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Whose Encyclopedia?

Texts are devices for blowing up or narcotizing pieces of information.

--Umberto Eco, "Dictionary vs. Encyclopedia," in Semiotics and the Philosophy of Language

Bacon's Tree

Within Western culture, the universe of knowledge has traditionally been imagined and constructed by the creation of lists which became encyclopedic. The origin of the term encyclopedia reverberates down halls of learning and tells us something about imagining literacy. Its modern spelling is the result of a mistaken transcription of the Greek enkuklios paideia, meaning general education, into enkuklopaideia. It is derived from encyclical, meaning general or wide circulation, and paideia, meaning education and training and is related to the root for child. Hence it came to mean "the circle of learning; a general course of instruction" and was used in

English as early as 1632 in reference to the J.H. Alstedii Encyclopedia. It came into general usage in the eighteenth century in reference to the French Encyclopèdie, ou dictionnaire raisonnè des sciences, des arts et des mètiers, par une sociètè de gens de lettres[1] created by a group of scholars and scientists under the editorship of Diderot and D'Alembert, respectively a philosopher and a mathematician. Successive volumes were completed between 1751 and 1772; when fully collected, it finally comprised seventeen volumes of text and eleven volumes of plates. The Encyclopèdie provided a positivist program for human progress and was the central document of the era; Voltaire, Montesquieu, Rousseau and Turgot all contributed essays.[2]

Planned to mimic Bacon's classification of knowledge, it provided access to information on every conceivable subject -- religion, law, literature, mathematics, philosophy, chemistry, military science, and agriculture. Implicitly empirical in its conception and execution and collecting the trades and the sciences for the first time together with the humanities, "Its purpose was to show the interconnectedness of all knowledge." It was to be a foundation onto which succeeding generations would add and "whose very existence would be a guarantee against ignorance, bigotry, and superstition (Hankins 163-170)." The

Encyclopèdie was a meditation against barbarism.

Taking Bacon's tree of knowledge as a starting point, D'Alembert was conscious of the implications and limitations of this project. D'Alembert recognized that knowledge is more effectively represented and negotiated by a map, but his encyclopedia was necessarily limited by its structure. Umberto Eco, whose theories inform this analysis, notes this in his technical discussions of dictionaries and encyclopedias:

> . . .the eighteenth-century encyclopedia was not necessarily different from a tree. . .it. . .presents itself as the most economical solution with which to confront and resolve a particular problem of the reunification of knowledge.. . .the encyclopedist knows that the tree organizes, yet impoverishes, its content, and he hopes to determine as precisely as he can the intermediary paths between the various nodes of the tree so that little by little it is transformed into a geographical chart or map. (Eco, 1984b, 82-83)

D'Alembert states without equivocation that the general system of knowledge is a labyrinth, ". . .a torturous road which the spirit faces without knowing too much about the path to be followed." He imagines the philosopher who mediates this system to be elevated above it, but presents no justification

for this claim. The encyclopedia as an impoverished world map represents local knowledges as individual nodes on an enormous theoretical map. A global vision is not possible, only various cartographical projections from various imposed perspectives. D'Alembert continues: [the]. . .form of the encyclopedic tree will depend on the perspective we impose on it to examine the cultural universe. One can therefore imagine as many different systems of human knowledge as there are cartographical projections(Eco, 1984b, 83). It is this tension between the encyclopedia as tree and the encyclopedia as implied theoretical map which points to alternate imaginings of literacy, alternate cultural knowledges.

Imagining literacy often results in the manufacture of an encyclopedia of one sort or another which becomes an outline of one possible circle of learning, one local or cultural knowledge. This outline, while clearly an empirical project, defines nation and national curricula. It enables shared literacy within a defined context, simultaneously fostering dissemination of knowledge and enforcing limits on the outlines of literacy. These limits are based in culture and the ideology of culture. Indeed, encyclopedias are structurally trapped in the ideologies of their creators. Encyclopedias may be said to be controlled by the crude ideology of recognized politics and

the subtle ideology of the communicative process out of which meaning is made. This is inevitable; however, it becomes the source of conflict and controversy when the outlines of nations and cultures become unstable, as they almost always are. Nation and culture are dynamic, but encyclopedias are frozen in the moment of their creation.

Not only are encyclopedias frozen in a moment, they are also structurally trapped by the demands of listing and definition, which necessarily limits or omits overt discussion of context. But without context, meaning is obscured and understanding necessarily impeded. The paradox at the heart of the encyclopedia is that while it is created by those with expertise in a certain context whose goal is to produce a material map of a mental territory, it is sometimes the recourse of those who possess limited expertise within that context, those who are without a map. In other words, the philosophers, who D'Alembert identifies as the mediators of the encyclopedia, create a tree out of an internalized and unconscious conceptual map. This map is the result of their perspective and even their secret knowledge. The bifurcated tree that is the encyclopedia is a reduced version of a multidimensional map the philosopher of knowledge possesses but fails to adequately translate. But the tree that is the encyclopedia is often consulted by those

who have no such privilege, perspective or secret knowledge.

Those without knowledge of a specific context sometimes choose or are sometimes forced to consult the lists produced by others, but without sufficient familiarity with context, comprehension is incomplete. In short, an encyclopedic entry, appearing as it does as part of a list which is a kind of mental address for a nugget of knowledge, is a poor substitute for a map, for context, for a multidimensional system of associations. The encyclopedist attempts to transform the tree into a multidimensional map, but the encyclopedia's structure necessarily limits this. Even so, curricula and tests often are organized according to the logic of the list, not the map. Or to put it another way, an address without a map is useless to a stranger in a strange land.

A list, comprised of single lexical items, implies, in the same way the semiotic square implies, a universe of semiosis, but semiosis is a process occurring in a matrix of associations which a list cannot trigger. The global competence of the individual triggers semiosis at the moment of interpretation at an embodied moment in a time and place. At the moment of interpretation, the individual possesses a map which represents her semantic competence in a specific context. If the implications of any single item exceed the semantic competence

of the individual who is required to interpret that item, communication and comprehension suffer. The ironic goal of the encyclopedia is to provide a semiotic map by means of the construction of the list, but a list cannot supply semiosis. A list invites and sometime demands an interpretative act of semiosis by an individual. Only an individual can supply deep and broad semantic competence. No dictionary, encyclopedia or other text can supply such competence. That is, the text has limits, but these limits do not constrain the individual. The text can only supply a surface; the individual supplies depth by calling on deep semantic competence which reflects the individuals knowledge of context.

Individuals come to encyclopedias much as Marco Polo traversed Khan's kingdom, without context but anxious to acquire it. The stranger in a strange land can acquire context, indeed does, by virtue of visiting the strange land. After a time, the newly acquired context becomes the ground upon which semiosis takes place. The encyclopedic list is replaced by a conceptual map rooted in context and experience in the strange land. This conceptual map is not two dimensional. It is multidimensional. It exceeds the representational limits of the written text. The encyclopedia's ironic goal, the transformation of the aggregate entries into a two dimensional and then multidimensional map,

cannot fully succeed because the encyclopedia cannot supply the deep and broad semantic competence which enables semiosis; it cannot supply context. Multidimensional context can be experienced but not represented as a totality. The philosopher encyclopedist, an expert who creates the boundaries and selects the items for collation into a whole, creating a list, has this context; the reader often does not.

The encyclopedia, frozen at the moment of its creation and by definition failing to supply context, has still another limitation: it is structurally limited to a local cultural representation. That is, it exists as a transitory collation of knowledge from a particular perspective. The map which the encyclopedia attempts to provide is necessarily limited to the experience of the philosopher encyclopedist, and, therefore, biased and limited. The local organization of knowledge, which the encyclopedia represents, allows for common understanding between individuals who are in the process of making meaning within a common context. Those who share overlapping maps constructed out of common experience can share information more easily. This may be stating the obvious, but what is not obvious is the difficultly of constructing maps which include multiple local knowledges. Arrogance generally has lead the encyclopedist to deny the local nature of his collection and to

suppress revealing its systematic bias; it has lead the encyclopedist to declare his local collection to be global and representative of all that can be considered important. But Eco insists that structured knowledge cannot be organized as a global system in the form of an encyclopedia because any defined "circle of learning" can be contradicted by alternative and equally transitory and/or local cultural organizations (84). Encyclopedias necessarily encode the ideology of the local. This is not a fatal flaw. It is simply a limitation which must be recognized if an encyclopedic project is not to suffer from hubris.

In contrast, to the list which becomes the encyclopedia, multidimensional maps are constructed out of experience, and this is ultimately the domain of the human interpreter. Travel across domains is possible, albeit ideology travels too.

The universe of semiosis is the universe of human culture. But global representation of human culture is a semantic impossibility. The collection and connection of potentially infinite local maps can mediate against the ideological bias of the encyclopedia as list.

If the global view is theory, is postulate, and is only a regulative idea that fosters the construction of the local into organized, but limited sets, the organization of these limited

sets allows the isolation of a portion of the whole of human culture in order to interpret certain discourses and texts. Believing that it is possible to create a map from one of those limited sets, one of those lists, allows encyclopedists to imagine the encyclopedia to be a route to literacy. This happens because the encyclopedist is unconscious of the semantic force of his interiorized map. At each moment, he is convinced he has supplied adequate context (or he suppresses the realization that he has not). Over time, the encyclopedist has forgotten his earlier, tentative maps of knowledge, has forgotten what it means not to know. But what seems simple to the encyclopedist, the collation of lists into interrelated maps, is in fact enormously complex. The encyclopedist believes he has created an aid to understanding, but he has also created a riddle. The encyclopedia is an unconscious cryptograph. The encyclopedist has created a literacy problem by encoding his personal secret system of knowledge and implying that it is universal and therefore accessible and useful. It is the belief that the encyclopedia aids literacy, not the inherent limitations of the encyclopedia, which is the fatal mistake.

This is E.D. Hirsch Jr.'s mistake: the idea that the list can supply the semiosis. He would deny that he means for the list to organize curricula or pedagogy, but it cannot help but

do so given the history of its use and the inherent implications of its structure. The metonymic force of Bacon's tree of knowledge reaches into our present. Mass media debates about Stanford's "Culture, Ideas and Values" curriculum were illustrated by a cartoon of a contemporary tree of knowledge torn apart by agents of "multiculturalism."Lists can only be created and collated by those who are already adept. As prescriptions for those who are not, they have dubious value because they cannot supply semiosis. Instead they foster a crippled literacy, an awkward and tentative understanding that will only serve as a first step. The encyclopedic impulse must be contrasted with its counterpoint: the impulse to travel across local knowledges, making a map as you go, weaving a net of connections as you meander and discover.

Disguised Encyclopedias?

Umberto Eco's theories can help us understand the relationship between encyclopedias and literacy and the problems surrounding the construction of literacy curricula, especially E. D. Hirsch's dictionaries of cultural literacy. Eco's discussion of dictionaries and encyclopedias is highly technical, involving abstract notions of how an ideal dictionary might be structured. Beginning the chapter in Semiotics and the Philosophy of Language concerning these issues with the question, "Is a definition an interpretation?" -- Eco demonstrates that existing theoretical models for constructing definitions are untenable on several counts. Attempts to construct models for dictionaries based on the notion that a dictionary should store a finite number of bits of information about a particular lexical item and inventory a finite list of entries fail.

Dictionaries theoretically rely on the idea of a list of semantic primitives (the simplest concepts which can be identified, e.g. human is simpler to identify than mammal). This list is devised in order to conceive of a dictionary-like competence free of any commitment to world knowledge; i.e., human is only identifiable as a result of experience. In other words, the dictionary attempts to make a list of primitives

which can be understood without world experience. But, if one believes primitives are rooted in world knowledge, then dictionary competence is dependent on world knowledge.

The Porphyrian tree is the model upon which dictionary definitions are built. The third century Phoenician, Porphyry, elaborated a theory of division based on Aristotle's Categories. While only suggested verbally in Porphyry's Isagoge, medieval tradition built the idea of a tree into visual representations tied to logical analysis. (59) Bacon's tree begins here. This analysis forms the basis for the construction of dictionaries with a finite list of entries and bits of information about those entries. Eco's claim is that the Prophyrian tree upon which such models are built ultimately yields not a finite list, but an infinite list, because the semantic primitives upon which a finite list are built remain rooted in world knowledge. His conclusion: it is impossible to construct a dictionary which is free of a commitment to world knowledge. Attempts to limit dictionaries to a list must fail.

Definitions which take the Porphyrian tree as a model rely on dualistic division of the qualities of any item. Thus, man comes to be defined by the division of the corporeal (body) into animate (living being) or inanimate (mineral); living being into sensitive (animal) or insensitive (vegetal); sensitive into

rational into mortal (man) or immortal (God). Each level of division supplies differentia. Differentia are qualities; differentia are expressed by adjectives. Differentia belong to infinite sets, not finite sets. The Porphyrian tree appears to be finite and ordered, but it is, in fact, infinite because the number of differentia needed to distinguish any item from any other is unknowable. Each node on the tree requires that we infer other differentia which are not named. Bacon's tree and then Diderot's encyclopedia grew according to this logic. For example, sensitive (animal) implies a contextual knowledge of the category animal that has experienced animals as sensitive versus plants as insensitive (a debatable point that also reveals the ideology of local knowledges). This contextual world knowledge necessarily draws on numerous associative networks. Eco makes clear that such networks are a priori infinite. Recent artificial intelligence research has attempted a solution to this problem by constructing semantic models that draw on world knowledge and by inventing the notion of "frames" and "scripts" that enable interpretation based on context. Computers are, of course, trapped in the binary logic of the Porphyrian tree. It seems unlikely that they will be able to break free of it as long as they remain binary “thinkers.”

Eco continues his analysis by emphasizing that a dictionary

attempts to be highly ordered, to include in its definitions the minimal needed to differentiate between signifiers. In order to hold together, a definition must ultimately rely on concrete and finite differentia. Paradoxically, a definition must explode into a multitude of differentia because the logical exclusion of entries and bits of information about those entries fails in the real world of semiosis. The necessary result is the illogical exclusion of differentia. So Bacon's tree grows through systematic exclusion, not just at the level of the limits of the primary list of definitions, that is at the level of what gets chosen for the list, but at the level of the differentia needed to sort one entry from another. The excluded bits point towards the world knowledge which is assumed to be unnecessary for interpretation. The result is that we are forced to infer the essential differences between entries based on our world knowledge; i.e., we must use world knowledge to interpret dictionary entries, but the dictionary represses our consciousness of this.

> The tree. . .blows up in a dust of differentiae, in a turmoil of infinite accidents, in a nonhierarchical network of qualia. The dictionary is dissolved into a potentially unordered and unrestricted galaxy of pieces of world knowledge. The dictionary thus

> becomes an encyclopedia, because it was in fact a disguised encyclopedia. (68)

If the dictionary dissolves "into an unordered and unrestricted galaxy of pieces of world knowledge," these pieces require a background encyclopedic knowledge rooted in world knowledge in order to be interpreted. Attempts to create dictionaries which require the semantic competence of an ideal speaker will fail because they are actually disguised encyclopedias which require pragmatic competence, a competence based on interaction with the world. No bi-dimensional tree can represent the global semantic competence of a given culture. No finite list can represent the universe of culture. An encyclopedic competence requires world knowledge.

But what are encyclopedias, and what kind of literacy do they require and enforce? Eco tells us that since dictionaries are theoretically impossible, all dictionaries are disguised encyclopedias. We must assume a more global knowledge is necessary if language is to be interpreted. How can global knowledge be represented so as to be discussed and theorized? All such representations are postulates and take the format of a multidimensional network (68).

The representation Eco chooses for this network is a rhizomatic labyrinth. Rejecting first, the classical labyrinth

of Crete, one in which you cannot help but reach the Minotaur at the center, and second, the Manneristic maze,[3] a labyrinth which gives you choices, some of which lead to dead ends, in other words, one in which you can make mistakes, one in which "the Minotaur is the visitor's trial-and-error process,"[4] Eco chooses a third type of labyrinth, the net, a labyrinth in which you cannot make mistakes since the point of such a net is to meander, to discover, to make connections.

> The main feature of a net is that every point can be connected with every other point, and where the connections are not yet designed, they are, however, conceivable and designable. A net is an unlimited territory. (81)

Further, Eco tells us that the best image for such a net is the rhizome suggested by Deleuze and Guattari (Rhizome). Such a net is like the rhizomes of the vegetable and fungal world. Some of its characteristics are: a. all points can and must be connected to all other points; b. it is anti-genealogical; c. it has neither an outside nor an inside because it makes another rhizome out of itself; d. it is susceptible to continual modification; e. one cannot provide a global description of the rhizome, not just because it is complicated but because it changes over time; f. there is the possibility of contradictory

inferences because every node can be connected with every other node; g. it cannot be described globally; rather, it must be described as "a potential sum of local descriptions;" h. since it has no outside, it can only be viewed from the inside. A labyrinth of this kind is necessarily myopic since no one can have the global vision of all its possibilities, only the local vision of the closest ones. Because of this, every local description of the net is an hypothesis, "in a rhizome blindness is the only way of seeing, and thinking means to grope one's way (82)." Thinking means feeling our way along a local path which can change and change again at any moment. Instead of a static tree which disallows growth, we find ourselves in a universe of knowledge subject to continual revision and expansion. The tree is impoverished knowledge; the rhizome infinite possibility. Which matches our imaginings of literacy best?

Finally, Eco tells us that "the universe of semiosis, that is, the universe of human culture, must be conceived" to be structured like the rhizome's labyrinth. Every attempt to codify local knowledges as "unique and 'global' -- ignoring their partiality -- produces an ideological bias (83-84)." Such local knowledges have the potential to "be contradicted by alternative and equally 'local' cultural organizations (84)." And each of these claims it represents Truth. In other words,

paradox becomes a familiar part of such a net. When local knowledges meet one another, paradox pops up. This can drive an individual into neurosis or start a war. But an acceptance of paradox as a condition of life can lead not to an interruption of ideology within its system, but a kind of truce between local knowledges, an agreement to disagree.

Such a net represents an alternate to the dictionary and encyclopedia as a method for imagining literacy. It is the net to which this study turns later. Rhizomes are a powerful representation for an alternate conception of literacy, but for the moment, we are caught in a Porphyrian tree.

Dictionaries without Ideology

Once we begin to understand the impulse behind the creation of encyclopedias, we are ready to understand why E.D. Hirsch begins his prescriptions for the reformation of American education with a list that becomes a dictionary, which is in fact an encyclopedia.[5] His list reflects how Hirsch imagines literacy from within his own interiorized map of knowledge, a map based on what he has learned and values. What follows is not a comprehensive critique of Hirsch's claims; the reaction to his book has been intense enough to provide many analyses which, when taken together, do an adequate job of covering that territory.[6] Robert Scholes has called Hirsch's proposals "voodoo[7] education," and while I do not entirely disagree with the implications of that accusation, I also find myself in agreement with Patrick Scott, who finds Hirsch's central thesis fascinating and who considers the profession's negative response to Hirsch intellectually shortsighted and politically inept. One of the most interesting and thoughtful critics is a former student, Gregory G. Colomb, whose summary takes his professor very seriously indeed.

Hirsch's main claim is that the current educational "crisis" can be traced to specific pedagogical errors based on the flawed philosophies of Rousseau and Dewey. American public

schools have concentrated on developing skills in isolation from "facts." This has lead to cultural illiteracy. Educational failure results from the lack of a common vocabulary rooted in a common cultural matrix. Without this common vocabulary, comprehension is limited. Hirsch posits an ideal reader, or rather, he accurately describes how texts are written with an ideal reader in mind. Those who possess this vocabulary are culturally literate; those who do not are crippled. He defines cultural literacy[8] vaguely as: possessing "the basic information needed to thrive in the world (Cultural Literacy xii)" or

> . . .the network of information that all competent readers possess. It is the background information, stored in their minds, that enables them to take up a newspaper and read it with an adequate level of comprehension, getting the point, grasping the implications, relating what they read to the unstated context which alone gives meaning to what they read. (2)

This is a possible definition of what Eco terms world knowledge, but Hirsch misses the implication of his own discovery. Understanding in context is a result of complex association rooted in semiosis, not listing. He tells us that such knowledge is hazy, "information essential to literacy is rarely

detailed or precise. . . (14)." But it is not so much hazy as it is deeply structured at an unconscious level. Unfortunately, his definition of cultural literacy is hazy precisely because he does not grasp the most important implications of his discovery: that semiosis is at the root of understanding.

Hirsch's notions appeal to nationalists who imagine America as a coherent entity; an entire chapter is devoted to the relationship between common cultural knowledge and the development of the modern nation-state. Clearly, his imaginings of literacy rely on his interiorized map of knowledge and are tied to a classic dream of progress and unity outside of religion or specific politics. Hirsch sincerely dreams of escaping factionalism through the construction of common knowledge. Unfortunately, he seeks to diminish uncommon knowledge in order to accomplish this goal. His method for canonizing the vocabulary of cultural literacy rests on his own experience as an intellectual and as a participating member of a particular body politic.

Hirsch believes the politics of the American educational system is such that a unitary national curriculum is an impossibility. Such a curriculum could foster a common vocabulary, but Hirsch believes it would never be adopted. For this reason, he invents the idea of a list of What Every

American Needs to Know. This list, which appears at the end of the 1987 book, immediately becomes a singular media curiosity and a major point of political dissension.

The list is gleaned from the vocabulary contained in a body of classical works represented by the canon of great books, including the Bible, Shakespeare and key cultural documents like the Declaration of Independence. The vocabulary included in these works forms the stable core of Hirsch's list. As to the elements of this list which change, Hirsch has decided that ". . .The persistent, stable elements belong at the core(Hirsch, 1988, 29. In other words, all elements of the culture which are not part of this canonical vocabulary are peripheral. This banishment of cultural diversity and change has marked Hirsch's work as inherently hostile to progressive and radical social change. The notion of a dynamic culture is consistently given only lip service in his analysis. Nowhere in Hirsch's discussions does he seriously address this crucial observation: culture is dynamic.

One wonders if he has looked around lately. Hirsch does not see American culture as a melange or salad or bouillabaisse as others have; he does not even imagine it to be a melting pot. Instead, "local, regional, ethnic" cultures are somehow severed from "mainstream culture (Cultural Literacy 22)." Terms from

"local" cultures enter cultural literacy as accessories after the fact.

It is Hirsch's easy erasure of the knowledges of "local" cultures that has given him the most clout with conservatives. And it is this erasure that has caused him the most trouble with those who are conscious of living in a world Hirsch refuses to acknowledge, a world in which the many cultures of the planet are colliding with increasing frequency. A world which is at once cacophonous and filled with lovely harmonies. The response to Hirsch's program has lead to the publication of alternative lists which take this reality into consideration. In 1988, the Graywolf Press answered both Hirsch and Bloom by publishing Multicultural Literacy: Opening the American Mind. Thirteen essays described the ground of our culture as already multicultural. The collection's appendix began to list items not included in Hirsch's list that are commonly omitted from U.S. educational texts, political thinking or social planning. It begins with the 100,000 Songs of Milarepa and ends with Zulu. Similarly in 1997, Henry Louis Gates, Jr., Anthony Appiah and Michael Colin Vasquez produced The Dictionary of Global Culture which takes as its premise that the West cannot remain the cultural and intellectual center of the world, that Europeans and North American know too little about world history and

culture, that "European culture is increasingly influenced by American popular culture; and the true roots of the culture of the United States run deep in the soils of many continents," that Western culture risks becoming (remaining) parochial and narrow, that "we have lost that peculiar sense of wonder about the world and its diversity that characterized the European Renaissance and Enlightenment." The central focus of this work is not North American cultural literacy, but global literacy resting on common knowledge among the literate citizens of the world. Global Literacy attempts to gather together "the common knowledge essential for the creation of an international culture, in which the Western tradition is seen as one strand in a complexly woven tapestry of cultures."[9] It is not surprising to note that not only do the editors of Global Culture make explicit the methods they used to compile their list, they remark that the cultural experts they consulted surprised them with lists that did not conform to their own biases and that they structured their methodology to elicit these surprises. Further, they warn their readers that no book, no encyclopedia, no dictionary could not be comprehensive or exhaustive and that the most complete dictionary would not suffice, that you need to know much more: the grammar of a language, how to read its poetry, how objects and ideas fit together in the lives of the

people whose ideas and objects they are. And finally they warn: “A dictionary can never represent the whole range of culture, just because a culture is a whole as well as a collection of parts(xiii).

All dictionaries and encyclopedias must be flawed, but this should not concern us unless we look to them for what they cannot supply. The idea that the list can be neutral and comprehensive is the real problem. "The evidence is increasingly clear: skills cannot be learned apart from knowledge (Columb 413)." Reading comprehension is rooted in world knowledge and many do lack this knowledge. Colomb exhaustively describes recent reading research, including artificial intelligence research, as does Eco in his discussion of encyclopedias. Colomb's conclusion:

> The knowledge needed for reading and writing is more complex than any list or even network of propositions and. . .literate persons are vague about their knowledge because producing isolated propositions is a poor way to access that knowledge. (420)

Further, we have little or no evidence as to how readers construct meaning from their knowledge but we know that they do. The most promising theory suggests that memory is distributed over many intricately connected units without a central

controller just as Eco's rhizomatic theories would suggest.

> Many other studies suggest that the knowledge that counts most is richly organized and hierarchical -- organized by plans and goals, organized into scenarios, organized by being understood and so connected to everything else we know. . .it is not enough for readers to know the requisite facts: they must understand them. (Colomb 424)

In other words, individuals are compelled to organize what they know into webs of association. And although it is clear that readers use world knowledge to understand texts, texts can help readers to understand entirely new information if the discourse structure leads them through "the web of new information (Colomb 432)." In other words, reading theory points away from lists towards the construction of webs of meaning. Meaning is made out of a complex and deep process which we do not understand but we can tentatively imagine to be analogous to the rhizome or a net of associations. It is interesting to note that the World Wide Web and the Internet are probably ironic tropes since even "experts" on the Net are groping around in more than semi-blindness. Still, the potential for the Net to be more than a maze of the unknowable seems real. How this might be accomplished is something else. The Net could be just another

technology for what Elspeth Stuckey calls violent literacy.

The encyclopedic list mirrors a long Western intellectual tradition that imagines knowledge as an artifact which can be represented concretely (and therefore collected) and tested empirically. It is widely accepted that it is possible to possess a fund of knowledge comprised of discrete elements which then becomes enabling to the individual who deploys this knowledge in the material world. This is clearly the assumption behind the development of curricula composed of a number of subjects organized by discipline and then further organized by topics and sub-topics. The idea that what humans know can be organized and transmitted in an organized set is contradicted by Eco's claim that the semiosis of human culture cannot be globally collected. All such attempts result in an ideological bias because the universe of human knowledge cannot be represented as a totality; every attempt to codify local knowledges as "unique and 'global' -- ignoring their partiality -- produces an ideological bias (83-84)."

The attempt to codify one local knowledge, European American cultural tradition, ignores the partiality of that vision and structurally produces a bias. There is nothing intrinsically negative about local knowledges; it is just that they are rooted in a perspective. It is their presentation as

unique and global that produces the problem. Instead, they should be presented as tentative visions from a particular perspective. Gates' global literacy project attempts to address this issue by placing the Western tradition in context as "one strand in a complexly woven tapestry of cultures." As it addresses one problem, it presents another: it imagines it can make a global description by exiting the Manneristic maze and providing a bird's eye view. But Eco points out that a bird's eye view is only possible as a postulate. In practice, meaning is made by groping one's way in semi-blindness through a maze, a net, a rhizome. Learning to tolerate that semi-blindness is one skill we all need to cultivate.

Eco would insist that comprehension of any lexical item on Hirsch's list demands deep knowledge. So the encyclopedic list necessarily fails because it attempts a global representation of what cannot be globally represented and because it assumes that exposure to individual lexical items can produce sufficient comprehension to be of use. It assumes that vocabulary knowledge can be fostered outside of deep contextualization.

Eco, Colomb and I are positing cultural literacy as requiring a kind of omnivorous search for the connections between elements, between seemingly disparate nuggets and disciplines. From Diderot's project forward, encyclopedias have

attempted to do just that. But individuals require mental maps rooted in their experience in order to interpret encyclopedic entries. Such maps are only temporary postulates which are necessarily myopic, rooted in the particular experiences and locations of the individual which necessarily change over time. Comprehension of the universe of human knowledge requires factual knowledge rooted in mental maps, which are themselves rooted in experience. All understanding is hypothesis and subject to change because these maps must change as experience changes. Comprehension also requires the ability to travel between many local knowledges as someone who not only observes but participates as a responsible member of a community, someone who is at once citizen, traveler and spy.

Donna Haraway's notion of situated knowledges and Nancy Hartsock's notion of "standpoint" are useful analogs of this observation. "Standpoint" represents an achieved wisdom which is the result of struggle and engagement with oppressive material and social conditions. Hartsock claims "that there are some perspectives on society from which, however well-intentioned one may be, the real relations of humans with each other and with the natural world are not visible (159)." Hartsock considers

> . . .the ruling group's vision [to be] <u>both</u> perverse

> [and partial] and made real by means of that group's power to define the terms for the community as a whole. . .the worker as well as the capitalist engages in the purchase and sale of commodities, and if material life structures consciousness, this cannot fail to have an affect. (162)

We are all at once citizens, travelers and spies on an infinite rhizome of interlocking situated knowledges.

It behooves us to examine the motivations which move individuals to curiosity and to commonality, to examine what motivates them to travel through the rhizome of human semiosis, how they negotiate alternate standpoints and situated knowledges. Literacy requires not the list, but its opposite, collation and re-collation across communities of knowledge. This vision of literacy does not make a simplistic division between skills and facts, a division underlying Hirsch's analysis. It recognizes that within a rhizome "thinking means to grope one's way," making connections. Making connections is precisely the point. Remember.

> The main feature of a net is that every point can be connected with every other point, and where the connections are not yet designed, they are, however, conceivable and designable. A net is an unlimited

territory. (81)

Colomb has no trouble seeing this. Why is it so difficult for Hirsch and many others?

> We need also to stop pretending to teach common readers and to face up to what students know perfectly well: that to move easily from one community of knowledge to another, from one discipline to another, requires not only a lot of knowledge but also the skills of an ethnographer and the flexibility of a spy. We could do a great deal toward creating a new kind of common reader by foregrounding for students the differences between communities of knowledge, by being explicit about the communal basis of our knowledge, and by helping them to understand the process of joining a community of knowers. (Colomb 461)

The paradox of dictionaries and encyclopedias is that they are created by insiders in the know for others who may have great difficultly using them to advantage. Without a map, the list is sometimes worse than useless.

Personally, I find Hirsch's dictionaries, in fact nearly all reference books, fascinating and fun. One reason for this is the fact that I have developed numerous overlapping maps of

local knowledges. But I can vividly remember how baffling dictionaries were when I was a child, and they are sometime so even today when I find myself reading beyond my areas of expertise and/or familiarity. The process of reading definitions is often fruitless under those circumstances; I must encounter the same word over and over again in context before the dictionary definition comes alive with meaning. There is nothing mysterious or new about this observation, so why is it not accounted for in our pedagogies?

The semiotics of dictionaries and encyclopedias predict that any list is not only trapped in ideology, not the worst thing that ever happened, but that lists in themselves obscure understanding.

The plenitude of the encyclopedic project obscures its repressions. Dictionaries create narratives out of de-selection. Plenitude is illusory in such a system. All of these products record the ideologies of their creators. Umberto Eco and Roland Barthes have described how definitions are created by bifurcations created out of a lack. If everything was included in any map, it would, of course, be unreadable.

Definitions must be constructed out of exclusion. For example, things may either move or not move. If they move, they may be dangerous or not. If they are dangerous, they may be

human or not, and so on (Eco 80).

All hierarchies proceed on this basis, in terms of something ruled out, in terms of a systematic denial of some attribute. The unconscious of the text is created by this repression and out of these lacks. Dictionaries necessarily construct a map of nation by means of systems of exclusion. It behooves the 'philosophers of the encyclopedia' to be aware of this process.

Hirsch's encyclopedic lists imply plenitude, but this implication is quickly contradicted by its gaps, many of which are inexplicable. By what logic is Jerry Falwell's entry longer than Jesse Jackson's? And both are accorded more space than Jim Crow and the John Birch Society, which are listed in immediate succession without correlation or reference to the Birch Society's racism. Hank Aaron's entry in the history section does not mention he was black or the anger that arose after he broke Babe Ruth's record. Jerusalem appears twice but is listed in the index only once -- under the world geography section. The cross references between Jerusalem as religious icon and modern city are absent, despite their critical relationship and even though both entries contain, in part, identical phrases. Without context, unforgivable gaps appear. Those who rely on the dictionary for literacy will certainly acquire a crippled

literacy.

Neither do this dictionary's sections (one easy indication we are not consulting a dictionary but rather an encyclopedia is the presence of these sections) follow a discernable logic. They are hierarchical, but this hierarchy does not offer the virtue of illumination. The eighteenth century encyclopedia imagined a synchronic world, but Hirsch's twenty-three sections clank awkwardly through an apparent diachronic progression. Religious and language based roots lead to world and national history and geography, to the social sciences, to business and economics, to the physical sciences and technology. Implicit in this progression is a theory of emergent humanism.

Because Hirsch insists that an enormous number of vocabulary items in our popular reading refer to the Bible, Shakespeare, classical mythology and folklore, the sections, "The Bible" and "Mythology and Folklore" appear first, but they comprise only eight of 546 pages. Jerry Falwell, et. al., could have easily loaned space to Shakespeare whose entry is not nearly as contextualized as it needs to be. The dictionary inexplicably violates its own stated ideology by devoting less attention to key cultural markers. And in a curious echo of the Jim Crow and John Birch Society entries, Shakespeare is followed immediately by a separate entry discussing Shall I Compare thee

to a Summer's Day? half as long as the Shakespeare entry itself. No cross references to other Shakespeare related entries are provided. How could any cultural illiterate wade through this series of deflections with any hope of coming out the wiser?

Politically powerful interests, represented by individuals like William Bennett, Alan Bloom, Saul Bellow,[10] Diane Ravitch, and Lynne Chenney, actively write, speak and lobby against multiculturalism and for mono-culturalism. One wonders if this discourse can sustain itself in the face of an extended struggle with ideologies represented by, for example, the Taliban. If Western civilzation's most dangerous enemy is mono-cultural, can the an analogous position sustain itself within Western civilization? While fostering a mono-cultural image of literacy, these same interests support national achievement testing. Such testing will almost certainly be based on the encyclopedic list as a model of knowledge. The inertia of already developed tests will enforce a static list and a static curriculum. How could it be otherwise?[11]

Lists are implicit in most of primary and secondary curricula as second only to skills. Students do not engage with these isolated bits. They do not remember the vocabulary. Memorizing isolated bits is what much of school is still about. Forgetting the list may be still more intrinsic to schooling.

Because curricula do not foster strong mental maps, students cannot make sense out of the nonsense of lists.

Outsider Literacy

Those who have limited access to a library are forced to imagine its contents and to imagine what it means to have mastered it. The paradox of the list, the dictionary, the encyclopedia, the library, is that while such collections are most useful and helpful for those who are adept, they are sometimes the recourse of those who are not. When outsiders are in unfamiliar territory, they need maps, but when they are without a map they may resort to an address, or a series of addresses, i.e., a list. This list, which is really a series of disconnected addresses, is only useful if a guide (a map) supplies context. Getting from one address to the other is impossible without that guide. Nevertheless, those without maps of broad areas of knowledge sometimes resort to lists until they learn enough to develop an interiorized map. Better crippled literacy than no literacy.

The literature of people of color is filled with descriptions of fascination with dictionaries, encyclopedias and libraries. Descriptions of obsession with such repositories of knowledge appear in the work of individuals such as Malcolm X and Richard Rodriguez. Their narratives suggest that these

fascinations are key moments in their development.

But obsession of this sort is not unambiguously positive. It is a manifestation of the anxiety that afflicts those who feel they are locked out of epistemologies of power. Driven to undo their ignorance, but unclear about what that would mean, they imagine a literacy which can be systematically and logically tracked down and acquired. Jean-Paul Sartre satirizes the folly of such an approach in his novel Nausea by inventing a character known to the reader as only "the Self-Taught Man." "The Self-Taught Man" handles books "like a dog who has found a bone." A pitiable character, he progresses through the library by reading every book alphabetically as it is shelved. After seven years, he has reached the "L"s.

> Today he has reached "L" --"K" after "J", "L" after "K". He has passed brutally from the study of coleopterae to the quantum theory, from a work on Tamerlaine to a Catholic pamphlet against Darwinism, he had never been disconcerted for an instant. He had read everything; he has stored up in his head most of what anyone knows about parthenogenesis, and half the arguments against vivisection. There is a universe behind and before him. And the day is approaching when closing the last book on the last shelf on the

far left: he will say to himself, "Now what?" (45)

"The Self-Taught Man" exemplifies the awkward ignorance of the outsider. At the end of the novel, he demonstrates that his crippled literacy parallels his social ineptitude. A gross error of judgement leads to his disgrace. Clearly, no amount of de-contextualized study could have prevented it.

Similarly, Richard Rodriguez describes his own process of alphabetical reading in The Hunger of Memory:

> . . .I was not a good reader. Merely bookish, I lacked a point of view when I read. Rather, I read to acquire a point of view. I vacuumed books for epigrams, scraps of information, ideas, themes -- anything to fill the hollow within me and make me feel educated. (64)

From a list of the hundred most important books of Western Civilization, he begins one of a series of reading programs. Although he does not understand many of the books he reads, he dutifully plows through them. Much later, while avoiding completing his dissertation in the reading room of the British Museum, he systematically attacks educational theory. In the process, Rodriguez reads Richard Hoggart's classic, The Uses of Literacy, and finds at last a depiction of his experience. Hoggart's description of "the scholarship boy" describes the

agonies of outsiders whose education enables them to pass from one class to another. His systematic and encyclopedic education cannot produce a living map of the territory. Reduced to mimicry because his deficiencies cannot be bridged by dutiful reading alone, the scholarship boy is a "bad thinker."

Despite this crippling methodology, Rodriguez goes on to be the first Chicano to write a book which will reach The New York Times best seller list. In contrast, Malcolm X describes his encounter with the dictionary as pivotal to his intellectual and political development. Unlike Rodriguez, Malcolm X becomes a visionary leader and anything but dutiful.

True to paradigm, Malcolm X was motivated to increase his literacy because of his religious goals. While incarcerated, he begins a letter writing campaign to Elijah Muhammad because the Nation of Islam has fired his imagination. Malcolm copied his first one page letter to Muhammad at least twenty-five times. "I was trying to make it both legible and understandable. I practically couldn't read my handwriting myself; it shames even to remember it (169)." Malcolm had decoding skills, but his vocabulary left him without the ability to make sense out of the books he picked up. At this point, he fixates obsessively on the dictionary as the solution to both his handwriting and reading problem. He begins copying it page by page, down to the

last punctuation mark. The first page took a day; after which, he memorized most of the entries.

> With every succeeding page, I also learned of people and places and events from history. Actually the dictionary is like a miniature encyclopedia.. . .That was the way I started copying what eventually became the entire dictionary." (172)

He continued to read up to fifteen hours a day, after lights were out at ten p.m., till three or four in the morning by the corridor light outside his cell. This required hiding from the guards every fifty-eight minutes. Entering Norfolk prison with twenty-twenty vision, he leaves with astigmatism and a very different consciousness. "I still marvel at how swiftly my previous life's thinking pattern slid away from me, like snow off a roof. It is as though someone else I knew of had lived by hustling and crime. I would be startled to catch myself thinking in a remote way of my earlier self as another person (170)."

No ordinary intellect and with prodigious time and devotion, Malcolm X transformed the dictionary into a map. His insight allowed him to see the dictionary for what it was: a disguised encyclopedia. But unlike most, his stakes in opposing the ideology encoded in that dictionary motivated him to study

against the grain. Unlike Rodriguez, he is not a scholarship boy. He reads with a determined point of view and an intense desire to uncover what was repressed about African and African American history. The first set of books which really impress him supply an archeological history of non-European peoples. Malcolm comes to books with a developed standpoint and high stakes in uncovering the hidden ideology in the racist discourses around him. His mapping is extraordinarily successful. He develops what Chéla Sandoval[12] terms an oppositional consciousness out of these studies, and he stimulates millions of others to do likewise.[13] He memorizes the dictionary out of necessity, turning it into a virtue. It is extraordinary, but we should not expect to duplicate it via the dictionary as curricula.

Mono-cultural vs. Multicultural Literacy

How do humans make meaning out of written language and how does cultural knowledge limit and advance literacy for Americans whose backgrounds are not dominated by the mono-cultural, Western humanist tradition? The list enforces a kind of crippled, cultural literacy.

Prescriptions for cultural literacy have entered the larger debates surrounding education, race, and liberal politics in the form of a conservative attack on the term multiculturalism.

Worse yet, uncommon knowledge, the knowledges of peoples, traditions, economic classes and women which are unrecorded or under-recorded in the great books of Western civilization and their corollaries, represents a structural problem because there is, at the moment, no clear answer to the question: how to collate disparate, often contradictory notions arising from the immense diversity of world views represented in these excluded epistemologies?

Cultural diversity, deep contextualization of knowledge are at issue when we discuss Hirsch's examination of the language of The Black Panther. Praising it for its "conservatism in literate knowledge and spelling" (CL,1987, 23) and citing this as evidence of mainstream cultural literacy, Hirsch points out that this revolutionary newspaper was not only meticulously edited but deployed common cultural terminology such as "free and indivisible," "milk and honey," "law and order," "bourgeois democracy," and the first five-hundred words of Jefferson's Declaration of Independence without attribution. What he does not note is the ironic nature of the use of these terms or that they were often bracketed by quotation marks. What Hirsch does not do is include Black Panther in his list of what literate Americans know or as an entry in his dictionary. Hirsch is happy for Patterson's support, but he does not take Patterson's

description of a dynamic culture in dialectic seriously. If he did, he would have placed his examination of the Black Panther party's newspaper within context as part of an American cultural revolution. Instead, he treats its product as severed from mainstream culture except insofar as it uses its language. The Black Panthers remain an accessory after the fact. Cultural literacy is a one way street for Hirsch. His analysis of The Black Panther's text is superficial and self-serving. Earlier he admits that "the explicit words [of a text] are just surface pointers to textual meaning in reading and writing," something I have described previously, but when it comes to this instance, he feels free to point to the linguistic conservatism of this revolutionary newspaper without attention to the sophisticated ironies deliberately present in the periodical's use of "conservative" cultural markers. "Free and indivisible" and phrases like it are indeed "just surface pointers to textual meaning." Anyone reading this periodical without cultural and historical context would indeed misread it drastically. By page eighteen, Hirsch is staking out a territory which marginalizes "multicultural education" and valorizes "American literate culture" without the least critical awareness of a "wider literacy" which is already multicultural.

Another serious problem concerns the denied status of

individuals who have not had the "opportunity" of growing up within the canonized cultural tradition. Research in the social class basis of literacy has pointed out that the home is a crucial setting for the acquisition of many skills that are necessarily a part of literacy. These skills are bound up in cultural experience, but are not taught by schools and indeed may not even be possible to teach in anything resembling a traditional school curriculum. Shirley Brice Heath describes the explicit transmission of specific skills in the middle class home as crucial to the development of certain school behaviors and skills. Working class families often explicitly teach attitudes and behavior which contradicts the assumptions of some school methodology. For example, exhortations from parents to "always tell the truth" can be a problem for working class students who are asked in the school setting to imagine and create out of fantasy. There are probably thousands of analogous pitfalls.

Ginger Root Literacy

In contrast to the tyranny of the lists produced by encyclopedias, we must explore the maps created by multiple human cultures. This is a project worthy of our collective attention. It could be said to be the primary epistemological project to which human culture is implicitly devoted. These maps cannot be encompassed in a list, which is at best a series of obscure addresses. An address without a mental map leaves you disoriented even after you have arrived. Alternate imaginings are not only inclusive of uncommon knowledge, other cultural literacies, but they travel between these and the mono-cultural knowledge canonized by the Western intellectual tradition.

In a diverse culture, the ability to juggle common knowledge and uncommon is a result of a struggle to imagine literacy across the dissonance of clashing meanings. Because of their life circumstances, many individuals cannot maintain the illusion of coherent and unified lists. Many others find themselves similarly situated betwixt and between. The results are interesting, complex and fruitful. The results point towards knowledge organized not like an encyclopedia but like a map.

When literacy is conceived as a collection of ever

expanding skills, it creates choice and flexibility. It enables invention. Ginger root literacy points toward the acquisition of many existing but not described skills and also to skills which are not yet required but soon will be -- sending a computerized fax, surfing the Internet, deciphering a menu composed of California's multicultural cuisine. Literacy, when understood this way, is comprised of any number of skills in a grab bag collection. This collection is added to and subtracted from as needed. We are all bricoleurs[14] of literacy.

Our imaginings regarding literacy should be liberated to include a whole range of repressed and rejected elements, including the visual literacies required to "read" video and film, the literacies required to negotiate the postmodern architecture of our cities and suburbs, the literacies required to interact with multiple cultures around the globe either directly or indirectly. If we think of the term literacy as a semantic field of contradictory and repressed notions, opening that semantic field and revealing its structure, revealing what has been devalued and repressed, will help us to understand how the ideologies of literacy have limited us and how breaking open the discourse around literacy offers constructive promise. Like all dualisms, literacy/illiteracy traps us in self-defeating loops of meaning which reinscribe us more tightly within the

dualism even as we seek to interrogate it.

Multiculturalism (or what I prefer to call mixed cultures) is one place to begin opening up dualistic thinking about literacy. Issues concerning the repression of the knowledges of women is another. But including not just reading and writing, but looking, speaking, viewing, traveling while viewing, manipulating artifacts (photographs and other sign/symbol systems not limited to written texts), video, film, perhaps even singing and dancing) is inevitable if the ideologies of literacy are seriously questioned. But if the notion of literacy is extended to all these fields, what do we have except an expression of what it means to live as a human in culture? Like Jorge Luis Borges, we have made literacy and the world equivalent to the universe of experience. Elspeth Stuckey reminds us that it is widely accepted that "literacy confers special power, the power to be human. To be wanting in literacy is to be wanting in human fulfillment (67)." Borges suggest the same. Is it true?

Forty years ago, American supermarkets did not generally carry ginger root. To find it, a shopper had to visit Asian food markets. Today, it would be hard to find a major market that does not offer ginger root alongside carrots and potatoes. Though many have not come into contact with rhizomes in nature,

the iris rhizome being the model I recall from my childhood, most have seen ginger root, if not eaten it. The appearance of ginger root as a commonplace is a result of cuisines traveling with immigrants to this nation. Ginger is a rhizome. An organic structure without a definable center or identifiable edges, rhizomes are capable of budding new growth from any angle, and each bud can repeat that process. Rhizomes can form intricate webs, webs that can double back on themselves, webs that can create layer after layer of knotted growth. Rhizomes imply connection and re-connection, not along a rigid hierarchy of bifurcation downwards or upwards, like Bacon's tree of knowledge, but according to a plastic logic. Indeed, purchasing ginger root often requires an active decision to sever the root from itself, to make an arbitrary decision to isolate a portion and carry it away to a kitchen where it will become invisible to the eye but not to the tongue. Although most produce is countable, "one potato, two potato, three potato, four," and Bacon's tree is an identifiable whole, a singular entity, ginger root has no beginning and no end. It cannot be viewed as a totality or described as a limited territory. Only portions of it can be isolated and manipulated.

Ginger root, then, can be a powerful image for understanding the structure of knowledge. Remember, Umberto Eco

tells us that "the universe of semiosis, that is, the universe of human culture, must be conceived" to be analogous to a labyrinth or net, sometimes taking the form of a vegetative rhizome. A rhizome is an unlimited and infinitely expandable territory. It enables connections between elements and positions. New neighborhoods spring up overnight. Unlike Bacon's tree of knowledge, the rhizome's plastic nature suits our historical period. It is an excellent visual model for an imagining of literacy which is not based on lists and trees of knowledge but on rhizomatic maps, a model for an organic mixed cultural literacy which allows for the concatenation of multiple local knowledges.

[1] Encyclopedia, or reasoned dictionary of the sciences, arts, and crafts, published by a society of men of letters.

[2] See the Oxford English and American Heritage dictionaries and Hankins 163-170.

[3] A Porphyrian tree is a Manneristic maze.

[4] This maze is a trap in which you continually repeat mistakes without exit (Eco 81).

[5] Hirsch's 1987 Cultural Literacy: What Every American Needs to Know was preceded by a series of articles and followed in 1988 by The Dictionary of Cultural Literacy: What Every American Needs to Know co-edited by Hirsch, Joseph F. Kett and James Trefil and the children's version, First Dictionary of Cultural Literacy: What Our Children Need to Know which were followed by another series of articles defending the Cultural Literacy program. The 1987 dictionary was updated in 1993.

[6] The best comprehensive critique I have uncovered is "Schooling, Culture and Literacy in the Age of Broken Dreams: A Review of Bloom and Hirsch," by Stanley Aronowitz and Henry A. Giroux in Harvard Educational Review, vol. 5, no. 2, May 1988, 172-194.

[7] Voodoo is, of course, one local knowledge which is almost always denigrated in Western cultural ideology.

[8] Hirsch's publisher has "trademarked" the term cultural literacy although I find no instances of the activation of this trademark. Perhaps they anticipated a series of competing products purporting to convey their own brand of cultural literacy. In any case, the construct cultural literacy ™ provides a fascinating mantra.

[9] From the introduction to Global Literacy, in manuscript.

[10] These three have been nicknamed, "the killer bees," by their opponents.

[11] The dictionary was used as a basis for the 1989 National Academic Decathlon Competition, conducted for American high school "whiz kids." (Thanks to Analisa Narareno's UCSC essay, "What every reader should know about The Dictionary of Cultural Literacy" for this nugget.)

[12] Sandoval's notion of oppositional consciousness has influenced the deep structure of my thinking.

[13] Chapter four, "The Trope of the Talking Book," in Henry Louis Gates, Jr.'s The Signifying Monkey: A Theory of African-American Literary Criticism points out the relationship between imagining freedom and imagining literacy in a number of examples. John Jea's "midnight dream of instruction. . .represents the dream of freedom as the dream of literacy, a dream realized as if by a miracle of literacy (166)."

[14] This term is borrowed from Claude Lévi-Strauss who begins his discussion in The Savage Mind with a reference to the French term 'bricoleur,' signifying an individual who undertakes odd jobs and is able to do what needs to be done by resorting to a collection of tools and materials which have been collected over time. These tools bear no relation to the current project, or to any particular project but are nevertheless brought to bear by the bricoleur out of the necessity of the moment. These tools and materials have been collected over time as a result of circumstance. Literacy can indeed be thought of as a bricoleur's skill (16-18).

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