinate groups in our society are people of color, except for supposedly 'inscrutable Orientals' and women" (p. 157). Thus, the myth of reason and dispassionate inquiry, and the consequent split between emotion and cognition, "functions to bolster the epistemic authority of the currently dominant groups, composed largely of white men, and to discredit the observations and claims of the currently subordinate groups...." (p. 158).

In effect, this separation of emotion and cognition perpetuates an unequal distribution of power along the lines of class, race, and gender. If the only legitimate knowledge is that which is supposedly "discovered" through rational and impersonal means, and if women, the lower class, and people of color are viewed as dominated by their emotions, then power over knowledge is restricted to those members of the social order who can control their emotions and of course who control the definition of legitimate knowledge.

The damage wrought by this myth reverberates throughout our society. For example, we devalue the arts as ways of knowing because the knowledge gained from science is perceived as the only legitimate knowledge. Poetry, dance, literature, drama, photography, painting, and sculpture are all ways of knowing. All of them provide insight and knowledge of the world and the human condition, and all of them represent a potential challenge to science as the only authoritative discourse.

The myth of one way of knowing and the emotional/cognitive wedge can be seen, perhaps most clearly, in our schools that teach content not children. The emotional lives of our children are important only if their emotions interfere with learning the content we transmit to them. Most of the content we transmit perpetuates the idea that there is only one way to manipulate numbers, one way to write a story, one way to think about history, and biology, physics, and chemistry. Students are not told that there is more than one way to construe the world. We do not tell them that they construct their own understanding and knowledge with both thought and feeling.

Teachers are also caught in the division between emotion and cognition within the context of caregiving versus intellectual labor. Freedman (1990) observes that teachers were never rewarded for combining caregiving with intellectual labor, so that teaching has always been viewed as "heart" and those who work with and design curriculum are "mind."

> To use the language of schools, teachers provide the "affect" — the personal, the emotional, the spontaneous, the instinctual, the private, and therefore the secretive. Those who work outside the classroom provide the curricula, the "cognitive" — the intellectual, the abstract, the public, the rational. (p. 248)

Freedman explains that the division between affect ("what is rooted in classroom life") and cognition ("what is imported into the school") is embedded in the structure of the schools. Most of the actors inside the classroom are women, and most of those outside are men, to such an extent that "schools replicate and publicly sanction the division of labor and power structure that distinguishes men's and women's spheres of influence outside of schools" (p. 249). The all too common question, "You're so bright, what are you still doing in the classroom?" reflects the belief that teachers cannot and do not perform intellectual tasks (Freedman, p. 249). Here again, the division between emotion and cognition functions to concentrate power in the hands of those who provide "intellect," so that knowledge construction is viewed as something that does not occur in the classroom.

Resistance to an emotional / cognitive unity

An emotional/cognitive unity challenges the prevailing definition of legitimate knowledge and hence challenges the power of the dominant culture. If emotion is acknowledged as part and parcel of cognition, and both are involved in the construction of knowledge, then the dominant culture is confronted with acknowledging the subject/self as a constructor of legitimate knowledge.

The reality created by the poet, the sculptor, and the dancer attains a status of legitimacy. The inclu-

sion of emotion challenges the notion of an aboriginal reality that can only be uncovered through the objective and passionless tools of science. In this scenario, power and control over the tools of scientific inquiry, power over who is allowed to learn those tools, and power over the specialized language of each scientific discipline is neutralized. Control over who gets to determine what counts as knowledge is no longer confined to a dominant few.

The resistance to acknowledging the unity of emotion and cognition is powerful. Within the sciences, accomplished researchers and theorists are privy to the emotion and beauty that is an essential part of scientific thought, but the idea of an elegant organic compound or a graceful equation seldom makes its way into an introductory science classroom.

As a nation, we are concerned with how few people are competent in science or mathematics, yet university science faculty stubbornly cling to introductory courses as a means of weeding out all but the "most promising" students (Tobias, 1990). Fort (1993) reports that by the end of high school, 85% of the population is "science shy" and readily admit that they "can't understand science." She suggests that people will only have confidence in their ability to understand science and technology "when they actively experience these disciplines as they exist in reality (where they have power and beauty) rather than as they exist in educational frameworks (where they are often neutered)" (p. 676). The neutering, the separation of context and meaning (emotion) from content, along with the "unapologetically competitive, selective, and intimidating" (Tobias, 1990) nature of most introductory science courses serves an important gatekeeping function and, again, concentrates control and power over a discipline in the hands of a few.

Another example of resistance to seeing the unitary character of emotion/cognition and consequently the subject/self constructing knowledge can be found in the English translations of Freud. *Id, ego,* and *superego* were terms constructed within the American Psychoanalytic Association. Freud used the German words *das Es, das Ich,* and *Über Ich,* which literally translate as it, I, and over I. Bettelheim (1982) notes that Freud's choice of these words reflected his vision of psychoanalysis as a tool for self-help as opposed to a therapy delivered by a trained professional. Freud wanted individuals to identify with and internalize his ideas. To that end, he used language that had personal appeal and carried emotional significance, facilitated intuitive understanding, and allowed for creativity and flexibility. However, in the quest to turn Freud's science of humanity into a medical specialty, the psychoanalytic community in the U.S. used language that was "devoid of personal commitment." Greek and Latin, medical terms, words that objectified, terms that promoted an "outside-in" or behavioral perspective served to neuter Freud's texts. Once made inaccessible, Freud's ideas came under the control of the American Psychoanalytic Association who, much against Freud's wishes, insisted that psychoanalysis be made a medical specialty (Bettelheim, 1982). Thus, in this instance, an entire theory was neutered of all emotional significance and this functioned to limit access and power over the practice of psychoanalysis to those allowed to enter the profession.

Implications of an emotional/cognitive unity

What does it mean to construct knowledge with both thought and feeling? What does it mean for the way that we teach and learn? In answering the first question, I think about a friend of mine who was preparing a paper on Dickinson's use of dashes in her poetry. Jill was blocked, none of the other theories on the topic resonated with her or helped her to construct her own understanding of Dickinson. She decided that what she needed to do was to go to Amherst, Massachusetts, visit Dickinson's house and get a feel for who Dickinson was, get a sense of what she valued. Once you have a sense of what a person values, you have a sense of connection to their feelings and emotions. Feelings are something we share, they seem to transcend real time. They serve as a point of connection, a way for us to insert ourselves into another context. Feelings also provide a foundation for constructing our knowledge.

An emotional/cognitive unity has psychological validity for the individual. Each of us can attest to the day-to-day experience of this unity. Whenever we construct meaning either from our own experiences or from the experiences that surround us, we rely on the unity of emotion and cognition. Our intentions and actions, the things and ideas we value, and the judgments we make are dependent on our emotional/cognitive interpretations of the world.

It is difficult, if not impossible, to conceive of any sort of meaning in the absence of emotion. Words have little meaning without either the emotion we import to a text or the emotion expressed in a text; actions have no meaning without intent, and intent

arises from the emotional valuing of a goal. This is similar to Bruner's (1986) notion of "stance," in which an utterance implies the feeling of the individual toward the object he or she is describing. In the absence of obvious meaning, we look for emotional cues or we attribute emotional intent. When children are unsure of how to act in a strange situation, they look to adults for emotional cues (Dunn, 1988). Sacks (1985) describes a group of auditory aphasics who, unable to understand the spoken word, are adept at reading emotional expression. In a classic study of perceived intent, subjects interpreted the simple animated movements of a triangle, square, circle, and rectangle as two lovers chased by a bully who ultimately breaks up their house (Heider & Simmel, 1944).

If we bring these ideas into the classroom, the pedagogical focus changes from one of teaching content to facilitating the construction of knowledge. If we want our students to construct knowledge as opposed to memorizing someone else's construction, we must enable them to insert themselves into the texts and ideas we present to them. We must also recognize that what each student will understand and know will be different from what the next student will understand and know, and part of that difference will lie with how each student will emotionally see themselves or insert themselves into the texts we present to them.

Bruner (1986) conducted an informal study in which he compared an expository text (an anthropological description of ritual) with a piece of narrative by James Joyce. He was primarily interested in the means by which a text keeps "meaning open and performable by a reader." The anthropological text declares its meaning, whereas the piece by Joyce invites meaning-making and invites readers to insert themselves in the text. Bruner looked at how students retell texts based on this idea of openness and invitation to a reader. One student's retelling of the piece by Joyce was rich with speculation and feeling and rich with the experiences of his own life. He used what he knew to construct his understanding of the story, and part of that understanding was constructed out of his ability to see himself in the text through the emotion that Joyce portrayed. The implication of Bruner's work for the classroom is that we should use texts that leave meaning open, that invite students to perform and construct their own meaning.

Noddings and Shore's (1984) ideas on intuitive modes of knowing illustrate how students can be invited to see themselves in an uncertain object. Noddings and Shore's description of a unit on the Civil War, filled with films, photographs and paintings, serves as an example. The students were asked what feelings were projected by a certain painting, and in order to answer, students had to put themselves in the place of the individuals being portrayed. Through this projection, the students thought about what they would have felt or expressed. In this way, an uncertain object, in this case the Civil War, takes on a sense of familiarity through an affective link that begins with the engagement of self.

A concept that encompasses the emotional/cognitive unity and has direct implications for the classroom is *verstehen*, which can be translated from the German as "interpretive understanding." It can be found in Max Weber's notion of historiography in which he argued that, to understand causation in human affairs, it is not enough to describe behavior; one has to know the inner motives of the actors (Scheff, 1989).

Wilhelm Dilthey's (1977) use of *verstehen* in human studies and historical understanding is similar to Weber's. He notes that we can know an individual's inner motives because of our own lived experience that occurs in common with others or in a "sphere of communality." This lived experience, which is real and requires no justification, provides the basis for projecting ourselves into another person's life or work so that we re-experience that life or work. The "complex understanding" that results opens up possibilities beyond our own lives. We are, as Dilthey writes, "transposed into freedom not only through art — as others have shown — but also through the understanding of what is given in history" (p. 135).

Emerson echoes the idea of *verstehen* in an essay on history:

> We are always coming up with the emphatic facts of history in our private experience, and verifying them here. All history becomes subjective; in other words there is properly no history, only biography. Every mind must know the whole lesson for itself — must go over the whole ground. What it does not see, what it does not live, it will not know.... We as we read must become Greeks, Romans, Turks, priest and king, martyr and executioner, must fasten these images to some reality in our secret experience, or we shall learn nothing rightly. What befell Asdrubal or Caesar Borgia is as much an illusion of the mind's powers and depravations as what has befallen us. (Scheff, 1989, p. 102)

To engage students in interpretive understanding or imaginative reliving requires us to acknowledge and focus on the values and feelings that are embedded in any curriculum. It requires that our texts be filled with vivid and compelling descriptions, that we talk about the lives and motives of the people who are the essence of the ideas that we sometimes parade as fact.

Apart from history, another vehicle to achieve *verstehen*, and consequently to value the unity of emotion and cognition, is art. Art, in its broadest sense, is a vivid articulation of emotion, and through it, learners in schools can begin to appreciate the infinite ways in which we construct knowledge of the world. With art, students are not only using their emotional experience to understand the emotion articulated by an artist, but their emotions and values are educated or informed by art. We may appreciate art for the insight it gives us into the human condition.

Oatley (1992) observes that the "artist has not just to depict emotions but to allow readers to be moved by their own emotions as they read and also to reflect on them" (p. 261). Oatley analyzes George Eliot's use of emotion in *Middlemarch* and states:

> Hers is a means of inviting self-reflection on our model of self, without forcing our interpretations of the events that occur in the story or rigidly programming our emotions as they occur in response to them. This allowing of the reader's own creativity is what distinguishes, I think, great art such as hers from formula-written novels whose purpose is largely to program particular emotions in the reader. George Eliot's art allows a kind of experimentation within the self that may promote understanding of our own emotions and their relation to other people. (p. 261)

The idea that art can inform our own emotions extends and broadens the idea of cognitive/emotional engagement. Oatley is suggesting that we not only structure a novel, poem, painting, or sculpture through our emotional / cognitive engagement, but that structure may be informed by and change in relation to our engagement with a piece of art. Thus, art not only provides an opportunity to construct knowledge, but it also affords an opportunity to alter our constructions.

Other theorists and educators whose work addresses the emotional/cognitive unity include Hopkins' (1994) work on narrative and experiential schooling, Miller's (1990) articulation of the holistic paradigm in education, Eisner's (1994) work on the role of the senses in concept formation, and Gardner's (1983) multiple intelligences. Egan's (1979, 1992) observation that children rely on emotional structures (much like Piaget's cognitive structures) to make sense of the world underscores the pedagogical importance of acknowledging the unity of emotion and cognition.

Possibilities for an emotional / cognitive unity

The resistance to redefining knowledge and redistributing power is great, but there is some movement toward conceiving of an emotional/cognitive unity. Within the discipline of psychology, a few theorists are taking a holistic perspective and studying and describing the emotional/cognitive unity in naturalistic contexts (see Crawford et al., 1992; Haug, 1987; Haviland, 1984; Johnson, 1987; Oatley, 1992). One interesting study by Miller, Hoogstra, Mintz, Fung, and Williams (1993) is focused on a two-year-old's intense four-week involvement with *The Tale of Peter Rabbit* by Beatrix Potter. The subject, Kurt, retold the story five times, and each retelling was used to formulate, reformulate, and resolve personalized aspects of the story that threatened *Kurt's* conception of his world order. This study illustrates a child's emotional/cognitive "involvement with cultural texts as a major mechanism of meaning creation" (p. 107).

The task of rejoining emotion with cognition is an enormous one, and it is essential. Bruner (1986) remarks on the dangers of emotion split off from cognition, and he suggests, indirectly, why there has been and will continue to be tremendous resistance to some of the ideas suggested in this paper. I take Bruner's use of the term "reflective intervention" to mean entrance of the self into a text.

> ...If he fails to develop any sense of what I shall call reflective intervention in the knowledge he encounters, the young person will be operating continually from the outside in — knowledge will control and guide him. If he succeeds in developing such a sense, he will control and select knowledge as needed. If he develops a sense of self that is premised on his ability to penetrate knowledge for his own uses, and if he can share and negotiate the result of his penetrations, then he becomes a member of the culture-creating community. (p. 132)

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From Global Thinking to Local Thinking

Reasons to Go Beyond Globalization Toward Localization

Madhu Suri Prakash

Thinking and acting on a human, rather than global, scale is more effective in dealing with the many problems of the planet.

"Think globally, act locally," the slogan supposedly formulated by Rene Dubos some decades ago, is not only a popular bumper sticker today. It increasingly captures the moral imagination of millions of people across the globe, including professional educators.

In support of this slogan's moral injunction, one or more "certainties" are proffered: *first*, the modern age forces us to live today in a global village; *second*, therefore, across the globe, people face shared predicaments and common enemies, like Coca Cola, Cargill, and other transnational corporations, as well as oppressive, militaristic nation-states; *third*, only clear awareness of the global nature of such problems could help forge coalitions of "human solidarity" and "global consciousness," essential for struggling successfully against these all-pervasive global enemies; *fourth*, this global consciousness includes the recognition that every decent human being must be morally committed to the active global defense of basic needs or universal human rights (to schooling, health, nutrition, housing, livelihood, etc.) and human freedoms (from torture, oppression, etc.).

While assuming the moral obligation to engage in "global thinking," the slogan simultaneously restrains us from the *illusion* of engaging in global action. This is not mere realism — the recognition that ordinary people lack the centralized power to spread their tentacles all over the planet through global action. The philosophy encapsulated in the second half of the slogan implicitly warns against the arrogance, the far-fetched and dangerous fantasy of acting globally, and urges us to respect the limits of local action. It teaches us to resist the Promethean lust to be godlike, omnipresent. By clearly defining

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the limits of intelligent, sensible action, it encourages decentralized, communal power. We must strive to make a difference with actions that are not grandiosely global, but humbly local.

My paper attempts to take the valuable insights contained in the second part of the slogan and extend them to the first part: I urge, therefore, the replacement of global thinking with local thinking. In doing so, I begin by presenting a synopsis of Wendell Berry's well-worked out argument, warning us not only against the dangerous arrogance of those who profess to be thinking globally, but also of the human impossibility of this form of thought.[1] From there I attempt to debunk the other "certainties" that today pressure millions into believing that they have the moral obligation to engage in global thinking.

By accepting Jeff Kane's invitation to engage in this dialogue with Dale Snauwaert, I want to stand by the challenge I offered to my audience in New Orleans: "to think and act locally." I want to address all the objections that I was unable to at the AERA conference, given the severe limits of time. These included not only the "certainties" that promote "Think Globally," but also the "certainties" that disparage "Think Locally." The latter center around another modern illusion: that local thinking must necessarily be not only ineffective in front of the global Goliath, but also *parochial*, taking us back to the dark ages when each was taught only to look after his or her own and the "devil take the hindmost." In rejecting these charges, I will try to show both the parochialism of "global thinking" and the efficacious, humble, as well as open nature of "local thinking."

Global thinking is impossible

The modern gaze can distinguish less and less between reality and the image broadcast on the TV screen.[2] For fitting it conveniently into the modern mind, the latter has shrunk the earth into a little blue bauble, a mere Christmas tree ornament. The more often we gaze at space satellite pictures of this blue bauble, the more we tend to forget how immense, grand, unknown, and mysterious is the earth, warns Wendell Berry. And, forgetting this, we succumb to the arrogance of thinking that, with the aid of technologies that have overcome the speed of light, we can also overcome the limits of human intelligence. Like the Gods, we can know the globe and, in knowing it, engage in thinking globally to manage and control planet Earth.

Bringing us down to earth from far off space and spacy thinking, teaching us to stand once again on our own feet as did our ancestors, Wendell Berry yanks us away from the "reality" manufactured for our personal TV set. He reveals that when we quit flying and flighty fancy, and relearn the art of walking once again on soil, we do rediscover the immensity, grandeur, and mystery of the earth in the face of human finiteness. Berry argues that *no* person, however sophisticated, intelligent, and overloaded with the information age state-of-the-art technologies, can ever "know" the globe — except by reducing it statistically, as universities, multinationals, state governments, and other modern institutions tend to do today. Rendering naked all the ignorance and attendant violence perpetrated by such statistical "thinking," Berry clarifies that we can only think wisely about what we actually know well. And, since none of us can ever know the planet earth, global thinking is at its best only an illusion, and at its worst the grounds for the kinds of destructive and dangerous actions perpetrated by global think tanks like the World Bank or the more benign watchdogs in the global environmental movement.

A sense of reality teaches us to make a difference with actions that are not grandiosely global, but humbly local.

By destroying the illusion of global thinking, Berry helps to debunk another "fact" of TV manufactured reality: the global village. The transnational reach of *Dallas* and the sexual escapades of the British Royal Family or the Bosnian bloodbath, like the international proliferation of McDonalds, Benetton, or Sheraton establishments, confirm the modern prejudice that we all live in one world.[3] McLuhan's unfortunate metaphor of the global village now operates as a fact, a preformulated judgment, completely depleting our critical consciousness. Our arrogance suggests that we can know our globe, just as premoderns knew their village. To rebut this nonsense, Berry confesses that he still has much to learn in order to "husband" with thought and wisdom the small family farm in his ancestral Kentucky that he has tilled and harvested for the past 40 years. His honesty about his ignorance in caring for this minuscule piece of our earth

renders naked the dangerousness of those who claim to think globally in the interest of monitoring and managing the global village.

Berry's reflections do not deny the reality of the internationalization of the economy, now in its final phases and increasingly reflected in the system of global mass media. Equally real is the homogenization of ways of living of wide minorities, in both the North and the South. Such phenomena and other related aspects of modern reality have been used as empirical support for the illusion that we are all being globalized — a prospect that some perceive as a threat and others as a promise. Whether threat or promise, "realists" who tend to see upward while contaminating the worlds of people who try to live down to earth argue for the unavoidability of globalization. They remain blind to the fact that far from being globalized, the real lives of most people on earth are clearly *marginalized* from any global way of life. The social majorities of the world will never, neither now nor in the future, have access to these so-called global phenomena — if the Club of Rome report and other studies that followed it, including the annual *State of the World* reports, are to be trusted. These show why the world's social majorities will never eat in McDonalds, have access to schools and hospitals, check into a Sheraton, or drive family cars. Globalists will have depleted the world's resources long before that could happen.

The wisdom of thinking little

In the tradition of Gandhi, Illich, Leopold Kohr, and his disciple Fritz Schumacher, Berry warns us of the many harmful consequences of "thinking big" — of pushing human enterprises beyond the human scale. Exemplifying the humility that comes with appreciating the genuine limits of human intelligence and capacities, Berry celebrates the age-old wisdom of "thinking little" — on a scale that humans can really know and understand to take care of the consequences of their actions and decisions upon others. To relearn how to think little, Berry recommends starting with the basics of life: food, for example. He suggests discovering ways to eat which take us beyond global thinking and action towards local thinking and action.

Global thinkers and the think tanks, like the World Bank, disregard this wisdom both at the level of thought and action. Declaring that current food problems, among others, are global in their nature, they seek to impose global solutions. Aware of the enormous threats perpetrated by the solutions of these and other like-minded globalists, the proponents of "Think globally, act locally" take recourse to the tradition of Kohr et al. *only* at the level of action. The latter, however, actually support and function on their enemies' turf by refusing to "think little."

Afraid that local thinking weakens and isolates people, localizing them into parochialism, the alternative global thinkers[4] forget that Goliath did, in fact, meet his match in David. Instead, they place their faith in the countervailing force of a competing Goliath of their own: global thinking or planetary consciousness. By framing their local efforts within the context of global thinking — transmitted internationally through E-mail, CNN, and other networks — they seek the global ban of DDT, nuclear power, and torture and the global dissemination of schools, vaccines, hospitals, roads, flush toilets, and other "basic amenities" of modern life to every village on earth. Hunger in Ethiopia, bloody civil wars in Somalia or Yugoslavia, and human rights violations in Mexico thus become personal concerns for all good, nonparochial citizens of Main Street, supposedly complementing their local involvement in reducing garbage, homelessness, or junk food in their own neighborhoods. Most global Samaritans fail to see that when their local actions are informed, shaped, and determined by the global frame of mind, they become as uprooted as those of the *other* globalists: those actively and explicitly criticized by the proponents of "Think Globally, Act Locally."

However, those who place their faith in David, like Berry, recognize that all global institutions, including the World Bank or Coca Cola, have to concretize their transnational operations in actions that are always necessarily local; they cannot exist otherwise. Since global forces can only achieve concrete existence at some local level, it is only there at the grassroots that they can most effectively and wisely be opposed.

The example of the food eaten today by "industrial eaters" provides an excellent example. Every mouthful consumed by the American industrial eater travels 2,000 kilometers from farm to plate. How do we defeat the five Goliath companies now controlling 85 percent of the world trade of grains and about half of its world production? or the four controlling the American consumption of chicken? or those few that have cornered the beverage market? One does not need to be a pessimist to realize that we will wait forever if we procrastinate chal-

lenging the food Goliaths until we have forged equally gigantic transnational consumers' coalitions, inspired by Ralph Nader or informed by some global notion about the right way to eat.

Realizing that we do not have to "think big" in order to begin releasing ourselves from the clutches of the monopolistic food economy, that we can free ourselves in the same voluntary ways we entered it, thousands of small grassroots groups across the world are simply learning to say "No" to Coke and other junk food, while looking for local alternatives that are healthy, ecologically sound, as well as decentralized in terms of social control.

Among the more promising solutions is the movement toward Community Supported Agriculture (CSA), inspired by both local thinking and action. It involves urban consumers educated to support small local farmers who farm with wisdom and care for local soils, waters, and intestines. And, in doing so, they simultaneously ensure that unknown farmers from faraway places like Costa Rica or Brazil are not exploited with inhuman wages and left sick with cancer or infertility. By taking care of our own local food, farms, and farmers, those of us who are members of CSAs are slowly overcoming the parochialism of industrial eaters who are becoming educated about the harm done by all of us who support multinationals and others who "think big," destroying millions of family farms across America, and in an analogous fashion, across the globe.

Those of us supporting CSAs are trying to abandon the global thinking with which industrial eaters enter their local grocery stores: buying from across the globe in order to get the "best" return for our dollar. Of course, those of us who are now trying to think locally about food (among other "basics") are also frugal: we do want the best return for our dollar. But for us this means much more than maximizing the pounds of eggs or the gallons of milk we can fill our grocery bag with. We are interested in knowing about the kind of lives lived by the hens whose eggs we eat; we want to know what type of soil our lettuce springs from; and we want to not only ensure that the animals and plants we bring to our palate were treated well, but also educate ourselves about our eating habits so that the farmers who work for us will not die of deadly diseases or become infertile because of the chemicals they were forced to spray on their fields. We have now read enough to know why these ills occur every time we buy grapes from California or bananas from Costa Rica. We also know that when our food comes from so far away, we will never know the whole story of suffering perpetrated unintentionally by us, despite the valiant efforts of journals like *The Ecologist* or scholars like Frances Moore Lappé; nor, for that matter, once we get a partial picture, will we be able to do much about it. Therefore, by decreasing the number of kilometers we eat, bringing them closer and closer to our local homes, we know we are empowering ourselves to be neither oppressed by the big and powerful, nor oppressors of those who live across the globe; and we are also educating ourselves to look after the well-being of members of our local community, who, in their turn, are similarly committed to our well-being.

The strength of thinking and acting locally

Local initiatives, no matter how wisely conceived, *prima facie* seem too small to counteract the global forces now daily invading our lives and environments. The whole history of economic development, in its colonialist, socialist, or capitalist forms, is a history of violent interventions by powerful forces persuading small communities to surrender with the use of weapons, economic lures, and "education."

Countless such cases give ample proof that local peoples often need outside allies to create a critical mass of political opposition capable of stopping those forces. But the solidarity of coalitions and alliances does not call for thinking globally. In fact, what is needed is exactly the opposite: people thinking and acting locally, while forging solidarity with other local forces that share this *opposition* to the global thinking and global forces threatening local spaces. The strength of the struggle against Goliath enemies demands that there be no deviation from local inspiration and firmly rooted local thought. When local movements or initiatives lose the ground under their feet, moving their struggle into the enemy's territory — global arenas constructed by global thinking — they become minor players in the global game, doomed to lose their battles.

The Earth Summit is perhaps the best contemporary illustration of this sequence. Motivated by global thinking, thousands of local groups flew across the world to Rio only to see their valuable initiatives transmogrified into nothing more than a footnote to the global agreements, conceived and now being implemented by the Big and the Powerful. Prescient of this failure of "thinking big/global," Berry predicted that the global environmental movement, by following the Grand Highways taken by the

peace and civil rights movements, would lose its vitality and strength, uprooted out of its natural ground: the concrete spaces of real men and women who think and act locally.

The realism of radical pluralism

The strongest support for global thinking is proffered by those with full faith in the universal declaration of human rights. Even those rejecting most varieties of global thinking propound the moral imperative to struggle for universal rights, perceived by many to represent a western conquest on behalf of every human on earth. Most fail to see why any conception of universal rights to education, for example, is controversial and a colonial tool for domination. That is why most cannot comprehend Gandhi's resistance to educational rights, which called for the importation of schools into India. Prescient Gandhi foresaw how the universal right to these institutions would perpetuate cultural damage on well-rooted, local, pre-colonial, indigenous approaches to education/cultural initiation.

The more we gaze at satellite pictures of our planet, the more we are in danger of succumbing to the arrogance of thinking that, with the aid of technologies that have overcome the speed of light, we can also overcome the limits of human intelligence.

In recent years, ordinary people and radical thinkers of many cultures have been challenging, on different grounds, the very notion of human rights — both their nature and their universality. For many cultures, and, in fact, for the social majorities of the present world, the notion of individual rights is clearly alien. Given their individualist underpinnings, they entail dissolving the very foundations of those cultures, organized around the notion of communal obligation, commitment, and service. In many non-Western, indigenous cultures, collective or communal rights have clear priority over *personal/individual* rights; legitimate hierarchy has primacy over equality; and for strengthening communal bonds, concrete customs are preferred over abstract universalizable laws.

Alienating individualism is essential to the very conception of universal human rights, reveal their cultural critics. In radical contrast, real communal rights of peoples to their commons often come with moral codes and traditions that imply dissolving or contradicting individual rights thereby avoiding their inherent individualism. Facts such as these challenge the universality of human rights, a peculiar Western construction assumed only by an increasing, but still minor, percentage of people on earth. Most other cultures of the world's social majorities have definitions of human well-being that either do not require or reject the notion of individual human rights.

What is a "right" for some people is "torture" for others, and vice versa. Schooling, homes for "senior citizens," sewage, or prisons, on the one side, and community service, religious practices, or common rituals, on the other, offer good cases for radical cultural opposition and pluralism. In some cultures, for example, crimes call for compensation "paid" with services to the community, economic responsibility being born by the killer for the family of the man killed, etc. These forms of compensation require the freedom from jail essential to the pursuit of real opportunities for social rehabilitation. Jails, which represent no violation of human rights in cultures like that of the U.S., are tantamount to inhuman torture in other cultural contexts.[5] Analogously, sewage and flush toilets, assumed to be a right and a basic need in some cultures, is recognized by an increasing number of people as a real threat; while dry latrines and other locally designed technologies are seen by these groups as the only responsible methods for "taking care of our own shit," to use a culturally specific colloquialism.

Human rights were born in particular cultural contexts, conceived in the course of legitimate struggles against power abuses. They express the reality of the individuals created by modernity in Europe, legitimately reacting against abuses by modern states. Whatever their merits and successes in industrial societies, these "rights" contaminate many communities, particularly in the Southern Hemisphere introducing in them the virus of *homo oeconomicus*: the possessive individual first fashioned in Europe. Far from assuming that the behavior of *homo oeco-*

nomicus defines universal human nature for all times and cultures, critics of human rights are recognizing what Western scholars have already well documented: that both individualism and *homo oeconomicus* are historical, Western creations, *not* ahistorical traits of our species.[6]

This type of opposition to human rights is entirely compatible with an active struggle to oppose all power abuses, both premodern or modern, in all their forms. And it explicitly includes the abuses of global thinking, which increasingly invades the lives and environments of people with schools, highways, prisons, flush toilets, Chemlawn and other poisonous pesticides, plastic garbage bags, or junk food.

Escaping parochialism

Global proposals are necessarily parochial: they inevitably express the specific vision and interests of a small group of people, even when they are formulated in the interest of humanity.[7] In contrast, if they are conceived by communities really rooted in specific places, local proposals reflect the unique *cosmovision*[8] that defines every culture: an awareness of the place and responsibilities of humans in the cosmos. For those who think locally do not twist the humble satisfaction of belonging to the cosmos into the arrogance of pretending to know what is good for everyone and attempting to control the world.

In recent years, while some of the people marginalized from the amenities of modernity are still struggling to be part of the world's "globalized" minorities, many more have abandoned such illusions. In doing so, they are rediscovering their own culturally specific, alternative definitions of "a good life," feasible in their own local spaces. Besieged by "global" pressures and aggressions, which generate uncertainty, destruction, and discrimination, they are less bedazzled by global solutions to their concrete local predicaments. Renouncing universal definitions of "the good life" (or the American dream) imposed across the world by global economic development, they are starting to protect themselves from the threats of modernity by rooting themselves more firmly in their soils, their local commons — cultural spaces that belong to them and to which they belong. Even the most superficial observation of what is really happening among the social majorities, particularly in the Southern Hemisphere, allows us to see the proliferation of localized initiatives, rooted in the concrete world, that shape the daily life of communities. They are not ignoring global phenomena that continually intrude upon their lives, but delinking with ingenuity and effectiveness from the "global thinking," plans and proposals that marginalize them from the operations of the global economy. They are escaping the globalization of their marginality by turning to localization.[9] Growing coalitions of local thinkers/activists are learning to effectively counteract the damage of global thinking and action through a shared rejection. Their shared "Nos" to their common enemies (whether a nuclear plant, dam, or Walmart) simultaneously affirm their culturally differentiated perceptions and locally rooted initiatives and modes of being. Their motives and arguments for saying "No" are as different as the variety of local settings they are trying to protect through their shared rejection. When these shared "Nos" interweave cross-cultural agreements or commitments, they retain their plurality without falling into cultural relativism. They successfully oppose globalism with radical pluralism, conceived for going beyond Western monoculturalism — now cosmeticized and disguised as multiculturalism inside as well as outside the quintessentially western educational setting: the classroom. And they find, in their concrete practices, that all "global powers," as the Soviet Union so ably demonstrated in the recent past, are built on shaky foundations and may be effectively opposed through modest local actions.

Epilogue

The latest fads in global education, global citizenship, multicultural education, distance education, and other related contemporary phenomena appear in new light once we see the importance of abandoning global thinking while embracing local thinking in its stead.[10] In the next phase of our dialogue, I hope we will be able to explore the diverse range of educational options that open up once we learn to adjust our frame of mind from the arrogance and parochialism of global thinking to the humility and radical pluralism of local thinking.

Notes

1. To study the different reasons Wendell Berry offers for opposing "global thinking," see Wendell Berry, "Out of Your Car, Off Your Horse," *Atlantic Monthly*, February 1991; "Nobody Loves This Planet," *In Context*, No. 27 (Winter 1991); "Think Little," *A Continuous Harmony: Essays Cultural and Agricultural* (New York: Harcourt, Brace, Jovanovich, 1972). Also see Madhu Suri Prakash, "What Are People For? Wendell Berry on Education, Ecology and Culture," *Educational Theory* (Spring 1994, Vol. 44, No. 2). For other critiques of global thinking, see Wolfgang Sachs, *Global Ecology* (London: Zed Books, 1993).

2. For the past three years at the Pennsylvania State University, we have been studying with Ivan Illich how for the many millions raised on TV, Mickey Mouse has become as real as Ronald Reagan; that, worse yet, both are in fact larger than real life itself — as are TV phenomena like Michael Jackson and Madonna, among others. For his discussion of the destruction of the senses in the age of *La Technique*, see Illich, "An address to 'Master Jacques'" *Bulletin of Science and Technology*, 1994, Vol. 14, No. 2.

3. Wolfgang Sachs, "One World," In *The Development Dictionary: A Guide to Knowledge as Power*, ed. Wolfgang Sachs (London: Zed Books, 1992).

4. I am calling alternative global thinkers all those theoreticians and practitioners who explicitly opposed conventional global thinking, epitomized by the World Bank, while being committed to global alternatives to it. The Worldwatch Institute, David C. Korten of the People-Centered Development Forum, and Greenpeace exemplify such alternatives.

5. See Gustavo Esteva, "A New Source of Hope: The Margins," *Interculture*, *26*(2) issue 119 (Spring 1993).

6. On the history of individualism and *homo economicus*, see Louis Dumont, *From Mandeville to Marx: Genesis and Triumph of Economic Ideology* (Chicago: University of Chicago Press, 1977). For a penetrating critique of the monoculturalism inherent in the notion of human rights and a defense of radical pluralism, see Raimundo Panikkar, especially, "Is the Notion of Human Rights a Western Concept?" in *Interculture*, *17* (1,2) issues 82 and 83 (Jan. and March 1984).

7. See Vandana Shiva, "The Greening of Global Reach," in ed. Wolfgang Sachs, *Global Ecology*.

8. See Raimundo Panikkar, "The Religion of the Future," in *Interculture*, *23*(3) issue 108 (Summer 1990).

9. See G. Esteva & M. S. Prakash, "Resistance to Sustainable Development: Lessons From the Banks of the Narmada," in *The Ecologist*, 22(2), 1992; E. Goldsmith, N. Hildyard, et al., "Whose Common Future?" in *The Ecologist*, *22*(4), 1992; and N. Hildyard, "Foxes in Charge of the Chickens," in ed. Wolfgang Sachs *Global Ecology*.

10. Prominent educators like Elise Boulding and Betty Reardon have successfully spread the gospel of global thinking, citizenship, and education. This perspective opens the door to an invitation to an alternative conception of education from the ones that the authors propose.

Interdependence and the Application of Democratic Social Intelligence

A Response to Madhu Suri Prakash

Dale T. Snauwaert

The complex interdependence of the communities in our world calls for local action with an awareness of its global impact. John Dewey's notion of the transcommunal application of democratic social intelligence provides a means of achieving this end.

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In her impassioned essay, Professor Prakash warns us against the "danger" of global thinking and implores us to think locally. Her position is based, on the one hand, upon the epistemological impossibility of global thinking and, on the other hand, upon a moral commitment to an ethic of tolerance premised upon a respect for diversity — what she refers to as "radical pluralism." She writes from a position of integrity and concern, and her commitment to progressive local stewardship is truly noble. However, it will be argued that we live in a world of complex interdependence, and in order to care for and sustain local communities and to ensure respect for plurality, our consciousness must be attuned to the consequences of action that transcend our locality. It will be argued that this can be achieved through the transcommunal application of democratic social intelligence as defined by John Dewey and as exemplified by both Wendell Berry and Gandhi. It will be argued that Professor Prakash's position calls not for the abandonment of "global" thinking but for its reformation.

We live in an interdependent world, a fact acknowledged by Prakash as well as numerous other scholars (Fox, 1990; Keohane & Nye, 1989; Mansbach, Ferguson, & Lampert, 1976; Nardin, 1983; Reich, 1992; Thompson, 1983; Wallerstein, 1974). Nations, regions, and local communities are not independent but mutually dependent upon one another economically, militarily, ecologically, culturally, and hence politically. For example, the rise of multinational corporations and the export of finance capital has created a global economy, wherein markets, finance, and production are interconnected transnationally. The development and proliferation of nuclear weapons renders unilateral military action obsolete and the very notion of sovereignty consid-

erably weakened. Ecological deterioration as well is clearly not confined to national or communal borders (e.g., ozone depletion, global warming), nor is national or local communal sovereignty intact when actions in one nation or locality have serious ecological consequences in another (e.g., acid raid, flooding exacerbated and/or caused by the construction of levies upstream). Nor are community borders immune from cultural penetration. Cultural boundaries have always been permeable, but the power of penetration has grown exponentially with the advent of mass communication, economic interdependence, and rapid transportation. Politically there exists a complex system of international law that constitutes a broad range of transnational regimes.

The above examples of interdependence suggest that local communities, regions, and even nations are *not* independent from each other but exist in a complex web of interdependence. The consequences of local action transcend specific localities and are reciprocal: localities affect and are affected by other localities. If local communities are to be positively sustained, the consequences of such interdependence need to be articulated and regulated. Here we have a radical pluralism but it is an interdependent plurality.

Local communities, regions, and even nations are not independent from each other but exist in a complex web of interdependence.

What is striking about the existence of interdependence is its pragmatic grounding in the broad interests of individuals, groups, and states and its basis in the indirect consequences of behavior across national and communal boundaries. This analysis is strikingly similar to the insightful, but neglected, political theory of John Dewey as expressed in his book, *The Public and Its Problems*.

Dewey argues that a "public" is created whenever there are consequences (intended and unintended) of two or more persons' actions on others not party to the action. In other words, the public is created by the indirect consequences on others of someone's decision/action. In turn, some of these consequences are perceived/recognized by those affected, leading to the desire to control and regulate them. He writes: "The public consists of all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for." Dewey (1954, pp. 15-16) argues that when the indirect consequences are perceived and regulated, a regime has come into existence. From this perspective, the problem of the public is the articulation and institutionalization of ways of regulating the indirect consequences of action. This entails instituting special agencies to organize and regulate the public. Given the complexity and dynamic nature of the public, the special agencies are necessarily always experimental and fluid.

It is possible, however, that the public may be eclipsed, that is, it can be left unknown and/or unarticulated, or the public itself may be intentionally distorted in order to unduly benefit the interests of particular members of the society. In order for the consequences of conjoint activity to be moved in progressive directions, the public must become self-conscious in the sense of the regulation of the public.

The complexity of the indirect consequences of conjoint activity in modern society is so immense that it is difficult for the public to identify and organize itself, leaving it prone to either disorder and/or exploitation. This difficulty is compounded exponentially by transnational interdependence. As Dewey put it: "Extensive, enduring, intricate, and serious indirect consequences of the conjoint activity of a comparatively few people traverse the globe ... existing political and legal forms and arrangements are incompetent to deal with the situation." (Dewey, 1954, p. 128. See also Keohane & Nye, 1989; Nardin, 1983.)

Given transnational interdependence, Dewey argues that new political structures are needed. The response by the "public" has been just that: a new series of political structures has been created on a transnational basis rendering the map of international relations of a complex set of weblike regimes and conglomerates. (See also Mansbach et al., 1976.) This attempt to articulate and regulate transnational publics in favor of common interests has been, however, incomplete, leaving the world system prone to serious distortion and exploitation.

However, this distortion, one that Prakash is acutely sensitive to, is *not* based on global thinking in any genuine sense. I agree that no one person or elite

group of experts can know and articulate the vast complexity of interdependence. This would be both illusory and dangerous. One can argue that it is also not even global. It is the kind of thinking that the World Bank, for example, engages in, which is self-interested, ideologically driven, and narrow. It possesses a global facade, but is profoundly small and hence destructive. The alternative is the application of what Dewey refers to as "social intelligence."

Through a process that approximates undistorted deliberation, in a Habermasian sense (e.g., Dewey, 1954; Gouinlock, 1986, Habermas, 1984), the public can be known, articulated, and either a consensus or compromise generated in the common interest of all parties affected. This process Dewey refers to interchangeably as the application of social intelligence or democracy. It is Dewey's contention that democracy is the most effective way for a public to identify, articulate, and regulate itself. This process entails communication, free association, inquiry, debate, and participation, which taken together form the ideal of community life. A public can only be self-conscious through open inquiry and deliberation, for it is only through extensive communication that the full range of consequences of conjoint activity can be known. This cannot be accomplished through the superior intelligence of an elite cadre but through the collective intelligence of the people. From this perspective, global thinking can be defined as the transcommunal application of democratic social intelligence.

This conception of transcommunal democratic social intelligence is consistent with the moral and political thought of both Wendell Berry and Gandhi. Berry defines community as "the spiritual condition of knowing that the place is shared." How is this condition fulfilled? Berry maintains that this knowledge is acquired through local involvement and participation. It is the participation in communal life that defines community. However, the condition of place is larger than our own small plot of land. It is, as Native Americans teach us, the earth itself. We share the earth with all creatures, and thus the consciousness of community based in a knowledge of sharedness cannot be confined to one's locale, but must take on a cosmopolitan and ecological character. This is a position that Gandhi also maintains. Gandhi advocates a democratic anarchy as the ideal of nonviolence, one that is decentralized and communal. However, the true and the right, *satya* and *ahimsa*, transcend community boundaries (See Iyer, 1973; Snauwaert, 1993).

In other words, we must act locally, but never lose sight of imperatives that are universal. The consciousness of these imperatives are, according to Dewey, Berry, and Gandhi, developed through participation in democratic community. I also believe this is what Professor Prakash means by a "cosmovision." "An awareness of the place and responsibilities of humans in the cosmos." Implicit in the notion of a transcommunal application of democratic social intelligence is a cosmopolitan ethic that mandates equal respect for and identification with the basic dignity of humanity.

In conclusion, if global thinking is defined as the transcommunal application of democratic social intelligence, then the epistemological and moral barriers to global thinking that Professor Prakash submits are unfounded. In principle, global thinking is collective, and its collectivity contains its feasibility and importance for sustaining the values of diversity, tolerance, and community that Professor Prakash and others expose. If we do not learn to think transcommunally through the application of democratic social intelligence, then we face the balkanization of the planet and its Draconian consequences.

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Book Reviews

Peripheral Visions: Learning Along the Way

by Mary Catherine Bateson

Published by HarperCollins, 1994.

Reviewed by Paul Byers

Mary Catherine Bateson's *Peripheral Visions: Learning Along the Way* is the most holistic book by a single author that I have encountered, even though she avoids the word holistic. She doesn't write *about* holism. She allows the reader to follow her holistic, multilevel thinking as she describes events in the four societies in which she has lived and worked: this country, Israel, the Philippines, and Iran. The Kung San of southwest Africa are mentioned although she has not lived among them.

Early in *Peripheral Visions* the author writes, "... Our species thinks in metaphors and learns through stories" and her book is built on a foundation of stories. Her observations (peripheral visions) and her internal dialogue, with herself and with the reader, become "learning along the way." I will not attempt to retell or review her stories beyond saying that the book begins with the story of her and her two-and-a-half-year-old daughter's participation in the ritual slaughter of a sheep in a Persian garden. She includes the story of experiencing grief in the Philippines after the death of her first child soon after his birth, and even writes a few lines about falling in love for a moment with a stranger on a street corner in Boston.

The process of learning that she shares with the reader is, I think, a new form of apprenticeship. Apprenticeship is the metaphor that emerged, for me, upon rereading her book.

She speaks often of metaphor as a thinking tool that can reveal insight:

> Metaphors are what thought is all about. We use metaphors, consciously or unconsciously, all the time, so it is a matter of mental hygiene to take responsibility for these metaphors, to look at them carefully, to see how meanings slide from one to the other. Any metaphor is double-sided.
>
> ... the solution is to take responsibility for the choice of metaphors, to savor them and ponder their suggestions, above all to live with many and take no one metaphor as absolute.
>
> A metaphor goes on generating ideas and questions, so that a metaphorical approach to the world is endlessly fertile and involves constant learning. A good metaphor continues to instruct.

In my own metaphor, the foundation of the house she constructs in this refreshing new literary form is made of stories that invite our participation. The first floor is mirrored, reflecting metaphors from multiple perspectives. But, as she says:

> Any metaphor is double-sided, offering both new insight and new confusion.

The second floor is occupied by strangers, inviting us to participate in their rituals, conversations, and frolics. Here there is uncertainty and one must observe carefully, peripherally, and adapt by improvisation.

On the third floor one recognizes the learning one has acquired along the way:

> Learning is the fundamental pattern of human adaptation, but mostly it occurs before or after or in the interstices of schooling.
>
> ... Learning can be practiced as a form of spirituality through a lifetime.
>
> Learning is the new continuity for individuals, innovation the new continuity for business.

From the windows on the third floor we can look out at the past, the present, and the future — each molded into a different shape and seemingly discontinuous. But from the new perspective we can now see the underlying continuity.

My house-construction metaphor implies discontinuity or compartmentalization, but Mary Catherine Bateson weaves all her diverse thoughts into a single whole fabric. She and her reader-apprentices are always simultaneously confronting strangers, improvising, recognizing connections through metaphor, and intermittently looking out a window to see our present familiar world with fresh perspectives:

> ... It is fashionable in America to say that schools are failing and there is a groundswell of anger against educators of all kinds. This is not in the main because they are not doing their job — it is because we have no adequate understanding of what the job is in the kind of society we are becoming.
>
> ... It is a mistake to try to reform the educational system without revising our sense of ourselves as learning beings.
>
> ... The impulse to improve without first understanding is dangerous.

Paul Byers, an anthropologist, is adjunct associate professor of education at Teachers College, Columbia University. He has been particularly concerned with the problem of bringing newly recognized scholarly insights into inflexible and resistant social institutions. His research in hauman communication examines the unredcognized forms of information that are a significant part of all relationships.

> The knowledge that children bring with them into school has not been learned in an orderly progression ... but through spirals of partly apprehended repetition. An awareness of the complexity of the knowledge they (children and traditional people who regard themselves as profoundly ignorant) already possess could in itself be a revolutionary force.

Peripheral Visions sometimes looks back into history with an unexpected perspective.

> How ironic it is that, in the story of the Garden of Eden that is so often seen as having crystallized for millennia the notion of human dominance over the natural world, the Fall is a punishment for eating the fruit of the tree of knowledge. Yet even after they have eaten that fruit, it is clear that Adam and Eve do not understand God or apple trees or serpents or even each other. Expelled from the garden, they set forth on a path of misunderstanding — and denying — their own desires.

Sometimes she looks at the present with unexpected wry humor:

> Wealth and power are obstacles to learning. People who don't wear shoes learn the languages of people who do, not vice versa.
>
> Trying to understand learning by studying schooling is rather like trying to understand sexuality by studying bordellos.
>
> ... Living happily ever after is a swamp.

There is also the strange and unpredictable matter of what we call "the future," which we sometimes see as a strange and unpredictable discontinuity. To Mary Catherine Bateson, who *never* says "we should...," this future can be negotiated by improvisation, enriched by the learning that comes with peripheral vision. After all, the future is only more of our evolution, creating endless differences that are the sources of our creativity — despite our misplaced hope for homogeneity.

At the end of *Peripheral Visions* she offers a brief coda:

> We started from participant observation and the necessity for improvisation, asserting the need to act and interact with others without complete understanding, learning along the way, and we argued that improvisation can be both creative and responsible. We have explored ways of embracing myths and metaphors and multiple layers of truths, education through lessons that are very different at every encounter. The self is constructed from continuing uncertainty but it can include or reflect a community or even the entire biosphere, can be both fluid and stable, can be fulfilled in learning rather than in control.

This is an important and ingeniously constructed book but, like other important things in life, it must be experienced more than once. We, like children, learn "through spirals of partly apprehended repetition."

Sisters in the Blood: The Education of Women in Native America

by Ardy Bowker

Published by Women's Educational Equity Act Publishing Center, Educational Development Center, Inc. (Newton, MA), 1993; 354 pages, paper.

Reviewed by P. J. Ford Slack

> As I see it, we need two school systems. One for parents who want their children to remain on the reservation and participate in a limited fashion within the mainstream society. These children could be immersed in the language, culture, traditions, and history of our people. The second school system could prepare students to participate in the world at large. We need both kinds of citizens on the reservation. (p. 160)

This book is an ambitious undertaking. The chapters walk the reader through an overview of education before and after the colonizers, drawing our attention to the "perilous path of being a Native American girl" (see the current UNICEF exhibit; Girls a Perilous Path: global focus on issues related to girls throughout the world) in our current school system. *Sisters in the Blood* represents the difficulty of walking in two worlds, not only for Native American females but also for researchers like Dr. Bowker. We can infer from the passage above that there is disagreement in tribal communities regarding what Indian schooling is about. While Bowker's research questions and methodology are framed in a dominant discourse of schooling, it is clear that this author is well aware of the divided road she walks. She walks that road through her words with humility, honoring, and an authority that comes from one who respects the voices of elders.

Bowker's goals in writing this book were threefold: one was to identify educational successes of American Indian females in school; another was to offer a theoretical framework for understanding American Indian females' interrelationships to their tribe and their school; and a third was to influence those who make

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policy decisions about American Indian schools. Her work is effective in beginning a conversation about these issues.

The opening three chapters of the book should be required reading for all teacher and administrator licensure students as well as anyone renewing their license. History of education courses tend to be taught from a "colonized perspective," and these chapters help establish a foundation for educational systems that were present in the United States prior to 1642, the starting place for current educational history courses.

Part two of the book presents a discussion of the study's purpose, research design, and format. Bowker's study is framed in a mostly traditional format with the questions about females in schools revolving around current educational discourse issues of being at-risk, a drop-out, a teen and pregnant, or a teen mother. These labels, and the use of the word minority, made me uneasy at times while reading the findings and will probably create some dissonance and criticism in certain tribal communities. But as the author states,

> Perhaps as you critique these ideas, you will find that not all of the suggestions are appropriate for your schools.... It is my sincerest hope that this study and the results presented here will, at a minimum, provide a basis for discussion about Indian education. (p. 290)

Chapter 7 was my favorite part of the book and the one I have used in conversations in my graduate classes as well as during BIA (Bureau of Indian Affairs) educational meetings. The chapter profiles the stories of girls who are high school and college graduates. Stories are important in getting points across, and these stories go a long way in making their points. The profiles or stories are key features of Bowker's research. I found myself wanting to hear more of the voices — as those are the pieces that can be retold and restoried in classrooms, at board meetings, and in conversations with family members. This is an approach I hope Bowker continues in future research. I would also like to learn from the girls who did not finish high school or college. Those stories are equally important in helping us lend support at the high school level, in Upward Bound programs, and in colleges, both tribal and western.

In the last chapter, "Using the Past as a Path to the Future," Bowker challenges those of us who work in tribal or public schools:

> For starters we must redefine Indian education from the perspective of Indians. We must develop an educational program that gives meaning to our lives as Indians and to our culture, while at the same time instructing students in the underlying ideas of American culture and providing the intellectual tools to survive in a contemporary, global society. (p. 283)

Her list of recommendations is thoughtful. The suggestions would be important for any school to consider but have particular meaning for those who live and work in areas with tribal student populations. Although Bowker discusses tribal education, public schools are often the system in place on or near many reservations, and urban schools have tribal students due to the relocation that occurred in the 1950s and 1960s. (See Bowker, pp. 22–23). This final chapter offers a starting point for teachers who are tribally affiliated as well as those who are not to begin a conversation. That conversation can be carried to Parent Advisory Committees or Tribal Boards. The American Indian female voices are the significance of this work. They are what the girls in our schools, their aunties and fathers, and tribal board members will listen to. The statistics, history, theoretical framing, and at-risk language are what the academics, policymakers, and grant readers will respond to. It would appear that Ardy Bowker has done a fine job of addressing her three goals as well as teaching many communities.

The narrative of the book describes the strength and leadership found in the women of tribal communities throughout the United States and Canada. I hope that Bowker continues her work by offering us more stories from those communities. Issues like staying in school in areas where there is no work need to be addressed. The dominant culture's social construction of teen pregnancy also raises interesting questions in communities where children are not only wanted but needed. As the time of the seventh generation surrounds us, perhaps we will begin to listen and allow issues regarding Indian schooling to emerge from the communities — opening a space for the tribal elders and others to define once again their own education systems for their children.

Sisters in the Blood needs to be read slowly and with patience. Bowker's text provides access to the Original Peoples of this continent. While this is largely a reference book full of statistics and cases that will assist those who write grants for tribal schools or seek funds of support from state and local agencies, all readers should be patient and listen for the voices. Beyond the statistics and through the recommendations, it is the stories of the women and girls that will echo in your heart long after you have closed this text.

Enhancing Teaching

By Madeline Hunter

Published by Macmillan College Publishing Company Inc. (New York), 1994; 254 pages, paper.

Reviewed by Jean Terry

Madeline Hunter. The name alone can send chills through some educators. Often her work is associated with the very fragmentation and narrowness of pedagogical practice that holistic education opposes. If, however, "the paths to awakening are many and are as varied as the faces of the children we teach" (Kane, 1993), Hunter's latest book, *Enhancing Teaching*, leads down an unexpected path, a path to better teaching irrespective of the curricular designs or instructional strategies educators employ.

Care must be taken not to prejudge or pass over a particular educator's work simply because others previously misused and misinterpreted it. Hunter addresses this issue in the introduction to her book. Early in her career while working as a psychologist at the Los Angeles Juvenile Hall, she found many of the "youngsters' problems could have been prevented," so she became a school psychologist "to work on prevention rather than remediation" (p. vii). She discovered that teachers and administrators had usually taken a course called Educational Psychology where "they had learned about slobbering dogs and pecking pigeons" (p. vii) but had learned nothing useful about educating children. Her goal became to translate "research-based psychological generalizations into teacher language so they could be used in planning learning opportunities..." (p. viii).

This goal clearly pertains to all educators for "without an understanding of the general laws of child development, education becomes an arbitrary process," and decisions made within this process are not "matters to be simply left to personal opinion" (Almon, 1993).

Hunter wrote *Enhancing Teaching* in order to compile work that had not been included in her earlier publications. Some familiarity with the terminology developed in these previous books might make this one more comprehensible. Hunter, however, tries to make the information accessible to those unfamiliar with the jargon. For example, when discussing "anticipatory set" she gives a short definition and rationale for its use. She also includes extensive bibliographies at the end of each chapter, which include her earlier work and the original research on which this work was based.

The book is divided into four sections with a total of twenty-four consecutively numbered chapters. The titles of the chapters provide better guides to the content than the section titles as they are more concrete and much less generalized. For example, in Section 3, *Decisions About Learning Behavior*, one chapter is called "The Chalkboard: An Assist to Both Hemispheres." And each section stands on its own so the reader can pick and choose which to read, skipping those that might not suit the environment in which he or she is teaching.

Parts of *Enhancing Teaching* speak directly to holistic educators; other information in the book is better suited to the traditional classroom atmosphere. In the first section, *A Model of Teaching*, Hunter reviews what has become known as the Hunter or UCLA Model of Teaching. Unfortunately, this model has been codified and ossified in many schools to the point where administrators use check-off sheets when reviewing teachers' lessons. Hunter, however, refers to it as *a* model, not *the* model. Chapter 3 of this section provides the place to start if you have ever been forced to participate in what an article in *Instructor* referred to as "The Hunterization of America's Schools" (Slavin, 1987). It addresses questions, myths, and misunderstandings about Hunter's work. She addresses, for example, the belief that "the model is great for direct teaching of content areas, but it does not apply to the arts, or to other models of teaching" (p. 33). She believes that the model focuses on decisions made in all teaching, in any content area, using any style of teaching.

The next section, called *Decisions About Content*, proves valuable for all educators. Seemingly contrary to the title, it focuses on the *how* of student learning and does not try to ascertain the worth of a particular curriculum. Hunter's work has always concentrated on the practical application of teaching skills based on psychological research.

She expresses regret and horror that the results of her work, commonly referred to as "elements of instruction," are all too often presented by others as "must do" edicts. She, on the other hand, refers to these results as information the professional teacher "must know about and think about" (p. x).

Chapter 6, "Teaching Concepts, Generalizations, and Discriminations," also presents some particularly useful information on how to promote students' critical thinking. Hunter clearly differentiates between concepts, generalizations, and discriminations and gives

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concrete advice on how to teach students to generate meaning for themselves. She describes this as "a major and essential contribution to students' abilities to think creatively, [to] solve problems, and to make responsible, satisfying decisions: the goal of all education" (p. 74).

Hunter next reviews recent research on how the brain operates and how students' learning preferences differ. In *Decisions About Learning Behavior*, Section 3, she gives an overview of recent research on memory, the brain's two hemispheres and how they affect students' learning styles. Hunter gives specific examples how to utilize students' various learning styles and how to accommodate for them in teaching opportunities. An example is the previously mentioned section on how to utilize a chalkboard effectively. She presents and justifies four simple but basic guidelines:

1. Say before writing.
2. Use only key words and simple diagrams.
3. Demonstrate relationships by the position on the board.
4. Erase before introducing a new concept.

The importance of these suggestions is easily demonstrated with her example of the impact of spatial relationships. A list arranged in this order:

Washington

Adams

Jefferson

indicates a priority relationship, while a temporal relationship results from arranging the list in the following manner:

Washington Adams Jefferson

Several chapters of the fourth and last section, *Decisions About Teaching Behaviors*, deal with how to increase learning. As in previous chapters, some of the information pertains more to traditional educational philosophy than that of holistic education. Some, on the other hand, relates directly to holistic philosophy. If holistic "educational efforts are successful to the degree that the child eventually learns to speak in his or her own voice ... to take responsibility for his or her own judgment and destiny" (Kane, 1993), Hunter offers some very helpful advice. For instance, the two pages called *Putting the Student ("You") at the Center of Learning* provide simple, clear, and immediately useful ideas. The information in the slightly longer chapter, *Teaching Students How to Disagree Agreeably* provides information useful for many interactions, not just for students. The information is equally applicable to adult interaction.

Hunter devotes the last chapter of the book to her strong view of education as the ultimate profession. In the introduction she reminds us "of the powerful impact of professional decisions on students' learning and that these decisions should be made intentionally from a knowledge base" (p. viii). She concludes her introduction with a belief that "there is no question that there exists an art of teaching over and beyond effective teaching." Her goal is to make accessible to educators the "science that underlies and enhances the art" (p. ix). With the publication of this book, Hunter takes us further down the path of understanding both the science and the art.

In *Enhancing Teaching*, Hunter expresses the wish that "this book [will] make an additional contribution to the knowledge base for the decisions all teachers make, and ... affirm the belief that teachers are decision-making professionals whose knowledge must continually be extended" (p. xi). Madeline Hunter shares the goal of holistic educators when she states that she feels "society will be the beneficiary [of better teaching] by the production of a better world in which to live" (p. xi).

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Freedom to Learn

by Carl Rogers and H. Jerome Freiberg

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Reviewed by William Crain

In the 1940s, Carl Rogers began formulating a new theory of personality and psychotherapy. The human organism, Rogers argued, has an inherent tendency toward growth and actualization. In a warm, accepting environment, humans will develop their capacities, reach out to new experiences, and trust their natural feelings and intuitions. Unfortunately, most people don't fully develop these potentials because, in the course of growing up, they come to feel that they are loved conditionally. That is, they conclude that they are

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not loved and prized for just being themselves, but only if they act, think, and feel in ways that parents and others approve of. Because children need others' love and approval, they tend to adopt these external standards as their own and they try to push down and dissociate themselves from "bad" feelings (such as anger or erotic feelings). As a result, they grow into young people and adults who feel unsure of themselves. They try to follow the "oughts" they have been taught, but they don't really know what they are like inside — only sensing that there may be something dangerous lurking within. They don't feel they can just be themselves and trust their own experience — their feelings, intuitions, and gut-level impressions — as a guide in life (chap. 3).

In Rogers's client-centered therapy, the goal is to help clients become more open and trusting with respect to their feelings. To do this, the therapist doesn't give the client advice or provide insight into the client's conflicts — practices that only encourage clients to look outside themselves for guidance and direction. Instead, the therapist tries to adopt three basic attitudes that enable the client to take the lead in exploring his or her feelings.

First, the therapist tries to be genuine. She tries to be in touch with her own feelings and may occasionally tell the client about them. Second, the therapist tries to prize the client unconditionally. The therapist tries to express, often nonverbally, a basic respect for the client as a person, regardless of how shameful or negative the client may feel about what he is saying. And third, the therapist strives to be empathic. She tries to see the world through the client's eyes, to imagine what the client is experiencing, and to reflect this back to the client. Client-centered therapy assumes that when the therapist adopts these attitudes, the client will soon discover that no matter what feelings he brings up — however embarrassing or repugnant they might have seemed — he is understood and respected as a person. Thus, he will feel emboldened to initiate further explorations, and as he does, he will come to accept his feelings and value his unique experience of the world.

Client-centered therapy has often struck people as too superficial and non-directive. It seems to put too much faith in a client's ability to solve his or her own problems without the expert guidance or insight of the therapist. But Rogers believed that this faith in clients, which is really a faith in the organism's actualizing tendency, is justified. And a substantial body of empirical research suggests that client-centered therapy has considerable value (Bergin & Garfield, 1994).

In 1940, when Rogers was beginning to develop his new therapy, he began a career as a university professor (primarily teaching graduate courses), and he soon became uncomfortable with the traditional teacher role. He balked at the idea of being an expert who determines what students must learn and evaluates them accordingly. He thought that he should be able to trust his students, as much as his clients, to move independently in positive directions. So Rogers began to experiment with new educational approaches, becoming less of a teacher and more of a facilitator and resource person who permitted students to pursue their own interests. Rogers didn't feel he could dispense with grades, so he asked his students to grade themselves, although he reserved the right to talk with students about differences between their estimates and his. All in all, he gave his students considerably more freedom than they were accustomed to, and in the early weeks of his courses, students often felt confused and angry over the lack of direction. But after the courses were over, Rogers received numerous student comments and letters telling him how valuable the self-directed learning had been (Rogers, 1969; Kirschenbaum, 1979).

Rogers wrote several forceful papers on education in the 1950s and 1960s and included some of them in his 1969 book, *Freedom to Learn*. The book also described his and others' experiences with student-centered learning, as well as empirical research bearing on this approach. Rogers's second edition of the book, *Freedom to Learn for the '80s*, was published in 1983. Rogers died in 1987, but his daughter, Natalie Rogers, encouraged one of her father's colleagues, H. Jerome Freiberg, to update the book. The result is the third edition, published in 1994.

The central argument of the new edition, like the others, is that real learning is "not the lifeless, sterile, futile, quickly forgotten stuff" (p. 35) that schools and universities cram into the minds of helpless students. Real learning is that which the student finds exciting and personally meaningful. It engages the student as a whole person, mentally and emotionally. This kind of learning cannot take place in the conventional school, which is dominated by prescribed curricula, lecturing, standardized tests, and instructor-chosen grades. It requires a teacher who gives students the freedom to pursue their own deepest interests. To facilitate such self-initiated learning, the teacher should try to adopt the same three basic attitudes that facilitate self-exploration in therapy: genuineness, prizing, and empathy. These attitudes create a classroom climate in which the child feels free to be curious, to be creative and make mistakes, to learn from other students, and to work on problems that are intrinsically meaningful to him or her (p. 170).

Like the earlier editions, this volume emphasizes first-person accounts by teachers, students, and administrators who have been involved in student-centered education. Freiberg has retained many of the earlier accounts and has added some recent illustrations. Freiberg has also continued to emphasize empirical research, highlighting the studies by David Aspy and Flora Roebuck, which indicate that teachers' genuineness, prizing, and empathy promote student achievement, self-esteem, creativity, and conceptual thinking.

In the second edition, Rogers pointed to positive outcome research on open education as supporting his approach; Freiberg has added outcome research on Montessori schools and cooperative learning to strengthen the case. Finally, Freiberg has provided an updated look at the role of Rogerian education in today's educational crisis and has described several educational innovations that can foster student-centered learning. Specifically, Freiberg has added excellent chapters on ways in which administrators can facilitate student-centered learning and ways in which students can create their own discipline within the classroom.

Rogers's writings on education have been a significant inspiration to countless educators, many of whom will find this new edition very useful. At the same time, *Freedom to Learn* has had — and continues to have — problems.

For one thing, Rogers typically described his educational ideas as if they were brand new, ignoring their historical antecedents. For example, his pleas for personally relevant education echo those of John Dewey, but Rogers rarely cited Dewey. In one instance where Rogers did acknowledge an earlier contribution, his comment was telling. After quoting Martin Heidegger, Rogers said, "I should mention that Heidegger gave the previous statement as part of a lecture in 1951 or 1952. In other words, this kind of thinking about teaching is not new. It has very old roots" (p. 34). But the roots go back considerably farther than 1951. Dewey was writing at the turn of the century, and Dewey and many earlier child-centered educators owed a great deal to Rousseau, whose *Emile* was published in 1762.

When one scholar, Donald Walker (1956) linked Rogers to Rousseau, Rogers basically dismissed the connection. He said that writers should be considered independently and quipped: "My only personal contact with Rousseau's work was the required reading of a portion of his *Emile* for my doctoral language examination in French, and I nearly flunked the exam!" (1957, p. 402).

Rogers's neglect of historical antecedents reflects his image of the way a person should live. His idea of the fully functioning person, described in detail in *Freedom to Learn*, is a person "living in the moment," a person for whom "the sensation is that of floating with a complex stream of experience." In such an individual, "the most stable personality traits are openness to experience and the flexible resolution of existing needs in the existing environment" (p. 319).

This flexible, moment-to-moment approach to life may have its merits, but we also can learn from the past, including past efforts in the area of student-directed education. In the current edition of *Freedom to Learn*, Freiberg adds a bit of historical perspective by noting the contributions of Montessori, but this is only a minor addition.

The values of openness and flexibility, I would note, are problematic within Rogers' own work because in the area of psychotherapy he advocated a strict, even rigid, adherence to basic principles. He never recommended flexibility, for example, in the use of empathy. He never recommended that therapists respond empathically most of the time but give clients a dose of reality when the situation calls for it.

Yet Rogers's educational thinking sometimes seems too flexible, too ready to compromise. In the first two editions of *Freedom to Learn*, Rogers recommended the flexible use of Skinnerian programmed instruction, even though programmed instruction doesn't permit creative thinking. Rogers also recommended the use of student/teacher contracts and self-administered grades, even though these practices may detract from the most deeply motivated learning — the kind in which the person becomes thoroughly engrossed in a problem and follows it wherever it leads, without worrying about prearranged agreements or how well he or she is performing.

The problem of excessive openness and flexibility is even more pronounced in the latest edition. Freiberg drops programmed instruction as a recommended tool, but he believes that Rogerian education can incorporate an extremely wide range of recent proposals. He endorses, among other things, corporate partnerships, apprenticeships, hand-held computers, just-in-time learning, intergeneration centers, and year-round school. He also calls for a "national dialogue on the future of education in America" (p. 358) so we can "build a consensus and support system for learning" (p. 359). Some of these proposals may prove worthwhile, but the book seems too eager to embrace and participate in the contemporary hodgepodge of educational thinking and rhetoric. The book often lacks a critical stance toward current trends.

In terms of model schools, Freiberg repeatedly praises one institution, the O'Farrell Community School, when all we learn about the school comes from a report that reads like a trendy public relations piece. From the report, it is difficult to tell whether O'Farrell, a middle-level school, is really committed to student-centered education. A typical passage reports that:

> A commitment to academic excellence and equity, a structure which ensures strong relationships among teachers, students, and parents, and a school culture which communicates high expectations to all students contribute to the success of the O'Farrell program. Students at O'Farrell know that their teachers expect that they will do well, and rely on their teachers' encouragement, assistance, and unwavering belief in their abilities as they move toward becoming independent learners. (pp. 181–182)

Such descriptions are too vague and cliché-ridden to give us a good idea of what happens in the classrooms. But if we take a strongly student-centered position, we need to be suspicious about terms such as "high expectations," which may mean that adult goals take priority over children's spontaneous interests and their own ways of learning. Similarly, we might wonder about the statement that the students "move toward becoming independent learners." Does "move toward" mean that the school doesn't trust the children to learn on their own right from the start?

Elsewhere the report mentions, among its many new programs, "student-centered, activity-oriented learning experiences" (p. 180). But the report also quotes students who emphasize that the teachers "really care about our grades" and "make sure that students understand the assignments either for class or homework" (p. 182). It's pretty clear that it's the teachers who determine the assignments and the grades — practices at odds with student-centered learning.

I should point out that my knowledge of the O'Farrell School is based solely on the report in this book. The school may very well be an excellent one. Even from the report, I get the sense that it is strongly committed to giving all children, including children of color, a first-rate education. My point is that the present account suggests that the school is more teacher-directed than student-centered, yet Freiberg has nothing but praise for it.

While reading the book, I found myself speculating that Freiberg has an overall strategy. He has decided to participate in today's nationwide school reform movement, led by our top public officials and corporate leaders, so he can help push student-centered education into the mainstream. If this is his strategy, it is understandable that he is reluctant to criticize others' educational innovations.

But I believe this strategy would be unwise. Today's educational policy makers are far more concerned with preparing children to meet future work force needs than providing children with opportunities to pursue their own interests, learn at their own pace, and develop as whole persons. Joining forces with a broad, consensus-oriented movement can dilute the student-centered approach and take it in the wrong directions. I believe it is better for Rogerian educators to restrict their support to those contemporary trends that are clearly consistent with their fundamental positions.

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Call For Papers for Future Thematic Issues of the Review

Freedom. Despite the near universal appreciation of the ideal of freedom, the concept remains borderline and problematic in education. What freedom should parents have in determining the education for their children? What freedom should teachers have in creating and governing schools? What would it mean to educate children to live in freedom or "to overcome the tyranny of the self-centered ego" (to use Abraham Heschel's terms)? *Articles due by March 15, 1995.*

Love. Thanks to the courage and intelligence of scholars like Nel Noddings, educators can now speak directly about "caring" in the education of children. We now have the opportunity to delve into the associated idea of love. How can one teach so that children love the world? What role does the experience of love play in the creation of values? What is the meaning and importance of a teacher's love for her or his students? *Articles due by May 1, 1995.*

Hope. Times are rough and many children go to school in fear and return home through meanancing streets to know the companionship of a television. With so much violence, confusion, and isolation, how can we educate children so that they have hope for the future? How can we caution children about the dangers in the world without portraying human nature as violent and corrupt? How can we create environments that foster hope? *Articles due by July 15, 1995.*

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