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Teacher as Landmark: Metaphors and Education

by
Delese Wear

*Unless you are at home in the metaphor,
unless you have had your proper poetical
education in the metaphor, you are not
safe anywhere. (Robert Frost, "Education
by Poetry: A Meditative Monologue")*

INTRODUCTION

When a colleague handed me the Frost essay from which the above quotation is taken, I was both enchanted and intrigued. I knew about the virtues of an education by poetry--aesthetically, anyway--yet I found myself musing about Frost's other more expedient reason for the study of poetry. Without a poetic education, Frost maintains, "you are not at ease with figurative values: you don't know the metaphor in its strength and its weakness. You don't know how far you may expect to ride it and when it may break down with you."¹ Reading Frost's essay I began to wonder about our "safety" as educators. Have we had a proper poetic education? Are we aware of the metaphors which selectively guide our action? Do we know the metaphors we use in our teaching and with which we implicitly and explicitly communicate our beliefs about education and schooling? I had never looked beyond the intrinsic beauty and personal meaning one derives from an encounter with the metaphor. Frost warned me to look further.

What follows is, first, a language with which to discuss the metaphor, secondly, some pervasive metaphors in education, drawn selectively from the literature; and thirdly, educational metaphors described by teachers across grade levels and disciplines.

*"Are we aware of
the metaphors
which selectively
guide our action?"*

THE METAPHOR

Definitions

Beginning a paper with definitions of metaphor seems rather mundane, even irreverent, for a subject which can serve as an instrument of basic cognitive processes, our very epistemology, while providing a "peephole on the nature of transcendental reality."² And although many of us can proffer a high school English class definition memorized in years past, "metaphorical speech and thought (remain) tantalizingly obscure."³ Yet it is this very obscurity which provokes and implores us to seek definition of an abstraction which we recognize as being hazily seductive but unruly and powerful.

No one can read too far in the literature on metaphors without encountering the fact that there are two theories of metaphor which are inextricably woven into the definitions: metaphor as substitution and metaphor as interaction. The substitution view is that the "metaphorical word or expression is used in place of some equivalent literal expression."⁴ The meaning communicated, then, might have been expressed literally, thus reducing the metaphor to an ornament or decoration, to "entertain" or "divert." I. A. Richards describes this view of metaphor as being "a sort of happy extra trick with words...a grace or ornament or added power of language, not its constitutive form."⁵ The comparison view, which is what most literature teachers use when they describe metaphor as an implied comparison, is really an extension of the substitution view, and makes metaphor what Gowin calls a "condensed simile,"⁶ or provides what Black describes as a more "elaborate paraphrase"⁷ than the substitution view. Indeed, Black continues, "It would be more illuminating in some of these cases to say that the metaphor creates the similarity than to say that it formulates some similarity antecedently existing."⁸ What is important to note about the comparative view is that it does not "serve to make intelligible the acquisition of radically new knowledge...(it) might allow for extensions of already existing knowledge, but it would not provide a new form of understanding."⁹

"The interactive view of metaphor 'permits one to say things which cannot be said otherwise....' "

In contrast, the interactive view of metaphor "permits one to say things which cannot be said otherwise, the meaning of which would not be fully captured by a mere listing of comparisons between the unchanged concepts."¹⁰ Truly new forms of knowledge and understanding result from the interaction of subjects, what Richards describes as an "intercourse" of thoughts, irreducible to literal assertions. These separate

thoughts Richard has called the tenor, or primary subject/idea, and the vehicle, or secondary subject/idea, their copresence creating meaning not attainable without their interaction. Indeed, Apter calls this "metaphor as synergy," claiming that two subjects work together to produce an effect which neither could produce alone,¹¹ while Bloor calls this same phenomenon the "dialectics of metaphor."¹² Black provides an often repeated explanation of the way metaphor works:

Suppose I look at the night sky through a piece of heavily smoked glass on which certain lines have been left clear. Then I shall see only the stars that can be made to lie on the lines previously prepared upon the screen, and the stars I do see will be seen as organized by the screen's structure. We can think of a metaphor as such a screen...the principal subject is "seen through" the metaphorical expression.¹³

Thus, two subjects "often from domains too dissimilar to allow our beliefs about one characterize the other directly" interact and force the reader to seek rough equivalents across the boundaries.¹⁴ Nowotny calls this dissimilarity between domains "domain incongruence," which is a source of both the "novelty and difficulty of many metaphors."¹⁵ Apter concurs that these domains must contain mutually exclusive properties, or the metaphor becomes "dead" whereby the individual is unaware of the opposites involved. Only when the opposites are blended metaphorically are the new and striking "nuances" formed¹⁶ and the new knowledge created, complete with new emotional value.

When the Metaphor Occurs

Parker describes most eloquently the "metaphorical plot" as an "interruption of movement towards a simple linear end or straightforward reference."¹⁷ Similarly, Burke calls the metaphor a "deflection" or "subverter of the direct route between sign and meaning,"¹⁸ while others have described its occurrence as "hitting a snag"¹⁹ or "deviations that enrich."²⁰ Regardless of how this figurative space is described, all conceptions imply imagination not only on the part of the speaker of the metaphor, but for the hearer, too. Indeed, the "success" of the metaphor depends in large part on the willingness and ability of the hearer to move up and down between layers of meaning to consider the possibilities expressed by the metaphor. Just as Black writes that the reader is "forced" to connect the two ideas,²¹ Moore notes that the reader is "made to think

of, to explore, to recreate, or to create a range of similarities."²² Richards cites William Empson regarding this mysterious space between the purpose of the speaker and the context of the hearer:

*Statements are made as if they were connected, and the reader is forced to consider their relations for himself. The reason why these statements should have been selected is left for him to invent; he will invent a variety of reasons and order them in his own mind.*²³

Because this process of invention and ordering is a personal encounter with language, the individual's confrontation with metaphor is ultimately both psychological and phenomenological.²⁴ Burke posits that "even the simplest, most automatic 'naming'--identification--places an entity, a topic, or a context in a semantic perspective which prefigures response,"²⁵ similar to what Bullough et al. have called preunderstandings:

*Preunderstandings have three essential characteristics. First, they are historical. For the most part, preunderstandings are situated within a culture (local to universal) and change over time--albeit slowly. Emphatically, they are not to be seen as a priori givens embedded in the nature of things for all times and peoples. Second, they are necessary elements in all situations requiring understanding because they serve as a backdrop of meanings that enable understanding. Consider, in this regard, the fact that pictorial signs used by international airports to help people get around seem to be universally understandable. Third, preunderstandings limit and distort meaning because they significantly predetermine it by virtue of the world view and values inherent in a native language and a family and social context. Limitation and distortion come with the enabling characteristics of preunderstandings, for any particular view of things precludes or decries other possible views. These three formal components of preunderstandings occur simultaneously, of course, but not with equal emphasis.*²⁶

"Lugging the baggage of preunderstandings yet armed with an awareness of motives for metaphor, the hearer must attempt to uncover the strategy... of a particular speaker."

Thus, lugging the baggage of preunderstandings yet armed with an awareness of motives for metaphor, the hearer must attempt to uncover the strategy or motivation of a particular speaker: "What is he trying to

get us to do? Which of his own ends might be served by such action? What shall we do about this?"²⁷

It is at this point that we shall begin to look at metaphors in education. We shall examine some of the metaphors in the literature which characterize education and schooling today. Next we shall examine the results of interviews with teachers which yielded the metaphors they use to think about education and schooling.

Metaphors and Education: Selections from the Literature

Neil Postman offers the finest observation of the role of metaphor in education, and although lengthy, it is well worth quoting in its entirety:

Unless I am sorely mistaken, metaphor is at present rarely approached in schools except by English teachers during lessons in poetry. This strikes me as an absurdity, since I do not see how it is possible for a subject to be understood in the absence of any insight into the metaphors on which it is constructed. There is no better example of this than the subject of education itself, for every philosophy, every proposal, every improvement one hears about is rooted in some metaphorical conception...If you believe that the mind is like a dark cavern, you will suggest activities that are quite different from those suggested by people who believe the mind is like a muscle or an empty vessel. Do you believe that human beings learn the way rats learn? Or do you conceptualize the mind as a kind of computer? Or a garden? Or a lump of clay? Embedded in every test, every textbook, every teaching strategy, is a metaphor of the mind--some notion of what it is nearly like. Similarly, arguments about the roles of teachers, students, and administrators originate in different metaphors of school. Some think of school as a prison; others, a hospital; still others, a military organization, or an extension of the home. How school is conceptualized will, in turn, control our metaphors of students. What are students? Are they patients to be cared for? Troops to be disciplined? Sons and daughters to be nurtured? Inmates to be punished? Resources to be cultivated? Personnel to be trained? It is right here, on this issue, that the arguments begin. One

"Embedded in every test, every textbook, every teaching strategy, is a metaphor of the mind...."

would think that adversaries in a dispute about education would try to make their metaphors explicit and visible, let us say, as scientists are apt to do. But usually they do not, which is one reason why such disputes tend to remain murky. To borrow a metaphor from linguistics, the deep structure of the argument usually remains hidden.²⁸

Smith notes that some of these metaphors are so embedded in ordinary language that we often fail to notice them, that "instead of encouraging active thinking, they actually obscure the need for thought...we stop thinking...if we are stuck with the metaphor, then we are disinclined to ask other leading questions about thinking."²⁹ These metaphors are, as ways of thinking about education and schooling, thought-controlling and profoundly influential in the way teachers construct their professional worlds. When we consider that new knowledge can be formed via the use of metaphor with subsequent new ways of viewing reality, we can hardly afford to disregard the metaphors teachers use which form the foundation of life in schools. More difficult to uncover, yet vitally important for our understanding, are the sources and motives for the use of specific metaphors.

"These metaphors are...thought-controlling and profoundly influential in the way teachers construct their professional worlds."

One of the most influential metaphors guiding educational practice today surely must be that which has its roots in the business/corporate planning models. Selden writes:

This commitment has an historical base as the curriculum field appears a child of the early twentieth century reform period; as early school people looked for role models that might increase their professional power, the obvious choice became that of the business executive. This conception of the school as factory and the administrator as a "captain of industry" appears then as old as this century and the effect of this central image has been the creation of an educational literature and practice filled with the industrial metaphors of "efficiency" and "productivity."³⁰

One views education within this metaphor as involving students as natural resources/raw materials to be molded by the teacher-as-technician in the school-as-factory to meet industrial/vocational ends. Infused throughout

this metaphor and others are political considerations, as Apple aptly notes, since "as an act of influence, teaching is inherently a political act;"³¹ at any given time the teacher is transmitting a certain set of values and not others.

Other metaphors which influence teaching behavior and curriculum decisions include those which characterize the nature of the child. While hardly discrete categories, there are three common conceptions with accompanying metaphors: the child as innately good (Rousseau's fallen angel); the child as bearer of original sin (the killer ape); and the child as tabula rasa (the wax tablet). Within the first metaphor, education is likely to be viewed as an opportunity to grow freely, since children will seek to realize themselves and move toward constructive self-fulfillment. Within the second metaphor, children are viewed as objects to be trained and policed. Within the third metaphor, children are viewed as infinitely malleable, making scientifically designed teaching and training essential so that the "end product" of development is a person who functions usefully in society. In his research on metaphor in the thinking of teachers, Munby reports that teachers often view the child's mind as a "vessel for filling,"³² similar to Freire's often cited "banking" metaphor for education:

Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorize, and repeat. This is the "banking" concept of education, in which the scope of action allowed to the students extends only as far as receiving, filling, and storing the deposits...In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing.³³

“Regardless of the specific metaphor one chooses to characterize education, many imply passivity for learners....”

Regardless of the specific metaphor one chooses to characterize education, many imply passivity for learners whether they are viewed as mounds of clay, raw material, or depositories. This, in turn, affects one's metaphorical conception of the human mind, of knowledge, of the process of learning, and of the institution of the school, all which form the basis for curriculum and instructional decisions. Postman correctly observes that "in a fundamental sense, all arguments about how

education ought to be conducted are arguments about the validity of competing metaphors."³⁴

We now move to the metaphors used by teachers in several public schools in a county system in northeastern Ohio. While there was no random systematic attempt to sample teachers across grade levels and disciplines, fifteen teachers representing various subject areas in both elementary and secondary schools were interviewed. Likewise, the researchers did not enter the settings to test pre-existing hypotheses about teachers' uses of metaphor. Rather, the intent of the interviews was explicitly to generate data for examination of the nature of schooling and education as viewed by teachers, which may or may not lead to the generation of hypotheses.

Access was gained to the teachers through a county office language arts supervisor who contacted principals for initial permission to ask teachers to participate in the project. Fifteen teachers and one principal from three schools took part: a primary school, an elementary school, and one high school. The group interviews were voluntary, lasted approximately one hour, and took place after school in classrooms. The interview format consisted of (1) a brief background on the project, including a review of the definition and uses of metaphor, (2) an example of a metaphor used to characterize some aspect of educational phenomena, and (3) a description of five categories of educational phenomena to be used in the extension of any given metaphor: teachers, students, schools, education, and teaching/learning. Once the example was given and extended across all five categories, there was little interviewer prompting necessary, and the metaphors began to spew from teachers. The only intercession by the interviewer was to seek clarification of a word, or to question lapses in categories. What follows is a discussion of all the extended metaphors which were generated by category.

THE INTERVIEWS: DATA ANALYSIS

Teachers and Students

An initial overview of metaphors (Figure 1) indicates several noticeable trends. Probably the most apparent appear in the teacher-student dyad. In the

Figure 1: Metaphors

school	teachers	students	learning	education
1. power plant	generators	receptors	receiving/ conducting the current	receiving/ conducting energy
2. ship	officers	mates	ordering	sail the ocean of knowledge
3. zoos	trainers	animals	conditioning	performing a trick
4. farm	farmer	crop	cultivation	production of bountiful crop
5. space	astronauts	space cadets	experiments	a mission
6. factory	foremen	laborers	assembling on the line	producing finished product
7. wagon	driver	mule	dangling a carrot	movement of the wagon

<u>schools</u>	<u>teachers</u>	<u>students</u>	<u>learning</u>	<u>education</u>
8. composition paper	music teacher	composers	composing	written musical composition/the "symphony"
9. churches	minister/preacher	parishioners	sermon/gospel	salvation/getting saved
10. prisons	inmates	wardens/guards	drilling/tasks	sentence/rehabilitation
11. mills	weavers	yarn	designing	finished fabric
12. studio	painter	canvas	color arrangements	gallery show/display
13. wheel	potter	clay	shaping	pot
14. soil/dirt	gardener	seeds	fertilizing	flower/fruit
15. staff	conductor	notes	scoring	music
16. nursery	parent	baby	nourishing	growth
17. hospital	doctor	patient	prescription	wellness/health
18. kitchen	chef	ingredients	recipe	entree
19. field	coach	player	game plan	game
20. lot	architect	building materials	blueprint	house
21. writers' workshop	poet	words	arrangement (rhyme/meter)	poem
22. salon	hairstylist	hair	styling	coiffure
23. library	librarian	readers/browsers	reading books	knowledge
24. stage	director	actor	memorizing the script	play
25. foreign seas	landmarks/ lighthouse	explorer	sailing the voyage itself	discovery

vast majority of the 25 metaphors generated by the informants, teachers are clearly the actors, students the acted upon; or simply, teachers are active, students are passive in the learning context. In fact, in only 3 metaphors (teacher as music tutor, student as composer; teacher as landmark/lighthouse, student as explorer; and teacher as librarian, student as reader) is the student genuinely and responsibly involved in the course of his or her learning in a relationship characterized more as helping rather than authoritarian. While 12 of the 25 metaphors for students (see Figure 2) are human, 2 are animals, 10 are inanimate, and 1 is a vegetable, 23 of the metaphors for teachers (see Figure 3) possess human qualities and only 2 are inanimate. Of these inanimate teachers, however, 1 (train engine and generator) is more powerful than its corresponding student (receptor), while the remaining metaphor of teacher as landmark/light-house suggests a more directive than powerful role. Thus, it can be argued quite persuasively that teachers within the context of these interviews view their role in a uniform, traditional manner, that is, as paternal educational

Figure 2: STUDENT METAPHORS

<u>Human</u>	<u>Animal</u>	<u>Vegetable</u>	<u>Inanimate</u>
mates	animals	crops	receptors
space cadets	mule		yarn
laborers			canvas
composers			clay
parishioners			seeds
inmates			notes
baby			ingredients
patient			building materials
player			words
reader			hair
actor			
explorer			
N = 12	N = 2	N = 1	N = 10

Figure 3: TEACHER METAPHORS

<u>Human</u>	<u>Animal</u>	<u>Vegetable</u>	<u>Inanimate</u>
officer			generators
trainers			landmark/lighthouse
farmer			
astronaut			
foremen			
diver			
music tutor			
minister			
warden/guard			
weaver			
painter			
potter			
gardener			
conductor			
parent			
doctor			
chef			
coach			
architect			
poet			
hairstresser			
librarian			
director			
N = 23			N = 2

decision makers. Similarly, the metaphors for students characterize them as the passive recipients of the knowledge, skills, and values of teachers. What they do with this received knowledge, skills, and values varies, however, and will be described below.

Teaching/Learning Context

The metaphors for learning can be divided into four broad categories. First, some describe learning in terms of teacher behavior exclusively, with the student figuring as an entity to be manipulated by the action of the teacher to produce an educational end (see Figure 4). Not surprisingly, all the corresponding students within each extended metaphor are characterized as inanimate, making

Figure 4: LEARNING CHARACTERIZED BY DIRECT TEACHER ACTION/MANIPULATION/INTERPRETATION*

learning as following a recipe
learning as following a blueprint
learning as arranging (words)
learning as styling (hair)
learning as designing (fabric)
learning as arranging (color)
learning as shaping (clay)
learning as fertilizing (seeds/plants)
learning as scoring (notes)
learning as cultivating (crops)

*all these describe teacher, not student behavior

the active characterization of the teacher in the teaching/learning context quite natural and predictable. Students themselves do nothing but receive; any educational result can be traced to the teacher's expertise, not the student's.

The next two categories of learning (see Figures 5 and 6) are distinguished by the difference between teacher action and teacher order, and are different from the first category because of the growing activity of the student. In Figure 5, learning is still characterized by direct teacher action with student

Figure 5: LEARNING CHARACTERIZED BY DIRECT TEACHER ACTION FOLLOWED BY STUDENT ACTION/MANIPULATION/INTERPRETATION*

learning as conditioning (animals)
learning as dangling a carrot (in front of a mule)
learning as providing nourishment (to a baby)
learning as writing a prescription (for a patient)
learning as giving a sermon (to parishioners)

*all these describe teacher behavior

acting as a receptacle, yet the student does something as part of the learning: the animals perform after conditioning; the mules move after seeing the dangling carrot; the baby grows after being nourished; the patients get better after taking the prescription; parishioners act morally after the sermon; receptors conduct energy after receiving it. All the metaphors are highly behaviorist with little room for student initiative and responsibility in the learning process. Indeed, effective learning--and the educational net result--can be traced directly to the expertise of the teacher and the packaging or delivery of that which is to be learned.

In contrast, the learners in Figure 6, while still inextricably tied to the teacher as the source of what must be learned, are clearly more responsible once

Figure 6: LEARNING CHARACTERIZED BY DIRECT TEACHER ORDER BUT FOLLOWED BY STUDENT ACTION/MANIPULATION/INTERPRETATION*

learning as following orders (mates)
learning as doing experiments (space cadets)
learning as assembling (laborers)
learning as following the game plan (players)
learning as memorizing the script (actors)
learning as drill/performing tasks (inmates)
learning as receiving a current (receptors)

*all these describe student behavior

knowledge or skills are in their possession: the learner is active and follows orders, does experiments, assembles things, follows a game plan, learns a script, performs a task. The teacher is, respectively, the maker of the order, the designer of the experiment, the foreman on the assembly line, the architect of the game plan, the director of the script, the warden overseeing the tasks. Yet such a highly directive role for the teacher does not imply inappropriate behavior. While many of us as teachers are or become ethnocentric with regard to our disciplines, we do know that didactic behavior is clearly an appropriate--even superior--vehicle for the learning of certain tasks.

The fourth category of metaphors for learning includes for the first time student behaviors of initiative, responsibility, and creativity. It might be argued quite accurately that an athlete and an actor improvise, show responsibility, and are undoubtedly quite creative, yet the basis of these actions is more predetermined, perhaps, than a composer, a browser in the library, or an explorer. While these three metaphors--learning as composing (a symphony, perhaps), learning as sailing/voyaging (to discover or explore), or learning as

Figure 7: LEARNING AS STUDENT ACTION/MANIPULATION/INTERPRETATION*

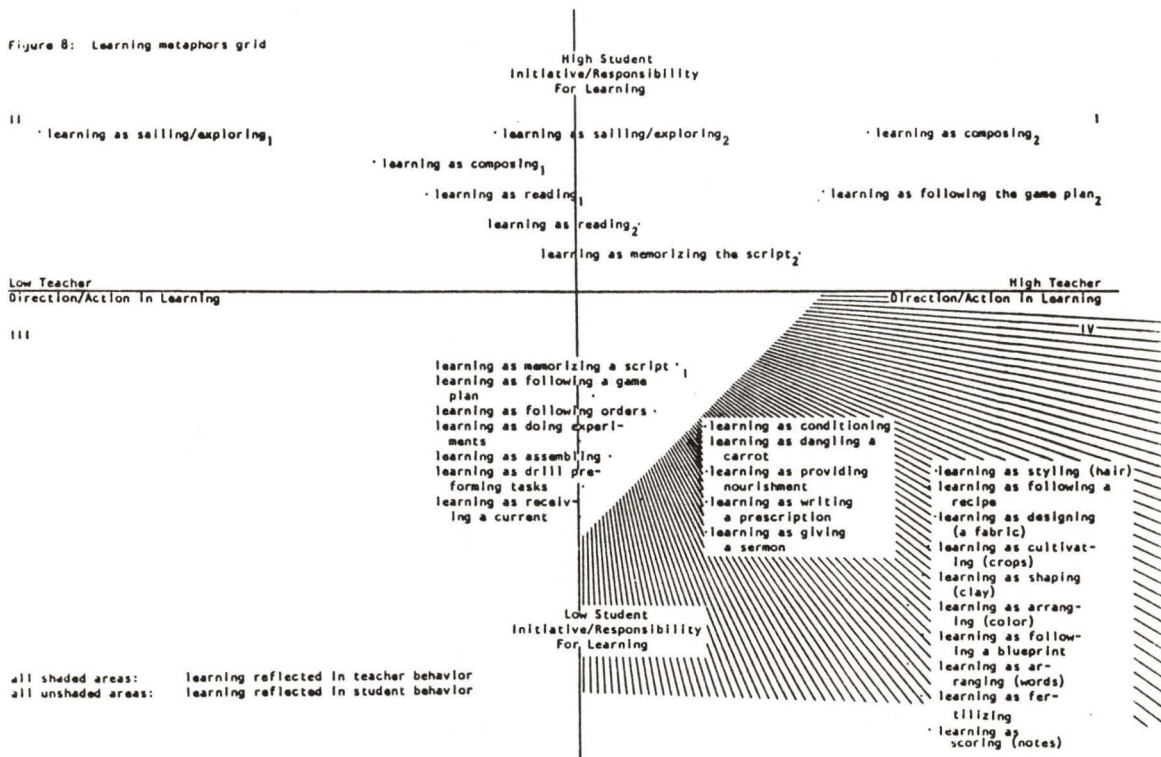
learning as composing (a symphony)
learning as sailing/voyaging (to discover)
learning as reading (to gain knowledge)

*all these describe student behavior

reading/browsing in the library (to gain knowledge)--rest squarely on the student's shoulders, the teacher's role cannot be depreciated in the learning process: students do not learn to read, sail, or compose in a vacuum. In fact, didactic instruction and hours of drill were undoubtedly a precursor to the more sophisticated processes exhibited by learners within these metaphors. Fundamentals are necessary but not sufficient for the creative acts of composing and exploring, and even active engagement with literature is more than reading words and knowing how to use the card catalog.

Figure 8 indicates an arbitrary placement of metaphors for learning on a grid which contains four quadrants: high student initiative and responsibility for learning/high teacher direction and action in learning (I); high student

initiative and responsibility for learning/low teacher direction and action in learning (II); low student initiative and responsibility for learning/low teacher direction and action in learning (III); low student initiative and responsibility for learning/high teacher direction and action in learning (IV). The gray area indicates that learning is characterized solely in terms of teacher behavior;



the metaphors are randomly placed here to indicate a high degree of teacher direction and student passivity. Similarly, the remaining metaphors in quadrant IV indicate moderate to high teacher direction and relatively low levels of student initiative in learning, yet depending on the nature of the learning and the learner, some of the metaphors might be placed more accurately in a different quadrant. Consider, for example, the theater metaphor. In some theaters, rigorous and unwavering consistency with the script might be demanded, while in other settings, improvisation might be encouraged with the script serving as a guide, not a mandate. In the former, there is low student initiative; in the latter, higher levels of student initiative.

Education

Two general themes emerged in the analysis of the metaphors for education (see Figure 9). Not surprisingly, these metaphors are characteristic of traditional views of education: one, a discrete end product which is evident at the end of a more or less linear progression of learning; and two, a process or state of being which is not a product per se but a culmination of learning which has hazier boundaries and which implies new or continued growth.

Figure 9: EDUCATION AS DISCRETE END PRODUCT

education as a bountiful crop
education as a finished product
education as a written musical composition ("the symphony")
education as finished fabric
education as gallery show/display
education as pottery
education as the flower/fruit
education as the music
education as performance of a trick
education as the entree
education as the game (athletic)
education as the house
education as the poem
education as the coiffure
education as the play

N = 15

The group of metaphors portraying education as a discrete end product is characterized by two internal trends. First, if one traces back to the corresponding portrayal of the student within each extended metaphor, 9 of the 15 students in this metaphor of education as discrete end product were inanimate (out of a total of 10 inanimate student metaphors). Similarly, the learning which took place to arrive at this discrete end state is characterized by direct teacher action/manipulation/interpretation (10 of the 15 metaphors).

Figure 10 portrays the second group of metaphors which describe education as a process or state of being. Here only one of the corresponding extended

Figure 10: EDUCATION AS PROCESS OR STATE-OF-BEING

education as receiving/conducting energy
education as sailing the ocean of knowledge
education as a mission
education as movement of a wagon
education as rehabilitation
education as growth
education as discovery
education as salvation
education as wellness/health
education as knowledge

N = 10

metaphors for students is inanimate, and none of the corresponding learning metaphors is from the direct teacher action/manipulation/interpretation group. Although most are embedded in high degrees of teacher direction, two corresponding learning metaphors are from the student action/manipulation/interpretation group.

DISCUSSION

Summary of Trends

The overwhelming trend pervading the majority of the metaphors is a traditional, teacher-centered model of schooling with a discernable product as its aim. Within the extended metaphors, students are viewed generally as passive receivers (as inanimate objects in 10 of the 25 metaphors), teachers as active givers or shapers of learning (only 2 of the 25 metaphors for teachers were inanimate), learning as a function of teacher action/manipulation/interpretation/order (all but 3 metaphors describe learning in terms of teacher behavior), and education as a discrete end product, a palpable entity, an empirical "thing" (in 15 of the 25 metaphors). This traditional gestalt explicitly implied by the metaphors is consistent between and among individual categories in the majority of extended metaphors and is reminiscent of Freire's banking metaphor and the business/corporate metaphor for education described earlier.

Limitations

Several points must be made, however, for a closer examination of the metaphors. First, some of the metaphors could accurately be labeled as inappropriate or perhaps even invalid. While there was a surprising amount of enthusiasm, reflectiveness, and good cheer surrounding the metaphor-making sessions, at times the teachers were more rigorous in seeking consistency within the extended metaphors rather than accurately depicting their views of themselves, their students, schools, teaching/learning, and education. This very well could be a result of the investigators' prodding the teachers to extend the metaphors, and rather than discarding a metaphor which could not be extended across categories, teachers appeared excited and enthusiastic about bringing a metaphor to closure in a consistent fashion. Indeed, in some instances, roles were made to fit the metaphor once an image had been conjured by a teacher, not metaphors to fit existing roles and/or beliefs.

A limitation voiced several times by teachers had to do with the time of year, since all data collection took place in the early and late spring. One high school English teacher noted that his attitude toward students traditionally underwent profound changes from September to February to May; other teachers nodded their heads in agreement. While determining differences among levels and disciplines in the kind of metaphors generated was not a purpose of the investigation, it was interesting to note that although the high school teachers were more good-naturedly cynical in their metaphors compared to their elementary counterparts, there was hardly a dearth of positive metaphors generated by the secondary teachers.

Uses of Metaphor Making

While not convinced that the design used was best for accurately generating metaphors teachers use to think about educational phenomena, I do believe that the content and process of each session did promote reflection among teachers. It was, perhaps, viewed by teachers as an intriguing twist, a challenge from some of the more mundane (and at times, packaged and trite) activities touted as staff development, yet less restrictive and sterile than the more common teacher

involvement in educational research. As such, examination of metaphors could be a significant and creative vehicle for professional development which provides a format without prefiguring response. Likewise, an examination of these same metaphors under diverse and controlled situations could provide meaningful data as educational researchers continue their attempt to describe and understand educational phenomena through teachers' perspectives.

Moreover, a close examination of the metaphors generated by the teachers clearly indicates that all fall into the substitution or comparison view which does not create new knowledge. These metaphors might illustrate a teacher's implicit beliefs about education--perhaps unspoken heretofore--yet the creation of such metaphors does not "make intelligible the acquisition of new knowledge."³⁵ Thus, while they are interesting to create and illuminate existing beliefs, these metaphors are of limited use to the researcher. None of the metaphors contained mutually exclusive properties, an important characteristic if metaphors are not to become "dead" because of too little dissimilarity between domains: in fact, the meaning of each metaphor could be fully captured by a mere listing of comparisons, many of which are part of the everyday language used by teachers. Designing questions (and an environment) that would encourage and nurture the kind of critical thought and self examination necessary to invent synergistic metaphors is a challenge to educational researchers.

In the end, it will be this process of invention which will enable us involved in educating to break out of our preunderstandings regarding education which limit and distort other possible views. Some of the existing views are worthwhile and strong and transcend time: schools as farms and stages and oceans. These should remain in the landscape. But other views elude our sight, some because we are unaware of their existence, some because we choose a priori givens.

Postman is correct: differing views of education are really competing metaphors. In order to think about education, to talk about it, to act intelligently and purposefully on our beliefs, we need access to a fuller range of metaphors, but they must be metaphors of our own making, and these do not readily appear--prefabrications are infinitely easier:

*You do not have to sit outside in the dark. If, however, you want to look at the stars, you will find that darkness is necessary. But the stars neither require nor demand it.*³⁶

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