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Language as human ecology: A new agenda for linguistic education

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ABSTRACT

The efficiency of linguistic education based on the code model of language is questioned. The view of written language as a representation of speech ignores the important difference between the experientially different cognitive domains of speech and writing which affect human cognitive development by establishing an extended ecology of languaging. As a consequence, functional illiteracy in societies with established literate cultures becomes a real threat. It can be avoided when it is understood that language is a kind of socially driven behavior which contributes, in a quite definitive way, to the rich context of the human ecological niche, including texts, without which it cannot be understood.

1. Introduction: the puzzled parent

When, in Russia, children go to school for the first time at the age of 7, they are full of great expectations and eager with anticipation, because they are entering a new world – the world of learning. They know, even if only intuitively, that becoming part of this world is a necessary condition for becoming an adult person in contemporary society, which thrives in mind-boggling technologies. In the Russian culture, a child's educational enterprise is referred to as a 'quest for knowledge', and the 1st of September, which is the official beginning of a new school year, is called the Day of Knowledge.

However, soon enough, after the first or second year of elementary school, many children begin to show signs of boredom often intertwined with confusion and even bewilderment. It turns out that learning is not always fun, nor something a child's mind is ready to comprehend. They often cannot find a use for their 'new knowledge', and children are very pragmatic when it comes to doing something. Characteristically, as a third-grader, my own son clearly showed this alarming change of attitude; as a matter of fact, his big sisters before him, and millions of kids worldwide have gone through the same stage of grim revelation that schooling was not quite what they had thought it to be. As a result, by the end of elementary school a lot of children undergo a metamorphosis; a big-eyed quizzical little creature enthralled by the exciting wonders of the adult human world and ready to work miracles with the newly "acquired" knowledge, by and by turns into a dull, average, disaffected individual struggling to survive in what has, paradoxically, become a not-so-friendly world of hard work and emotional strain often devoid of meaning – at least, to the child's eye. Many parents of young children are all too familiar with this inexplicable loss of motivation on the part of their offspring, and the question, of course, is: "What goes on in the world of school education?" To answer this question, one must take a closer look at the ideology and methodology of education as institutionalized practices and techniques accepted and approved in most literate cultures.

2. Linguistic education as institutionalization of the language myth

2.1. Reification of knowledge and its consequences

According to *Webster's Encyclopedic Unabridged Dictionary of the English Language* (1996), education is "the act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life". The key words in this definition are *impart* (1. to make known; tell; relate. 2. to give; bestow; communicate) and *acquire* (1. to come into possession of; get as one's own. 2. to gain for oneself through one's actions or efforts), which give a very clear idea of how knowledge is conceptualized and what education is really about. In our world view knowledge is a thing, a commodity which may be traded by 'giving' and 'taking',

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or a prize for one's efforts, and education is the actual process of such trade taking place at special commodity exchanges – educational institutions, such as schools and colleges.

But where are these articles of trade (that is, pieces of knowledge) stored, and what do they look like? The layman's answer is, of course: "In books (textbooks)", which are depositories of the vast knowledge accumulated by humans. We read books to learn something, and it is simply impossible to imagine a school without texts and teachers whose job is to provide some of the knowledge they have and make sure that the students take it and add to it by reading more on a given topic, thus expanding *their* knowledge. In other words, education, as a process, is, for the most part, 'extraction' of knowledge from texts; this knowledge becomes something we 'possess' and may 'pass on', should we choose to do so, to someone else.

How do we pass it on? Verbally, by telling someone something, or by writing another text for a targeted readership. Basically, the orthodox view of the function of language seen as a tool for expressing and conveying meanings, thoughts, information, or what have you, stems from our reification of knowledge as something potentially external to us as human organisms, something 'out there'. It possesses value because it helps (or so we believe) to better understand the world around us, and is a reliable guide in our daily life. It is always to a person's credit to be known as *highly educated* or *well-read*, that is, *knowledgeable*. However, the ugly truth is that the amount of education a person has does not necessarily relate to his cognitive ability to meaningfully interact with the world which, to humans, is, first and foremost, the world of social interactions. The so-called knowledge imparted to a student very often continues to remain something external to him, not unlike a collection of potentially useful things stored in the attic for some later day – which, as we all know, may never come.

On a social scale, this situation has dire consequences, often affecting the very quality of our life for the simple reason, very well expressed by Maturana and Varela (1987) in their seminal book *The Tree of Knowledge*: "All doing is knowing, and all knowing is doing". To know something is not to 'possess knowledge' as a kind of acquired commodity; it is to be *in a state* that allows an organism to meaningfully interact with the environment. And every actual state of an organism is determined by the organism's structure as a result of a history of fine structural coupling of the organism with the environment.[1] That is, as emphasized by Maturana (1970: 1), "knowledge as an experience is something personal and private that cannot be transferred".

Language *is* something material inasmuch as it involves various observables accompanying linguistic behavior (vocalizations, gestures, cultural artifacts, etc). However, as a kind of adaptive behavior language *does not* convey information; it establishes a relational domain of coordinated interactions which both determine, and are determined by, the states of interacting organisms. An observer interprets the activity of languaging using his experience of interactions with the observed in their consensual domain,[2] and this interpretation triggers changes in the observer's state as a structure determined living system which the observer describes as "understanding". For example, when a father introduces his son to the components of a car engine so that he can learn to do some car repairs, he might say, pointing: "This is a carburetor". The son, as an observer, may understand that there is a relationship between the component pointed at and the vocalization that accompanies the pointing; he may also understand that a carburetor is somehow important and that his dad 'knows' something about it from relevant experience. However, even though the child now knows the name of something he did not know before, it is not the kind of knowledge that helps him to meaningfully interact with the perceived components of the world ('all doing is knowing, and all knowing is doing'). What the father 'knows' about carburetors does not automatically become part of his son's 'knowledge', because it is not something grounded in his personal experience; in this sense, there is no knowledge transfer. Knowledge is constructed by a living system "on the go"; it is an *emergent* phenomenon. But if this is so, and knowledge, indeed, cannot be transferred (specifically, via language as a tool for such transfer), then what is the process of education about? Looking for an answer, we must turn to the established view of language as a means of communication.

2.2. The 'fixed code' fallacy

The spread of Saussure's views on language and semiotics in the 20th c., institutionalized in linguistics as the 'scientific study of language', was, perhaps, the final touch in creating the language myth (Harris, 1981) – a belief that language is a finite set of rules generating an infinite set of pairs, in which material forms are combined with meanings; it is used to exchange thoughts in accordance with a prearranged plan determined by those rules. This view is very well illustrated by the scheme a second-grader finds on the inside of the back cover of his textbook in Russian (shown in Fig. 1): words-as-blocks (in the top-left box) are arranged into sentences (the bottom-left box) which become rings of various sizes and color of which the pyramid of text is built around the core of the 'main thought' (the right-side box).

The language myth is the product of two interconnected fallacies which are at the basis of construing language as a fixed code (Harris, 1981): the telementational fallacy (the belief that language is used to exchange thought) and the determinacy fallacy (the belief that such exchanges take place in accordance with a prearranged plan determined by a finite set of rules). The fixed-code fallacy accounts for the publicly shared illusion that language is a tool for the transfer of thought. In this case, both language and thought become ontologically independent. Yet, this seeming independence is nothing more than the result of an 'epistemic cut' between what is observed (language as a kind of human social behavior, or *languaging*) and the observer (a languaging human describing language).

Cognition is a biological phenomenon, and to understand it as such an observer and his role in cognition must be taken into account and explained. As argued by Maturana (1978: 29),

> science is a closed cognitive domain in which all statements are, of necessity, subject dependent, valid only in the domain of interactions in which the standard observer exists and operates. As observers we generally take the observer for granted and, by accepting his universality by implication, ascribe many of the invariant features of our descriptions that depend on the standard observer to a reality that is ontologically objective and independent of us.

This is exactly what happens in linguistics. The language we speak plays a bad joke on us, setting a trap few can escape. Because we as humans "happen in language" as our immediate interactional environment, and because what we know of the world comes through the agency of the body in action – particularly, through linguistic interactions with others as we take what Cowley (2011)

[1] "A structure determined system is a system such that all that happens in it or with it arises as a consequence of its structural dynamics, and in which nothing external to it can specify what happens in it, but only triggers a change in its structure determined by its structure" (Maturana, 2000: 461).

[2] A consensual domain is the domain of interactions that appears to the observer as a network of sequences of mutually triggering interlocked conducts (Maturana, 1978).