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AUTHOR Lindstrom, Al
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ABSTRACT

This paper explores the themes that surround agency, cultural myths, artificial and natural systems' interconnectedness, institutions that perpetuate cultural myth, and the intertwined ethic within systems. It promotes the use of a problem solving model in which the teacher becomes the agent for global change as students learn to explore beyond their own cultural myths, and it questions the prudence of trusting curriculum agendas that do not embrace the welfare of all humankind. Examples using food, technology, knowledge, and language are employed to help conceptualize education as art. Agency is explored in terms of the locus of action, epistemology, and methodology that the educator can and does exercise in daily practice. Locus of action for global change is explored as a peripheral theme as the agent epistemology within the global community is examined. Methodologies and their potential to produce awareness and meaningful action are explored from a multi-community context, while agency themes are explored from scientific theory, eastern tradition, and the degrees of value that Robert Pirsig (1991) calls the "metaphysics of quality." Agency is explored and defined in terms of the actor's propensity to embrace global, rather than just national or regional, responsibility in the daily practice of education as art. Teachers who are agents for global change teach about the interconnectedness of social, biological, ecological, economic, and political systems because they believe that only a complete overview of all these systems will give a student a meaningful representation of where they are in the global picture. They also believe that a student connected to that big picture has a chance to become an agent for change. (Contains 67 references.) (NAV)

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Teacher Agency and the Art of Helping Children Explore
Knowledge Wrapped in Cultural Mythology in Education as Art

by

Al Lindstrom

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Abstract

Agency is explored in terms of the locus of action, epistemology, and methodology that the educator can and does exercise in daily practice. Locus of action for global change is explored as a peripheral theme as the paper examines agent epistemology within the global community. Methodologies and their potential to produce awareness and meaningful action are explored from a multi-community context. Agency themes are explored from scientific theory, eastern tradition, and degrees of Value in what Robert Pirsig (1991) calls a Metaphysics of Quality. Agency is explored and defined in terms of the actor's propensity to embrace global, rather than just national or regional, responsibility in the daily practice of education as art.

Preamble

The world today is ill divided in almost every material way. Some people can watch in living color, in the comfort of their living rooms, as Others struggle in the clutches of poverty as they starve to death. Technology, as currently distributed, provides an easy life for some and guarantees hardship for others. Free trade ensures wealth for some while it enslaves others in dependency relationships to powerful transnational entities. Powerful institutions like the World Bank and the International Monetary Fund (IMF) implement and support agreements like the General Agreement on Tariffs and Trade (GATT) between the G-7 and their trading partners while they ensure that other trading entities maintain subservient roles. NATO permits a third-world that festers as long as it does not threaten the imperial order while it smashes, by violent means, other entities that threaten that order (Amin, 1992). Behind each of these inequities of division lie a myriad of social, political, economic, demographic, ecological, resource, and general systemic authorities that wield leverage to ensure that security is maintained for specific special interests. Simple myths/explanations that appear to support one specific system authority prove useless when they are applied to solutions that try to address these global inequities.

More people die every two weeks from hunger than died in the two nuclear explosions at Hiroshima and Nagasaki. The European Economic Community (EEC) spends 330 million dollars each week to store, dump, and destroy surplus food. One thousand million people suffer chronic hunger. Malnutrition is the leading killer of children in the world today. The number of physiological and psychological problems rooted in malnutrition is not known, but from what we know about the effects of malnutrition, the numbers are probably very large. Military regimes are supported by traditional western interests void of morals or ethics or religion or philosophical equality. The only criteria for support seem to be how well they contribute to and support economic interests of the Core (Amin, 1989, 1992; Amin, Arrighi, Frank, & Wallerstein, 1990; Wallerstein, 1975, 1977, 1984, 1991).

Historical antecedents that underlie the assumptions in current myths often tell another story when they are reassessed from an interconnected systems approach. Assumptions that seem to make sense in a simple limited system may prove to be deeply troubling when applied globally. The various aspects of the food paradox, such as food distribution on a global scale, and problematic runaway technology, will provide examples throughout this paper of the kind of scholarship I propose.

Solutions that embrace civilized moral codes come from an educated populace able to explore the many potential relationships inherent in the terms of global inequity. Some will argue: "We have problems at home that we must fix first

before we can get involved in global problems." But the same problems that contaminate the global dynamic infect the domestic dynamic and thus fall into larger interactive systems. If the teacher is to become an agent for change it seems that the teacher must learn some methodology to expose the vitality of interconnected social, political, economic, religious, ecological, demographic, resource, and general systemic dynamics; then facilitate student learning as they explore and come to comprehend the complexity of global interconnectedness. We are part of a global community and what we do, directly or indirectly, to that community we do to ourselves. It seems that Western education is trapped within its own systems models that seek simplistic explanations rooted solely in quantitative myths that provide even more simplistic solutions. Qualitative methodology used to search for interconnected systems comprehension may enriches the global psyche.

Teacher as Agent in Helping Children Explore Interconnected
Knowledge as Cultural Mythology in Education as Art

Educators have long been tied to curriculums set by some Other agent separate from the needs of the local classroom and community. Educators trust and assume that the Other "knows" what a meaningful curriculum looks like. As an educator, father, and observer of social-cultural issues across the world I believe we have placed too much trust in a centralized authority that formulates curriculums. The public school curriculum today is wrapped in a myriad of myths that reproduction theorists would claim are designed to perpetuate the status quo.

This paper explores themes that surround agency, cultural myths, artificial and natural systems' interconnectedness, institutions that perpetuate cultural myth, and the intertwined ethic within systems. Examples that surround food, technology, knowledge, and language will be disbursed through the paper to help provide insights to education as art. The paper promotes the use of a problem solving model in its basic form to help us start to think about how the teacher becomes agent for global change as students learn to explore beyond their cultural myths. This paper makes no claims to "knowing" anything. However, this paper questions the prudence of placing trust in curriculum agendas verbatim, developed by a core of special interests, that do not embrace the welfare of all mankind. The curriculum, as it stands today, embraces specific quantitative models, void of qualitative aspects, that contribute to a myriad of problems in our communities, our country, and throughout the world. If we ignore the interconnectedness between curriculums set in developed nations and their effect on the underdeveloped world (Bagchi, 1982) we may, by default, become tacit supporters of the most dangerous kind of mythology of all, the mythology that we are better than those we inadvertently decimate.

There are thousands of arguments, rooted in genetics, ethics, Natural Law, United Nations Law, national law, religion, and philosophical realms that claim some degree of equality for all. An exploration of each of these arguments is beyond the scope of this paper. However, this paper draws its energy and vitality from the rhetoric and truth that seeps from each of those arguments. The fundamental position this paper will assume, based on that myriad of arguments, is that we, as a non-threatened civilized culture, when given a choice will choose to "do no harm" to the Other. Other has a broad definition and includes all peoples and species. A more tacit declaration in this paper is that when educators ignore the issues that surround global interconnectedness they nourish the mythology of "betterness" (Mirande, 1987). Education becomes art when knowledge is explored as interconnected cultural mythology.

Mythology

Mythology in this paper embraces a broad definition: It is in essence the story people tell and accept uncritically, either individually or collectively, that brings purpose, meaning, explanation, predictivity, comprehension, control, solidarity, a sense of reality, expression, truth, and/or belief to their view of the world. Thus: One's collection of myths becomes one's "world-view." This definition makes no claims to truth/Truth or reality/Reality and as such is one with myth and saturated with uncertainty (Heisenberg, 1962).

Hard and soft myth.

Mathematics is probably the ultimate in cultural hard mythology. It meets all the criteria of myth. It is a story concerned with the creation of quantitative reality. Math is embraced as real and is accepted uncritically by most people, save a few philosophers and mathematicians who question its generalization beyond purely quantitative intention. Math brings meaning, control, explanation, understanding, and a sense of qualitative reality to those who use it. Math contains certain quantitative truths, expressions, and purpose that bring quantitative solidarity to almost every culture on earth. Math is predictive and thus lends itself to a family of hard myths we call the hard sciences and statistics. Math contains allegory and is for many a quantitative parable embraced as basic truth.

We tend to forget that math is an invention of the human mind, a quantitative construct, and only contains Reality within itself because we have made up the rules that define quantitative reality. Math contains no truths about Reality outside the boundaries we set by and through the evolution of the rules of math. $2 + 2 = 4$ only within the rules of math. Mathematical concepts applied in banking, science, and statistics are descriptive as evidenced through their quantitative outcomes defined within the rules of math and in no way come from some objective reality beyond those rules.

Mathematics takes on a life of its own when we begin to believe the mathematical story is reality. The power that math has come to hold over our daily lives is a power we give it through our belief in math and quantitative concepts. We come to embrace math as past cultures embraced their stories of meaning, purpose, and control. Priests in ancient cultures claimed to "know" something about the universe that others only believed. The power held by the Priests was not divine, as they might have claimed, but given to them by the peoples' belief in their Priestly claim to power. Cultures like the Mayan and inhabitants of Easter Island that stepped into some abstract belief system, and ignored their natural interconnectedness with the world, eventually were laid waste. Many arguments seem to suggest that man is committed to an evolutionary dead end and I believe this

ignorance of interconnectedness and an adherence to abstract realities is the chief contributor to that evolutionary possibility (Diamond, 1988; Grady & Levenson, 1984; Houghton, 1989; Maranto, 1985; McKibben, 1989; Mooney, 1980; Nossiter, 1987; Revkin, 1988, 1989; Roan, 1989; Schumacher, 1975; Suzuki, 1989; Velasquez, 1982; Wallerstein, 1975, 1984, 1991; Willis, 1987) .

Every other human invention of the mind is probably myth and as such falls into the same Reality as mathematics. Myth has no power except the power we give it through our belief in its utility. Take the price-of-gold for example: The only real value we give it today, or at any time in the cultural past, is that value that we believed it held through its relationship to demand. And demand is often created by expectations and a belief that gold is valuable or may become more valuable. Gold has no value separate from culture. Like every construct in economics value comes from the belief that we place in the item as being valuable. The current economic systems finds value in destroying ecosystems to feed production that feed economic models (Schumacher, 1975; Suzuki, 1989; Velasquez, 1982).

A softer but no less insidious example of myth revolves around the North American Buffalo. Buffalo were once the basis of a natural hunter-gatherer economy which provided wealth, health, and spiritual sustenance for people over thousands of years. That economy was intentionally destroyed as a tactic to replace it with an artificial capital economy based on ownership and cattle and land. Historical myths were written that helped sow a racist reality into the ecology of North and South American history to this day. While history is written by those who remember how it is remembered may often be an issue of political power. And how it is remembered and believed seems to have psychological ramifications for the believer. Human history is permeated with thousands of political myths that no doubt have other bents to them but are not told because they do not fit the core's cultural myth and their constructed world-view of a people. Soft myths are pervasive in the world-views of each of us and these myths contain Truth/truth and Reality/reality and power to the degree that we believe in them.

Myths have the potential to take on a life of their own once the power of belief is given to them. Cultural myths, accepted uncritically, may create cultural sheep destined to live the fate tacitly written into the myth. But dynamic myths, applied with balance, are powerful aids that help us live successful lives (Campbell, 1974). The educator helps provide that balance when they facilitate critical inquiry from their students.

Artificial and Natural Systems in Examples of Cultural Mythology

Artificial systems are systems rooted in human knowledge and constructs that are manifested through human behavior. Natural systems tend to be physical (tectonic) and biological.

(ecological), that operate void of human interventions. Human interactions that operate within invented systems tend to be driven by the belief in the artificial system. For example the belief a culture embraces in the current economic model drives corporate entities to seek cheaper labor within another culture void of the rules/ethics that prove constrictive in the former culture (Barnet & Muller, 1974).

Ick-Baull Laschi's murder on April 17, 1995 demonstrated the power that artificial systems can wield. He was one of millions of victims destroyed by the tension between Artificial and Natural systems. He was a 12 year old Pakistani boy who escaped the slavery of the carpet factories. He spoke to the Human Right Commission of the U.N. about the experience many third world children face every day as economic models, wrapped in their functional myth, force producers on a quest for cheaper and cheaper product. This quest increased the tension between the Natural system's struggle for survival needs and the Artificial system's pursuit of profit to the point that some could rationalize the murder of a 12 year old boy. He was honored by the commission for his bravery. He was liquidated by his enemies for his courage to speak out.

Chico Mendez understood the tensions between artificial and natural system's mythology and pleaded with the World Bank to rethink their industrial promotion policy in the Amazon basin. He was assassinated December 22, 1988 immediately upon his return home after addressing the World Bank on the plight of the Brazilian farmer/worker/eco-system. His passion is echoed in his words: "First I thought I was fighting for the rubber tappers. Then I thought I was fighting for the Amazon. Then I realized I was fighting for humanity."

The bombs unleashed at the New York Trade Center and the Oklahoma Federal Building may be part of a wave of protest that is rooted in our failure to grasp systems interconnectedness. How can we explore dynamic solutions that reach beyond traditional reactions?

Interconnected tensions between artificial and natural-systems.

The arbitrary kinds of contrived distinctions made between Marxism, capitalism, behaviorism, objectivism, subjectivism, constructivism, and the myriad of other "isms" seem to have very fuzzy boundaries once the myths are delineated and seen as explanatory fictions. Each myth may serve to soothe us as we avoid the existential position that each of us is ultimately alone in an uncertain universe (Palmer, 1991). Each "ism" speaks of Artificial Systems and each offers some method by which control can be exercised on some Natural-system (self or ecological system) which provides favor to the Artificial-system (explanatory/group system).

The individual tends to want to express the freedom to operate within boundaries set by natural systems. The group tends to want to control that freedom in favor of group agendas and sets criteria that define the boundaries of human behavior within a myth. This tension between the individual and the group, when not in balance, leads to the kinds of forced compromises that lie at the root of the disintegration in both Natural and Artificial systems. For example: An economic model that demands never ending growth and resources but operates in a finite world is a fallacy with far reaching consequences once it passes threshold.

The current concentrations of capital, merger mania, and downsizing in the corporate world may be the latest move toward threshold as the myth unravels. But large system breakdown is subtle as subsystem failure precedes the collapse of the fundamental Artificial-system. The history of Easter Island is a real world microcosm of this example. If educators help students explore troublesome issues in a balanced curriculum then myths might become less ominous. Students may then feel confident to assess the interconnectedness between systems rather than the more traditional insular methodologies that emerge from divisions in the intelligentsia. The student, thus skilled and connected, may feel there is a personal stake in, for example, the preservation of some ecosystem.

The ozone warnings from the southern hemisphere; the increased acts of global terrorism; the crisis in our inner cities; the global depletion of natural resources; the disappearance of colonies of phytoplankton near the surface of the world's oceans from the combined assault of ultraviolet radiation, acid rain, toxic waste, oil spills, and other human impacts, (Grady & Levenson, 1984); and the crisis in global economic systems (Nossiter, 1987); are sending loud clear messages to the earth's inhabitants. Do we understand the interconnectedness between systems? Do we know how to listen?

What we do to the plankton, we also do to ourselves. The loss of the phytoplankton at the surface of the sea is a bad omen for biological systems ashore. Are we listening? More pointedly: Do current curriculums teach our children how to listen and explore interconnected systems clouded in myth and develop solutions for their interconnected future?

Business, ethics, technology and sustainable development mythology.

Westerners have come to believe that certain myths explain the questions of why the people of the third world are living in poverty. Frances Moore Lappe' and Joseph Collins (1982) have put forth arguments that raise serious doubt as to the validity of those myths. An exploration of each myth and its interconnectedness within the global systems may undermine the traditional explanations accepted uncritically.

For example every developed nation has food gluts and subsidizes farmers to overproduce. Grain production alone provides enough protein and 3000 calories per day, for each person on earth, which is enough to feed the entire population of the planet. This does not include beans, root crops, fruits, nuts, vegetables, grass fed meats and fish. Yet many believe the myth that there is not enough food to feed a hungry world.

Over population is probably the most often used explanation to justify hunger and poverty. An exploration into the myth might reveal that countries like China, with a high people to cultivated acre ratio, is free of starvation. But countries in the sub Sahara like Sudan and Ethiopia, with some of the richest crop land in the world and a low people to cultivated acre ration, has regular cycles of starvation. When the food production in each country is contrasted the student might find that China's solution (Baark, 1981; Barnett, 1960) evolved around home grown technology. But the solution in Sudan and Ethiopia seems to be World Bank directed and embraces Western technology and economic models never before used in Africa. One might conclude that under utilization of the population, not overpopulation seems to be the cause of hunger. It may be that people are a liability in certain kinds of economic systems. Hunger and starvation seem to be rooted in people-systems relationships where people do not have access to resources and land (Lappe' & Collins, 1982; Lindstrom, 1990). Modern curriculums designed to explore these issues, and the many other myths that perpetuate poverty and starvation, may spawn people able to invent the solutions needed to move western economic models toward the ideal of "do not harm."

Historical perspectives and some antecedents to the food myth.

Food production has moved from a regional to a global enterprise. Technology and modern economic theory's efficiency arguments were applied throughout the colonial world. Imperialistic and capital models, which endorsed private ownership, turned common lands used by nomads and gatherer societies into plantations, ranches, and farms. Millions of land users without titles were forced off ancestral land. The displaced migrated to cities, and plantations and became laborers. Taxes from land owners supported armies and police forces which enforced colonial and imperial policy. These processes of land privatization and labor displacement continue in the Amazon basin today.

Epistemology and Education as Art

Philosophers often deconstruct systems and knowledge in an effort to find the origins and nature of how we come to "know" anything. They explore the origins, nature, and limits of human

knowledge within certain paradigms. Epistemological shifts are often tied to political shifts and as such seem to lose some of their potential for critical exploration. A teacher who helps students explore social, economic, political, religious, and scientific positions seems to enable student agency as they discover their interconnectedness with those systems

Language combined with individuality of experience seems to have the power to leave myth as an individually interpreted enterprise. The Other's culture, experience, and dynamic world view leave myth in a kind of perceptual flux. An epistemological study into language is intimately woven into other epistemological studies because language is the method of transmission of cultural myth. When we teach children that cultural myths is simply the current consensus and not some ultimate reality it seems we enable them to glean skills that may be needed to work within the dynamics of the next century.

Human agency is bound up in a complex maze of power and structure and medium. When teacher or student questions their observation that some sectors of the world are devastated by starvation while others spends \$330 million dollars a week to store, dump, and destroy surplus food and the whole process can be watched "in living color" on TV (Willis, 1987) then they might wish to ask "Why is it like this?" That question may be the first step in interconnected systems discovery. "What kind of myths perpetuate the phenomena?" might be a second step. And "What kind of solutions overcome this paradox?" might be a meaningful third step in myth deconstruction. The teachers who advance student inquiry skills within universalized criteria like "do no harm" become sowers of and true agents for global change.

Quality and methodology in solutions.

"That feels good." Hardly a scientific statement but none the less a statement packed with meaning. I had just placed a whole grain omelette on the stove and set the heat to about three on the dial. I then moved it to three and a quarter and walked away. But it still didn't hold that qualitative rightness. I walked back and turned it down a smidgin and muttered the words that opened this paragraph. I now felt confident that the omelette would cook in a timely way, to the right degree, and to a suitable texture which were all themes that I deemed would fit qualitatively into my day. I have never been able to make a thing from a recipe. I learned to cook at my grandmother's knee and she never owned a recipe. Someone could tell her the ingredients and experience had taught her that a certain ratio of interconnectedness of those ingredients would give her a certain culinary experience. People who are connected to their work do this automatically. Take the one room school house teacher who facilitates the learning of a few students across 5 to 12 grades. That teacher is intimately connected with the ingredients that the students need because that teacher is interconnected with the

entire class. Could you measure that interconnectedness? Probably not. Does the fact that you cannot measure it mean it does not provide meaningfulness to the students in that class? Of course not.

People trapped in quantitative recipes are operationally lost in the qualitative world of experience. Quantitative myths are necessary to begin experience. But the richness in experience comes when we move beyond exactness into the qualitative world beyond measures. We can be great cooks without measures.

Agency themes have roots in traditional theory which take objective snapshots of myth driven reality. Eastern tradition tends to view reality in mystical and uncertain terms, a view not dismissed by the new physics (Zukav, 1979). Robert Pirsig (1974, 1991) suggests that we can know reality in terms of Quality if the Quality is explored in all its interconnected richness to the world and its history. He refers to his process as the Metaphysics of Quality (MOQ).

Pirsig believes that we can describe an event, through interconnected assessment, in terms of quality. We need not subscribe a number to the event, just a sense of quality. Every teacher-student interaction lies somewhere on a quality continuum. The detrimental effects of standardized grades which may serve to separate the learner from the learning experience, may be avoided through portfolio assessment and individualized instruction which consider quality improvement as a criteria.

Exploration techniques, solution-sets, legitimacy, and the production of meaning.

The teacher that promotes a culture of exploration also embraces a politics of infringement that challenges the "Church of Reason's" approach to linear structured outcomes. Henry Giroux (1990) suggests we embrace meaning production and subjectivity as dynamic and redraw objects and experiences of politics by extending the reach of power and meaning. This seems to support a process that encourages students to explore problems in more dynamic terms. He suggests that if we subordinate reason to uncertainty we broaden inquiry and solutions as we seek to live in harmony in the world. He encourages us to strive to locate the knower within her/his personal myth to develop a pluralistic nature. If we reject Western Philosophical tradition that rely on master narratives hobbled by myth and we reject universal reason and impartial competence then we may open up the range of solutions. It seems Giroux embraces a struggle with fraternity terror (Sartre, 1954) in the effort to become free agents of free inquiry. He argues that if we lay siege to the emancipatory vanguard, disguised as an intellectual elite, we may mend the divisions in the intelligentsia. Students with a multi-disciplined approach may see with new eyes and speak with a plurality of voices and narratives.

Reason and knowledge seem to be situated within particular myths (particular configurations of space, place, time, power, history, ideology) and not outside them. And as such it seems that universalism, at some levels, is less useful as a construct. Giroux suggests that if we avoid a one-upmanship epistemology and embrace cooperative pluralistic reality we may avoid some dogma and bring richness to inquiry.

Legitimacy is probably not found in any One's myth as the final interpretive story. While traditions provide guidance they seem unable to provide certainty, truth, or final authority. And it seems that if we reject views of history as biased by the dominant teller then we open up the door to other interpretation and thus other realities. If we seek stories that balance the individual with the group, avoid homogeneity, recognize subject multiplicity and democratic values tied to a multiplication of democratic practices, and call into question themes of degraded Otherness, then it seems we build robustness into the exploration and solutions. Postmodern approaches provide one source of critical techniques for the educator who is unsettled with the concreteness of today's curriculum and seeks insight into the interconnectedness of knowledge, power, culture and language in the development of a scholar (Merrell, 1988 & Giroux, 1990). Education as art plays a key role in the solution.

The language of a solution might do well not to offend but invite one to explore another way. The language that demands we adhere to some proposition is probably not a solution but a dogma rooted within the rules of some myth. A myth adhered to dogmatically is a myth embodied with the power of belief that we have given it. And the journey from descriptive "is" to "ought" passes through a mythical minefield.

The teacher as agent for global change will also explore the limits to any new myths that students invent. For example: We may be able to find a solution for an economic problem at home through the exploitation of some less powerful region in the world. If we apply the criteria for problem solving which claims to "do no harm" then a full exploration of the social, political, economic, and cultural issues in relation to the criteria might be a useful exercise as we seek local support for the solution.

Summary/Conclusion

Throughout the developing world today are thousands of teachers that provide rich experiences to their students by exploring the interconnectedness between and among students and the outside world. It is a treat to watch these facilitator of knowledge transmission apply their art with the passion of any agent engaged in change. Teachers who are agents for global change teaches the interconnectedness of social, biological, ecological, economic, and political systems because they believe that only a complete overview of all of these systems will give the student a meaningful representation of where they sit in the

big picture. They also believe that a student connected to that big picture has a chance to become an agent for change.

All moral, ethical, and idealistic positions such as "do no harm" seem meaningless unless they apply universally to all the systems they touch. Globalization seems to be more than an economic reality. Globalization seems more like a contextual reality for all. If we teach to the dynamics of global interconnectedness then we might provide students with the information and agency to go beyond the model and seek creative solutions to systemic problems. Teachers seem to be positioned as agents for global stagnation or global change. Teachers cannot escape this reality.

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