"Language doesn't exist entirely separately from nervous systems-persons using the words."

WHAT WE DO WITH LANGUAGE — WHAT IT DOES WITH US

BRUCE I. KODISH*

A PARTICULAR VIEW of language relates to the applied, evaluational approach of general semantics. Language is intertwined with behavior, consciousness, etc. It has a neurological base; that is, language doesn't exist entirely separately from nervous systems-persons using the words. By means of spiral feedback mechanisms, we create our language; our language affects us; we create our language; etc., ongoingly. This individual process is embedded in, influences and is influenced by, a particular culture and community of others.

This view, "linguistic relativity," has a history in western culture going back at least several hundred years to the work of Vico and von Humboldt

* Bruce I. Kodish, Ph.D., P.T., practices physical therapy and teaches the Alexander Technique of posture-movement education in Pasadena, California. Co-author of *Drive Yourself Sane: Using the Uncommon Sense of General Semantics*, he serves as a Senior Editor of the *General Semantics Bulletin* and on the teaching staff of the Institute of General Semantics. Dr. Kodish's book, *Back Pain Solutions: How to Help Yourself with Posture-Movement Therapy and Education*, Extensional Publishing, 2001, applies general semantics to the problem of activity-related musculoskeletal pain. This article has been adapted with permission of the author from Chapter Ten of his new book, *Dare to Inquire: Sanity and Survival for the 21st Century and Beyond*, published by Extensional Publishing, Pasadena, CA.

and more recently to linguistic anthropologists Franz Boas, Edward Sapir, and Benjamin Lee Whorf, among others.

For those who espouse linguistic relativity, what we call 'language' and 'culture,' 'consciousness' and 'behavior' develop and operate together through individual and group experience. (Since they do not function in complete isolation from each other, although they can be considered separately, I put the terms in single quotes here.) Linguistic anthropologist Michael Agar has coined the term "languaculture" to label the joint phenomenon of language-culture. How do these factors work together?

Without denying cross-cultural similarities among humans, the principle of linguistic relativity implies that, as Whorf scholar Penny Lee wrote:

> ...although all observers may be confronted by the same physical evidence in the form of experiential data and although they may be capable of "externally similar acts of observation"... a person's 'picture of the universe' or 'view of the world' differs as a function of the particular language or languages that person knows. (1)

Korzybski and Keyser independently and earlier formulated similar notions in relation to undefined terms, logical fate, etc. As you may recall, they contended that the culturally inherited structure of an individual's language, *including his or her terminology, grammar, logic, doctrines, etc.*, relates to assumptions, premises, implications about the structure of ourselves and the world.

In *Science and Sanity*, Korzybski hinted at the practical implications of this structure even within a particular, apparently 'unified' languaculture:

> We do not realize what tremendous power the structure of an habitual language has. It is not an exaggeration to say that it enslaves us through the mechanism of *s.r.* [semantic or evaluational reactions] and that the structure which a language exhibits, and impresses upon us unconsciously, is *automatically projected* upon the world around us. (2)

Various distorted versions of this view have come to be known as the "Sapir-Whorf Hypothesis," an academic abstraction which does not label anything that Sapir or Whorf ever put forward as a hypothesis on their own. (The principle of linguistic relativity which they did put forward can be interpreted in various ways and may lead to many different hypotheses.) Some

scholars have pursued their own distorted interpretations and made a straw-man rendering of Whorf's views.

As you might imagine, much controversy has been generated by the various versions and responses to them. I consider this controversy important to examine in some detail in *Dare to Inquire,* due to the centrality of linguistic relativity in general semantics. I discuss the general-semantics view in the course of going into various other versions.

Language and Thought

According to psychologist Steven Pinker, both Whorf and Korzybski presented linguistic relativity as a single-valued, absolutistic and uni-directional belief that "language determines thought." (3) This "strong version" (and 'weaker' ones as well) of the supposed Sapir-Whorf hypothesis is "wrong, all wrong" (4) claims Pinker (widely accepted as an expert in linguistics and psychology).

Actually, neither Whorf nor Korzybski posited a 'language' entirely isolated from human behavior-in-a-culture as the sole, one-directional, single-valued determinant of some separable entity called 'thought.' According to both men, 'language,' 'thought' (more accurately, neuro-evaluational processes), 'behavior,' and 'culture' do not function separately but rather as elements within a gestalt (a unified whole) where they mutually interact in multi-dimensional and probabilistic ways.

In saying that 'language' does not function separately from 'thought,' I do not mean to imply, as Pinker does, that either formulator claimed that there is no 'thought' without 'language.' Whorf, at the very least, qualified this and Korzybski denied it.

Neither did they deny the possibility of inborn and 'universal' language-related processes, more or less impervious to cultural modification. Nevertheless, the thrust of their work suggests that language has important aspects modifiable through learning. Through *neuro-linguistic* (a term originated by Korzybski) processes, our language use helps create modifiable *neuro*-evaluational, *neuro*-linguistic environments, i.e., cultures, which can change and grow through time-binding. We not only do things with 'language,' 'language' does things with us.

The general-semantics view of linguistic relativity appears unique among other versions of linguistic relativity for several reasons. First is its explicit *neurological emphasis*. Using general-semantics language, we can talk more accurately in terms of neuro-linguistic relativity:

> Even a gramophone record undergoes some physical changes before words or noises can be 'stored' and/or reproduced. Is it so very difficult to understand that the extremely sensitive and highly complex human nervous system also undergoes some electro-colloidal changes before words, evaluations, etc., are stored, produced, or reproduced? (5)

Before his untimely death, Whorf appeared to be struggling toward such an explicit neurological formulation as well. (6)

A second point which distinguishes general semantics from many other views of linguistic relativity is its focus on an individual's *language behavior or use* as it relates to his or her evaluative (roughly 'cognitive') processes. The term "language" as neurocognitive linguist Sydney Lamb has noted, does not necessarily stand for one thing. Using a device suggested by general semanticists, Lamb indexes $language_1$, $language_2$, and $language_3$.

> ...when we look closely we can see that it ["language"] is used for a number of quite distinct collections of phenomena selected from the kaleidoscopic flux, including especially these three: (1) language as a set of sentences (e.g. Chomsky) or utterances (Bloomfield); (2) language as the system that lies behind such productions; (3) language as linguistic processes, as in the title of Winograd's *Language as a Cognitive Process* (1980). (7)

A given general $language_1$ system such as English, French, German, etc., can have within it distinguishable dialects (regional variations) and registers (professional and group variations, such as the language of physicians, etc.). Individual speakers or writers of a given $language_1$ will have unique particular variations within the more general system — which may include their vocabulary, logic, metaphors, doctrines, etc. $Language_2$ includes the neurolinguistic processes by which we generate $language_1$. A large part of human evaluative processes relates to language behavior or use, i.e., $language_3$. We learn how to do things with words in a social context in order to negotiate our lives with others — and with ourselves. $Language_3$ has become an area of increasing academic interest in recent years, as for example in discussions of "thinking for speaking" and "speech acts." General semantics especially focuses on $language_3$ — how an individual's evaluative processes relate to their $language_1$ generated from the neurological processes involved in language production, $language_2$.

A third factor that distinguishes general semantics from other forms of linguistic relativity is its specific attention to *practical implications and applica-*

tions — even within the boundaries of a particular, apparently 'unified' languaculture. Whorf, who died in his forties, noted but was not able to elaborate much on the more practical implications of linguistic relativity. On the other hand, general semantics focuses on ways in which individuals can become more aware of the effects of their language and its implicatory structure for ill and for good.

"Sticks and stones can break my bones but words can never harm me," goes a saying from my childhood. On the contrary, neuro-linguistic factors, i.e., *words with the associated neuro-evaluative processes in each of us*, can play a harmful, sometimes quite toxic role in our lives — especially if we remain unconscious of their implications.

We have particularly good access to our linguistic behavior, which appears modifiable to some degree. This is not any form of word magic. We're interested in the underlying implications and orientation reflected in the structure of language. These involve our evaluational (semantic) reactions, including so-called verbal 'thinking,' as well as non-verbal 'thinking,' 'feeling,' behaving, etc. By becoming more aware of our language and its implications, we can nudge our orientation to get closer in line with so-called 'facts.'

The Chomskyite Protest

The theory of Noam Chomsky has dominated linguistic studies in the United States for decades. Chomsky has consistently argued for the universal, innate and unlearned structure of human language. Building on Chomsky's work (focusing on language$_1$), Steven Pinker has proposed that the structure of language, i.e., grammar, etc., comes primarily by means of what he calls a "language instinct" determined by genes.

This chomskyite approach has now begun to show serious wear with little positive results for the claim that "language is an instinct." (This failure has serious implications for the more general program of "sociobiology" or "evolutionary psychology" as well.) Linguist Geoffrey Sampson has done an especially thorough job of analyzing the inadequacies of chomskyite views. Sampson has concluded that:

> ...there are some universal features in human languages, but what they mainly show is that human beings have to learn their mother tongues from scratch rather than having knowledge of language innate in their minds. Except for the properties that lead to that conclusion, languages are just different (except that they probably do all contain nouns and verbs) ... (8)

It seems that Dante had more or less the right view when he wrote in his *Paradiso*:

> Tis nature's work that man should utter words,
> But whether thus or thus, 'tis left to you
> To do as seems most pleasing. (9)

Nonetheless, the great popularity of the chomskyite program has probably prevented many people from taking Whorf's and Korzybski's work more seriously. To those who believe that most of language structure gets determined genetically, the differences between different linguistic groups can in some sense be considered trivial. If one accepts Pinker's claim that in its most significant aspects "language is not a cultural artifact," (10) then attention to language use cannot be used to affect human perception and behavior in the way general semanticists and others claim it can.

I decided to closely examine Pinker's dismissal of linguistic relativity in his book *The Language Instinct*, to see if there was anything there that would require me to revise my own views. The lack of substance in his arguments surprised me. Pinker's presentation does not seem notable for its accuracy and fairness regarding opposing views. It illustrates how someone nominally functioning as a scientist can block the way of inquiry. As Lamb noted, "Those who doubt that language can influence thinking are unlikely to be vigilant for the effects of language on their own thinking." (11)

Non-Verbal 'Thinking'

Pinker states that "General Semantics lays the blame for human folly on insidious 'semantic damage' to thought perpetrated by the structure of language." (12) Pinker finds this something to scoff at. However, Korzybski did not talk or write in terms of 'blame' or of 'thought' and 'language' so elementalistically.

A more accurate rendering of a general-semantics view of 'language' and 'thought' states that the structure of a language, *with its associated neuro-semantic (evaluative) reactions* — in each of us, at a given time, among other factors — affects our ongoing behavior, perception, evaluating, etc., for good and ill. Pinker may be unable to understand the nuances of this view because, as a good chomskyite, he lacks the linguistic consciousness that would allow him to stop objectifying the abstract terms 'language' and 'thought' as if they represented isolated entities in the world.

Despite his inaccurate description of general semantics, Pinker does correctly conclude that general semanticists find some support for their views in

Whorf's work. Unfortunately, Pinker also *in*correctly concludes that linguistic relativity must imply that "thought is the same thing as language" (13) and writes at great length to refute this. However, his efforts here have *no relevance whatsoever* to either Korzybski's or Whorf's actual views. Neither claimed that "thought is the same thing as language." In fact they both directly denied this while not eliminating the importance of what Penny Lee calls "linguistic thinking" (Lamb's $language_3$).

In Korzybski's case, as I have already emphasized, the term "semantic(s)" in general semantics implies "evaluation" and does not typically refer to "just words" despite the usage of those ill-informed about general semantics. Evaluation refers to happening-meanings, i.e., 'thinking,' 'feeling,' verbal and *non-verbal* organism-as-a-whole transactions within an environment. Indeed, Korzybski stressed the importance of non-verbal formulating within his understanding of neuro-linguistic behavior, noting that silent contemplating and visualization can allow us to take in and develop fresh information, relatively unbiased by verbal ruts.

Basic Color Terms

Pinker also makes much of the "basic color term" research of Berlin and Kay, and of Rosch, as disproof of whorfian-korzybskian views. (14) Even though different languacultures have differing numbers of color terms, there does seem to exist a rough, cross-cultural sequence of those colors which get labeled first, second, third, etc. In addition, people across different cultures may tend to pick particular focal colors as the best examples or prototypes for a particular category. Although at least some of this work has flaws in both its data collection and interpretation, it does lend support to the notion that some aspects of language may depend upon the biologically based perceptual equipment of humans across cultures. This doesn't, by the way, prove that some gene or genes are directly responsible for specific, observable language behaviors. Trial-and-error empirical learning may still play a role even in the development of color terms, however biologically based. (Note that "based" does not equate with "solely determined by.")

Despite Pinker's and other chomskyites' attempts to make this an either-or issue, any research which shows the possibility of some cross-cultural, biological basis for some of the terms we use does not actually challenge the notion of linguistic relativity. Neuro-linguistic relativity held non-absolutely has no inherent conflict with some degree of non-absolutist neuro-linguistic universalism, which may have some more or less direct biological basis.

Hopi Concept of 'Time'

Unfortunately Pinker doesn't play fair when it comes to discussing these issues. His representations of linguistic relativity cannot be relied upon for accuracy. For example, he uses selective quotes to 'prove' that Whorf made "outlandish claims" that the Hopi Indians were "oblivious to time" and did not have tenses in their language. (15) Although Whorf's analysis of Hopi languaculture may not be entirely flawless, a comparison of Pinker's claims about it and what Whorf actually wrote results in very different pictures.

It seems clear from a full, non-selective reading of Whorf's work that he recognized the importance of how the Hopi languaculture clearly deals with durations and times. Whorf did not deny that the Hopi have used dating or calendars, counted the number of days or duration of events, etc. What he did claim was that the Hopi did not conceptualize "space or time as such" in the reified manner that we do in English and other Indo-European languages. This has been corroborated by others who have lived within and studied Hopi language and culture, such as anthropologist Edward Hall.

Eskimo Snow

In his crusade to show how linguistic relativity is wrong, Pinker doesn't seem to mind descending to personal attack either. A common "urban legend" claims that Eskimo language has hundreds of different words for snow. By connecting Whorf's work to this popular claim, Pinker suggests that Whorf was party to a hoax. According to Pinker, from a report of four Eskimo words for snow made by Boas in 1911 "...Whorf embellished the count to seven and implied that there were more. His article was widely reprinted, then cited in textbooks and popular books on language, which led to successively inflated estimates in other textbooks, articles and newspaper columns of Amazing Facts." (16)

Whorf actually wrote that English had one word for snow and Eskimo had three. Whorf used data that he had available at the time of this writing (1940) to emphasize that: "Languages classify items of experience differently. The class corresponding to one word and one thought in language A may be regarded by language B as two or more classes corresponding to two or more words and thoughts." (17) To say that Whorf embellished anything here distorts what he said. Whorf does not have responsibility in any way, as Pinker tries to suggest, for other people's exaggerations and misinterpretations. This constitutes pure name-calling and has no basis in fact. (18)

Experimental Evidence for Linguistic Relativity

Studies to deliberately test one or another interpretation of linguistic relativity have gone on for at least a half-century. This research remains an area of great contention and, despite the claims of chomskyites to some sort of victory, their efforts to declare linguistic relativity "bunk" don't stand up to analysis. Pinker and others have attempted to downplay the significance of tests that corroborate the notion that words can in some sense have an effect on memory or categorization. However, the evidence hardly seems "weak." The results of these tests have sometimes surprised researchers who didn't necessarily favor linguistic relativity.

In one set of classic studies, subjects were shown colored chips. The colors varied in their *codability*, how easily an individual could apply a color label or name from his or her language to a chip. The chips were then removed, mixed up and shown again to the experimental subjects, who were asked to pick out the chips they had been shown before. The more easily labeled, more codable chips, appeared *more available*. In other words, the subjects had a better memory for, and could pick out, the more easily labeled chips, even though they could also remember colored chips without names. (19)

Pinker briefly mentioned and pooh-poohed the significance of another study about which the experimenters concluded that the habitual categories of speakers' languages could indeed influence their color-categorizing behavior. (20) One of the researchers, Willett Kempton, later wrote:

> A simple experiment, clear data, and seeing the Whorfian effect with our own eyes: It was a powerful conversion experience unlike anything I've experienced in my scientific career. Perhaps this all just goes to affirm Seguin's earlier quote, as applying to us as both natives and as theorists: "We have met the natives whose language filters the world — and they are us." (21)

Neuro-Linguistic Revision

Do this simple experiment. Have a friend select a number of newspaper headlines of similar size. Find a distance at which the friend can hold the headlines so that you cannot make out what they say. At this distance, when your friend tells you what an unfamiliar headline reads, the headline will probably 'pop out' at you.

This experiment provides a literal demonstration of *neuro-linguistic revision*. It illustrates how your linguistic maps may have a visible effect on what you 'perceive,' respond to, etc. Indeed, to a great extent we react to what goes

on around us as a function of the linguistic maps that we hold. In other words, we often appear to react to our neuro-linguistic reactions.

To the extent that the structure of our language fails to adequately map the non-verbal territory, we may ignore important 'facts' or respond to fictitious entities created by our way of talking. We do well to become aware of and, when necessary, change the structure of our language in order to create more adequate linguistic maps. The languages of science and mathematics not only provide another worldview but also serve as models for the kind of linguistic behavior that can help us improve our evaluative abilities. They provide especially powerful means for helping us to fit our language to the non-verbal world.

This doesn't mean that we can create a language that perfectly matches the world. Quite the reverse: our representations remain that; never exactly the same as what we're representing. Does it follow from this that we waste our time when we try to tidy up language, to make it more structurally in keeping with the structure of the non-verbal world? Surely not!

We can study other languages and linguistically expressed viewpoints, including the language of science and mathematics, to expand our 'perceptions' and 'conceptions' of the world.

On the contrary, if our representations have properties not shared by the thing represented, or vice versa, we need to look at that. It indicates a lack of fit or structural similarity between our mode of representation and what we wish to represent. This lack of fit can lead to problems and should be put right to the degree possible. We can study other languages and linguistically expressed viewpoints, including the language of science and mathematics, to expand our 'perceptions' and 'conceptions' of the world.

Neuro-linguistic relativity provides another way of understanding logical fate. Its significance relates not only to different 'languages' as conventionally understood, i.e., English, Hopi, Tarahumara, etc. ($language_1$), but also and perhaps even more importantly to the "linguistic" behavior of each individual ($language_3$). The words we use, the sentences we say, the logic we apply, the doctrines we espouse, insofar as they are done in language, must be produced and affect us through neuro-linguistic ($language_2$) mechanisms.

If we do not understand these mechanisms, we are more likely to misuse them and/or to become misused by means of them. The faith-based mass-

murderers of September 11, 2001 probably screamed "Allahu Akbar" (Arabic for "God is Great") as they killed themselves and thousands of others. They could not have done what they did without their particular language-based evaluations. Their actions inevitably required neuro-semantic, neuro-linguistic mechanisms and influences in order to occur.

Training in the system of GS provides an explicit language of evaluation. This language and its associated evaluative (semantic) reactions make our own neuro-evaluative, neuro-linguistic mechanisms more codable and thus more available for each one of us to consciously control. Semiotics pioneer Charles Morris wrote:

> The work of A. Korzybski and his followers, psycho-biological in orientation, has largely been devoted to the therapy of the individual, aiming to protect the individual against exploitation by others and by himself. (22)

General Semantics can help us understand the basic mechanism through which this neuro-evaluative, neuro-linguistic control occurs. Out of this understanding, suggestions for practice follow including the use of neuro-linguistic devices which can influence perception and behavior in less unsane/insane and more positive, inquiry-oriented directions.

NOTES

1. Penny Lee 1996, p.87
2. Korzybski 1994 (1933), p.90
3. Pinker 1994, p.58
4. Ibid, p.57
5. Korzybski 1994 (1933), p.xl
6. Whorf, p.239
7. Lamb 2000
8. Sampson, p.136
9. Qtd. in Vossler, p.235

10. Pinker 1994, p.18
11. Lamb 2000
12. Pinker 1994, p.57
13. Ibid, p.57
14. Ibid, pp.61-63
15. Ibid. p.63
16. Ibid, p.64
17. Whorf, p.210
18. Pinker gets his 'information' about this from original research by anthropologist Laura Martin (Martin, 1986) and an article on Martin's work by Geoffrey Pullum, entitled "The Great Eskimo Vocabulary Hoax." Martin's conclusions were later challenged by Stephen O. Murray. The term "hoax" implies a conscious act of deception. Pullum and Pinker abuse Martin's research. They have no actual evidence of conscious deception by Whorf or his colleagues.
19. Agar, pp.69-71
20. See P. Kay and W. Kempton, "What is the Sapir-Whorf Hypothesis?" This research is discussed in Lakoff 1987, pp.330-334.
21. Kempton. Also see Alford, Minkel, and Nisbett and Norenzayan.
22. Morris, p.283

BIBLIOGRAPHY

Agar, Michael. 1994. *Language Shock: Understanding the Culture of Conversation.* New York: William Morrow and Company.

Alford, Dan. 1980. "A Hidden Cycle in the History of Linguistics." In *Phoenix*, vol. 4, numbers 1 & 2. Available at http://enformy.com/dma-2.htm.

Hall, Edward T. 1984. *The Dance of Life: The Other Dimension of Time.* New York: Anchor.

Kay, Paul and Willett Kempton. 1984. "What is the Sapir-Whorf Hypothesis?" *American Anthropologist* 86 (1) March.

Kempton, Willett. 1991. "Whorf and Color." *Lingua List* Newsgroup, Subject 2.700, Oct. http://www.umich.edu/~archive/linguistics/linguist.list/volume.2/no.651-700.

Korzybski, Alfred. 1994 (1933). *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics.* Fifth Edition. Preface by Robert P. Pula. Brooklyn, NY: Institute of General Semantics.

Lakoff, George. 1987. *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind.* Chicago: University of Chicago Press.

Lamb, Sydney M. 2000. "Neuro-Cognitive Structure in the Interplay of Language and Thought." In *Explorations in Linguistic Relativity*, Edited by M. Pütz and M. Verspoor. Amsterdam/Philadelphia: John Benjamins Publishing Company. Also available at http://www.ruf.rice.edu/~lamb/lt.htm.

——. 1998. *Pathways of the Brain: The Neurocognitive Basis of Language.* Amsterdam/Philadelphia: John Benjamins Publishing Company.

Lee, Penny. 1997. "Language in Thinking and Learning: Pedagogy and the New Whorfian Framework." *Harvard Educational Review* Fall 1997: 430-471. Cambridge, MA.

——. 1996. *The Whorf Theory Complex: A Critical Reconstruction.* Amsterdam/ Philadelphia: John Benjamins Publishing Company.

Martin, Laura. 1986. "Eskimo Words for Snow: A Case Study in the Genesis and Decay of an Anthropological Example." *American Anthropologist* 88 (June): 418-423.

McNeil, David and Susan D. Duncan. 1998. "Growth Points in Thinking-for-Speaking." Cogprints at http://cogprints.ecs.soton.ac.uk/archive/ 00000664/.

Minkel, J. R. 2002. "A Way with Words." www.scientificamerican.com/explorations/ 2002/032502language/.

Morris, Charles. 1946. *Signs, Language and Behavior.* New York: Prentice-Hall.

Murray, Stephen O. 1987. "Snowing Canonical Texts." *American Anthropologist* 89 (June): 443-444.

Nisbett, R. E. and A. Norenzayan. 2002. "Culture and Cognition." In D. Medin and H. Pashler (Eds.), Stevens' *Handbook of Experimental Psychology, Third Edition, Volume Two: Memory and Cognitive Processes.* New York: John Wiley & Sons. Article available at Richard Nisbett's website: http://www-personal.umich.edu/ ~nisbett/index.html.

Pinker, Steven. 1994. *The Language Instinct: How the Mind Creates Language.* New York: Morrow.

Pullum, Geoffrey. 1991. *The Great Eskimo Vocabulary Hoax and Other Irreverent Essays on the Study of Language.* Chicago: University of Chicago Press.

Sampson, Geoffrey. 1997. *Educating Eve: The 'Language Instinct' Debate.* London: Cassell.

Slobin, Dan. 2001. "Language and Thought Online: Cognitive Consequences of Linguistic Relativity." Draft Version. http://ihd.berkeley.edu/slobin.htm.

Vossler, Karl. Trans. by Oscar Oeser. 1932. *The Spirit of Language in Civilization.* London: Routledge & Kegan Paul Ltd.

Whorf, Benjamin Lee. ed. by John B. Carrol. 1956. *Language, Thought & Reality: Selected Writings of Benjamin Lee Whorf.* Cambridge, MA: M.I.T. Press.