An Overview of Vygotsky's Language and Thought for EFL Teachers

Edward B. Geerson
edwardgeerson@yahoo.com

Abstract

In the past ten years, references to "Vygotsky" have multiplied in the ELT profession. Many practicing teachers, long out of university and preoccupied with the demands of teaching, are not familiar with his writings and are intimidated by some of the terms that are associated with him: ZPD and scaffolding, to name the two most frequent ones. This article attempts to demystify Lev Vygotsky by explaining who he was, what his terms mean, and how they can be seen in a language classroom. Described as a "sociocultural theorist" by Second Language Acquisition (SLA) specialists, Vygotsky has had a significant impact on general education theory as well. The article briefly addresses his theories and concludes with some implications for EFL teachers and SLA researchers. The aim of the article is to better inform EFL teachers so that they may remain up-to-date in the profession.

> "Thought is not merely expressed in words; it comes into existence through them...the speech structures mastered by the child become the basic structures of his thinking."
>
> - Lev Vygotsky: *Thought and Language*

I. Introduction

In 1962, a scant few years into the linguistic revolution engendered by Noam Chomsky's *Syntactic Structures* (1957) and his scathing rejection of behaviorism (1959), another book appeared which, only decades later, would have a startling impact on Second Language Acquisition (SLA) theory and research. Perhaps arguably less revolutionary than Chomsky's contributions to linguistic thought, the publication in English of Lev Vygotsky's *Thought and Language* (1962/1986) brought to the West a new perspective in understanding the complex interplay among the nature of language, cognitive development, and social interaction. Introduced by the eminent educational philosopher and psychologist Jerome Bruner, the book was critically acclaimed by a number of prominent intellectuals, including philosopher of science Stephen Toulmin, who called Vygotsky "the Mozart of psychology" (Van Lier, 2004). Like Mozart, Vygotsky was prodigious and iconoclastic; both died mid-career with legacies that have had greater impacts long after their creativity ended.

II. Background

Overshadowed by the attention paid to universal grammar, a posited "language acquisition device", and theories of syntax (Chomsky, 1965, 1966, 1968), the ideas of Vygotsky went largely unnoticed in the 1960's. Perhaps this was also due to the fact that Vygotsky was a virtual unknown among Western linguists: he had died in 1934, published originally in Russian, and the prevailing "cold war" mentality may have extended to American academic circles as well. Furthermore, his writings had little currency in the West throughout the 1960's as it was an era of explosive research into the language acquisition ramifications of Penfield and Robert's investigations of the human brain (1959), Lenneberg's "Critical Period Hypothesis" (1967), "error analysis" (Corder, 1967) and the belated, but eventually widespread influence of Piaget's writings on cognitive development (Ginsburg and Opper, 1969).

The furor of the 1970's also crowded out any significant treatment of Vygotsky's writings and theories. Chomsky (1975) and the theoretical consequences of generative theory had, by then, already replaced Saussure, Bloomfield and Firth as the primary "guiding lights" in the field of linguistics. The unprecedented first language acquisition studies by Roger Brown (1973) and de Villiers (1973, 1978) signaled the first scientifically-inspired research in the field of L1 acquisition. Indeed, as Ellis (1985) points out, it was only in the early 1970's that the field of Second Language Acquisition research emerged (p. 283). Selinker (1972) developed "error analysis" into *interlanguage*, and the Dulay and Burt morpheme studies (1973, 1974, 1975) dealt the behaviorist Contrastive Analysis hypothesis a serious blow. It was also the decade of what Nunan (1989) somewhat facetiously calls the "designer" methods of second language learning (p. 97). That is, with behaviorism discredited and the failure of the audio-lingual method to prove its widespread effectiveness as an L2 teaching methodology, the 1970's witnessed an explosion of alternative, competing, "humanistic" explanations of language learning and teaching with the affective and motivational concerns of the learner at their core: The Silent Way (Gattegno, 1972, 1976), Suggestopedia (Lozanov, 1978, 1979), Community Language Learning (Curran, 1976, 1977), and Total Physical Response (Asher, 1972, 1977).

In the 1980's, Vygotsky fared no better. Chomsky remained prolific and central in linguistics with his Government and Binding Theory (1981, 1982). SLA research, influenced by Chomsky's "innatist" explanation of language competence and informed by the abundant studies and fertile ground of the 1970's, lead to Krashen's "Monitor Model" (1982, 1985; Krashen & Terrell, 1983), Long's "Interaction Hypothesis" (1983, 1985), Dan Slobin's "perceptual saliency approach" (1985), the Pienemann "learnability/teachability theory" (1984, 1987, 1989), and the early information processing models of Anderson (1983, 1985), McLaughlin (1987, 1990) and connectionism (Mitchell & Myles, 1998, p. 81).

With such a rich and wide-ranging buffet at the linguists' table for nearly three decades, the ideas of Vygotsky remained largely outside the critical review of theoretical linguists. Fodor (1972) did reflect on Vygotsky's *Thought and Language*, to cite an exception to the rule, and

left the reader with a less than a favorable impression of Vygotsky's contribution. However, with a much-improved translation of the original book and subsequent publications of Vygotsky's *Mind in Society* (1978), *Thought and Language* (1962/1986), and *Thinking and Speech* (1987), his writings became much more accessible. Yet, as Van Lier (2004) notes, Vygotsky's theories were rarely presented, if at all, in applied linguistics and second language acquisition textbooks before the early 1990's.

However, in the past decade, references to Vygotsky and the signature terms associated with him ("zone of proximal development", "scaffolding", "mediation", "inner speech", and "microgenesis") abound in the academic literature, receive dedicated chapters in textbooks, and pepper the plenary presentations and parallel sessions at linguistics and TESOL conferences. An Internet search for "Vygotsky" will now retrieve tens of thousands of sites.

Clearly, Vygotsky's writings are no longer peripheral and have warranted careful consideration by language theoreticians and professional organizations of English teachers. While Vygotsky's "sociocultural theory" refers to a general theory of learning, a burgeoning field of research and application in terms of second language acquisition is now developing. Whether a practicing English teacher in the classroom (for whom this article is intended) accepts or rejects Vygotsky's tenets, philosophical interpretations of language, thought and meaning, or general model of cognitive development, the teacher has a responsibility to remain informed of the current trends in second language acquisition (TESOL, 2003; TESOL/NCATE, 2002). The view that EFL/ESL teachers are more *effective* as language providers, material developers and course/curriculum designers when they are aware of current research and advances in the profession is a cardinal principle espoused by all the seminal writers in the ELT field today: Kathy Bailey and Andy Curtis (2001), Douglas Brown (2000), JoAnn Crandall (2001), Donald Freeman (1996), Dianne Larsen-Freeman (2000), David Nunan (1999), and Jack Richards (1996), to cite just a few.

Therefore, with a view towards making Vygotsky's most relevant ideas accessible, the article presents a short biographical sketch of Vygotsky, followed by an introductory examination of his more frequent terms that are widely used in the ELT profession today. Three

classroom examples are then given to illustrate the terminology, followed by a brief consideration of the implications that Vygotsky's sociocultural theory has on ESL/EFL teaching and future SLA research.

III. Who was Vygotsky?

Lev Semyonovich Vygotsky (1896-1934) was born in Russia and was interested in literature and literary analysis as a young man. He excelled at poetry and philosophy and, at 18, wrote an essay on Shakespeare's *Hamlet* that was later incorporated into one of his psychological writings. After admission into the medical school at Moscow University, he quickly transferred to the law school and enrolled at a private university as well to further his study of literature. After graduating, he taught literature for a short time at a provincial school, but by the age of 28, he had already become interested in developmental psychology, education and psychopathology. He continued to teach at a teachers' college where he lectured on psychology. His first large research project was "The Psychology of Art" (1925) which he used as his Ph.D. thesis in psychology at the Moscow Institute of Psychology, although he had not had any prior formal training in psychology. (http:web.archive.org/people/Lev Vygotsky)

Vygotsky was a prodigious reader and wrote prolifically not only on psychology, but philosophy, linguistics, literature and the social sciences as well (Schutz, 2002). He pursued these interests at a highly productive pace until his death from tuberculosis in 1934, at the young age of 38. It is crucial to note that, during his lifetime, Vygotsky was under pressure to adapt his theories to the prevailing political ideology that took hold after the 1917 Bolshevik Revolution. His book *Thought and Language* was published, in Russian, in the same year he died, but was suppressed in the Soviet Union from 1936-1956. It was not until 1957 that an English translation was begun and finally completed in 1962.

To Vygotsky, all fundamental cognitive activities take shape in a matrix of social history and form the products of sociohistorical development (Schutz, 2002). That is, "cognitive skills and patterns of

thinking are not primarily determined by *innate* factors, but are the products of the activities practiced in the *social* institutions of the culture in which the individual grows up. Consequently, the history of the society in which a child is reared and the child's personal history are crucial developments of the way in which that individual will think. In this process of cognitive development, *language* is a crucial tool for determining *how* the child will learn how to *think* because advanced modes of thought are transmitted to the child by means of words" (italics added) (Schutz, 2002). This is the underpinning of Vygotsky's "social constructivist" or "sociocultural" approach to language acquisition. This squarely places him outside of Chomsky's innatist position and firmly in the "interactionist" framework of language acquisition. Even more so, Vygotsky's views are similar to, but certainly not identical with Piaget's, both of whom would strenuously reject the neo-behaviorist mechanism of connectionism. In the following section, Vygotsky's more specific tenets are examined.

IV. What Do Vygotsky's Terms Mean?

Like Piaget (born in Switzerland in the same year of 1896), Vygotsky was a child development researcher and theorist. Both have exerted a profound influence on educational psychology, but many of Vygotsky's 180 writings remain untranslated. Unlike Piaget, who maintained that language is used to represent the knowledge which children gain through physically interacting with the environment, Vygotsky's major theme is that *social* interaction is the critical element in cognitive development:

> Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals. (1978, p. 57)

Increasingly, SLA researchers are investigating the following main propositions advanced by Vygotsky:

a. Mediation

To understand the central importance of the concept of mediation in Vygotsky's writings, James Lantolf explains:

> Vygotsky's fundamental theoretical insight is that higher forms of human mental activity are always, and everywhere, *mediated* by symbolic means...Mediation, whether physical or symbolic, is understood to be the introduction of an auxiliary device into any activity that then links humans to the world of objects or to the world of mental behaviour. Just as physical tools (e.g. hammers, bulldozer, computers, etc.) allow humans to organize and alter their physical world, Vygotsky reasoned that symbolic tools empower humans to organize and control such mental processes as voluntary attention, logical problem-solving, planning and evaluation, voluntary memory, and voluntary learning... Symbolic tools are the means through which humans are able to organize and maintain control over the self and its mental, and even physical, activity. (1994, p. 418)

Mitchell and Myles (1998) point out that *language*, of course, is the prime symbolic tool available for the mediation of mental activity. "Through language, for example, we can direct our own attention (or that of others) to significant features in the environment, formulate a plan, or articulate the steps to be taken in solving a problem" (p. 145). Van Lier (2004) adds: "Language is also mediated, by gestures, facial expressions, references to the surrounding world and to memories, and so on." (p. 3)

b. Regulation, the Zone of Proximal Development (ZPD) and "Scaffolding"

Vygotsky maintains that children's cognitive development is "regulated", facilitated and enhanced through their interaction with more advanced and capable individuals, such as a parent, a teacher, or an older sibling. These more skilled individuals are capable of autonomous functioning, or *self-regulation*. Children can typically do more difficult things in collaboration with more skilled adults, for example, than they can do on their own. This is a process of *other regulation*, usually mediated through language. Successful learning takes place when the child takes over, or *appropriates*, new knowledge or skills by shifting from inter-mental activity to intra-mental activity. The range of tasks that children cannot yet perform on their own, but may learn with the help of others is the *zone of proximal development (ZPD)*. (Ormrod, 1998; Mitchell & Myles, 1998).

Vygotsky defines ZPD as "the difference between the child's developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." (1978, p. 85) The process of supportive dialogue, or assisted learning, which directs the attention of the learner to the key features of the environment, and which prompts them through successive steps of a problem was labeled by Wood, Bruner and Ross (1976) as "scaffolding."

One sees then that through the *mediation* of language and a *"scaffolded"* process of *other regulation*, a teacher's role is to elevate a learner's level to the *ZPD*. Once *appropriated*, the new skills or knowledge can be *self-regulated* by the learner.

According to Wood, Bruner and Ross (1976), "scaffolding" has the following functions:

1. recruiting interest in the task;
2. simplifying the task;
3. maintaining pursuit of the goal;
4. marking critical features and discrepancies between what has been produced and the ideal solution;
5. controlling frustration during problem solving
6. demonstrating an idealized version of the act to be performed

Or, as Donato (1994) summarizes, "scaffolded performance is a dialogically constituted interpsychological mechanism that promotes the novice's internalisation of knowledge co-constructed in shared activity." (p. 41)

c. Private and Inner Speech

Piaget contended that when very young children talk to themselves it is evidence of their *egocentrism,* or their inability to view the world from another's point of view; they have not yet learned to use language as a means of social communication. Vygotsky, however, interprets private speech as children's growing ability to regulate their own behavior. Private speech develops into *inner speech*, the use of language to regulate inner thought, without any external vocalization. Thus, as de Guerrero's study (1994) (as cited in Van Lier, 2004) interprets Vygotsky: "private speech is social in origin and social language is developmentally prior to mental or private language. Social speech is progressively internalized, and the various manifestations, either as private speech (talking to oneself) or as inner speech (thinking to oneself), mediate between social activity and mental development." (p. 3)

d. Microgenesis

In the "sociocultural" model of developmental psychology, some principles of which are explained above, Vygotsky further added that these same principles can be observed in four different dimensions of human behavior. *Phylogenesis* deals with the human species and its development of psychological signs and symbols, including language. The *Cultural-Historic* dimension concerns the development of human action over time in a particular culture. *Ontogenesis* considers the learning which the individual human passes through; and *microgenesis,* the development of human action over a limited duration of time (Hall, 2004).

> For the entire human race, as well as for the individual infant, learning is seen first as social, then individual. Consciousness and conceptual development are seen as first an inter-mental phenomenon, shared

between individuals; later, the individual appropriates their own consciousness, which becomes an intra-mental phenomenon. For the human race, and also for the individual infant, language is the prime symbolic mediating tool for the development of their consciousness.

Throughout their life, of course, human beings remain capable of learning; and the local learning process for more mature individuals acquiring new knowledge or skills is viewed as essentially the same. That is, new concepts continue to be acquired through social/interactional means, a process which can sometimes be traced visibly in the course of talk between expert and novice. This local, contextualized learning process is labeled *microgenesis;* it is central to sociocultural accounts of second language learning." (Mitchell & Myles, 1998, pp. 148-149)

V. Vygotsky in the classroom

To understand a Vygotskian interpretation of typical language interaction, three examples are provided (excerpted from Mitchell & Myles, 1998, pp. 146-157). Example A, taken from general education literature, centers on solving a mathematical problem. Example B examines an adult English learner in conversation with a native speaker; and Example C highlights the language among adult L2 learners in a classroom.

Example A

You have a square sheet of card measuring 15 cm by 15 cm and you want to use it to make an open cuboid container by cutting out the corners. What is the maximum capacity the container can have?

Emily: This box is bigger than what it should be 'cos if you get 15 by 15 you get 225, but if you times um 9 by 9 times 3 you still get 243 and I haven't got that much space in my box.

A: You have.
Emily: But the 15 by...
B: It can be, it can work, I think.
Emily: But surely...
B: You cut off the corners.
Emily: Yeah but that surely should make it smaller.
B: I think that is right.
Emily: *(counting squares marked on the paper)* Hang on, 1, 2, 3, 4, 5...
C: You're not going to get 243.
Emily: I shouldn't get 243 'cos if the piece of paper had only 225 then, um...
C: Hang on, look...9 times 9 times how many was it up?
A: But don't you remember Emily it's got all this space in the middle.
Emily: Yeh, but...
A: It's got all that space in the middle.
Emily: *(sounding exasperated)* No, it hasn't got anything to do with it. If my piece of paper had only 225 squares on it, I can't get more out of the same piece of paper.
A: You can because you're forgetting, things go *up* as well, not just the flat piece of paper like that.
Emily: Oh yeh.
A: It's going up.
C: It's because, look, down here you've got 3 and it's going up.
A: You're going 3 up, it's getting more on it. Do you see it will be 243?
Emily: Yeh.
C: It is right, it should be.

(Mercer, 1996, pp. 34-35)

Comment:

Here, Emily is a secondary school student who is struggling to make sense of a mathematical problem (which involves the relationship between area and volume). She is already proficient in the necessary arithmetical skills, so that the problem is in principle accessible to her (in Vygotskian terms, it lies within her personal ZPD). Her peers direct her attention to different aspects of the problem, illustrating the ideas of *other-regulation* and *scaffolding*. Eventually, the successive attempts of Emily's friends to direct her attention to the three-dimensional nature of the problem seem to be successful, as evidenced in the change from her non-verbal reaction ("sounding exasperated") to subsequent expressions of "oh yeh...yeh." The claim is that a qualitative change in Emily's understanding has occurred, so that she could, in the future, solve similar problems without help. In Vygotskian terms, Emily

has *appropriated* the necessary concepts, and should be more capable of *self-regulating* her own performance on another similar occasion (Mitchell & Myles, 1998, pp. 146-147).

Example B

In this exchange, an adult learner of English (Rafaela) is eliciting and using an expression she needs ("last year") from a native speaker:

NS: Oh, that's a beautiful plant!
I like that.
Did you buy that?
Rafaela: Excuse me...
This is the...
October 24.
The how you say...
The... (writes "1974")
year, ah?
NS: 1974. Last year.
Rafaela: Ah! Last years.
NS: One. *(Correction of plural form)*
Rafaela: Last year.
Last year a friend gave me it.

(Hatch, 1978, p. 410)

Comment:

From an input/interaction perspective, this exchange would be interpreted as an instance of negotiation of meaning, conversational repair, etc., and would be seen as maximizing the relevance of the available input for the learner's acquisitional stage. From a Vygotskian perspective, however, it would presumably be argued more ambitiously that we are witnessing *microgenesis* in the learner's L2 system, through the *appropriation* of a new lexical item from the *scaffolding* talk of the native speaker (Mitchell & Myles, 1998, p. 156).

Example C

This example is of adult English L1 learners of French working on English-to-French translation problems. It is taken from a small-group planning session, preparing for an oral presentation to be given in a later class. Three students are collaborating to construct the French "past

compound tense" for the reflexive verb *se souvenir* ("to remember").

S1 ...and then I'll say....*tu as souvenu notre anniversaire de marriage*...or should I say *mon anniversaire?*
S2 *Tu as*...
S3 *Tu as*...
S1 *Tu as souvenu*... "you remembered?"
S3 Yea, but isn't that reflexive? *Tu t'as*...
S1 Ah, *tu t'as souvenu.*
S2 Oh, it's *tu es*...
S1 *Tu es*
S3 *tu es, tu es, tu*...
S1 *T'es, tu t'es*
S3 *tu t'es*
S1 *Tu t'es souvenu*

(Donato, 1994, p. 44)

Comment:

No single member of the group possesses the ability to produce this complex form without help, yet through their successive *peer scaffolding* the verb form is collectively reshaped. Student 3 provides the reminder that the verb is reflexive and inserts a supplementary pronoun (*"tu t'as"*); Student 2 corrects the auxiliary verb (*"tu es"*); and finally Student 1 can integrate these separate items of information in order to produce the correct form (*"tu t'es souvenu"*). (Mitchell & Myles, 1998, pp. 156-157)

VI. Implications

The ascendance of Vygotskian thought since the 1990's and the extent to which his ideas have permeated linguistic research, academic instruction and ELT practice can be seen in the burgeoning references to Vygotsky in scholarly journals, university syllabi, SLA textbooks, introductions in EFL/ESL coursebooks, ELT articles, websites and at TESOL conferences. Only slowly are his ideas wending their way down to practicing teachers in the classroom.

On the one hand, there is much that is useful in the ideas of *scaffolding, ZPD* and *microgenesis:* as L2 models, interlocutors, and assessors, teachers should reflect on the discourse choices available to

them when *regulating* their teaching through the *mediation* of language. Similarly, Vygotsky's ideas have provided a theoretical foundation for content-based teaching and the growing number of adherents to *collaborative learning* and *situated learning*. Furthermore, microgenetic methods are being trumpeted by language researchers (Hall, 2004) as a valuable new tool in reaching conclusions about the contextual conditions affecting language learning. Even teachers committed to their own professional development are espousing Vygotskian principles in teacher learning programs (Johnson & Golombek, 2003).

On the other hand, because sociocultural theory is only a relatively recent arrival on the scene, it is beset by two immediate weaknesses which can best be summed up as: (1) many teachers in the field do not know about it; and (2) those who *do* know about it are not very adept at spreading the word: the entrenched "theorist vs. practitioner" dilemma, i.e. the lack of two-way communication between the researcher and the applied linguist (Cook & Seidlhofer, 1995).

However, a third (and perhaps more difficult) obstacle to overcome is the inherent nature of Vygotsky's writings. He was a developmental psychologist/philosopher whose interest was cognitive development of the individual and society, not knowledge of language as a system itself, and intended to reconstruct the human sciences with a new holistic theory to create an understanding of (and, at least in part, practical solutions to) the social and educational problems of his time (Goldfarb, 2005). In and of itself, that does not invalidate the relevance or usefulness of his ideas, but it underscores the huge gaps that need to be bridged when trying to apply to second language learning a general theory of learning, derived from cognitive psychology. Sociocultural theory, as it is today, explains language as a tool for learning and thought creation; it is a *functional* description of the *use* of language and the *process* by which knowledge is constructed. Yet, it currently falls short of a comprehensive linguistic theory.

To address the weaknesses, sociocultural theorists will need to:

1. address the mainstream questions of linguistic theory. For example, is language a generative, rule-governed system? Or does it consist of chunks and routines?
2. demonstrate how the continuing nature of L2 interaction

systematically affects learning opportunities and how the L2 learner takes advantage of those opportunities.

3. establish more convincingly the language acquisition claims made by comparatively small-scale studies which have typically used interpretive or qualitative research methods. A general causal relationship has yet to be empirically shown between *regulation,* for example, and *ZPD*-targeted language acquisition.
4. undertake longitudinal research of "sociocultural" language acquisition claims, demonstrating a connection between learners increasing control of linguistic structures with a narrative account of their interactional episodes.
5. formulate a position on the "rate" and "routes" of language learning. To date, sociocultural theorists have not addressed these factors in language acquisition. Long-term studies will need to be conducted.
6. provide their findings and interpretations of research in an intelligible form to a wider professional audience who can apply them usefully in classroom settings.

(Adapted from Cook & Seidlhofer, 1995; Mitchell & Myles, 1998)

VII. Conclusion

When asked why children learn a language, most people would answer "in order to communicate." Vygotsky, however, turns the proposition on its head: children want to communicate, and in trying to communicate, they learn language. And in learning that language they also learn a whole mode of thought particular to the cultural setting in which that language is used. (One immediately suspects that a heretofore unknown correspondence had taken place between Vygotsky and his contemporaries Sapir and Whorf on the issue of linguistic determinism and relativity.)

Vygotsky's writings also re-open the "nature versus nurture" debate: the innateness of Chomsky's universal grammar versus the "external" language package of the behaviorists. Historically, there's relatively

nothing new in that argument: it raged from Socratic antiquity up to Saussure (Harris & Taylor, 1989). His writings evoke the philosophical debate as well between the "rationalists" and "empiricists" over the role of innate ideas in the development of thought and language (Crystal, 1996). But such is the tenor of Vygotsky's writings that, failing to mention all of this, would be tantamount to reducing his work to a mere handful of jargon-like terms which most language teachers would feel they already know intuitively. *ZPD, "scaffolding"* and *regulation*, after all, are not so abstruse, once explained, that many teachers would not recognize their own classroom practices being described.

What is strikingly "modern" about Vygotsky's recast of age-old debates is the central mediating role that culture plays in the development of the mind, distinguishing him from Piaget (Cole & Wertsch, 2005), and his attempt to posit a dynamic, multi-dimensional, unified theory of psychological and natural sciences in which socialization leads to individual, cultural and species-wide consciousness. Its ambition accounts for the attraction *and* the wariness with which readers approach his ideas. There is much to appreciate in the breadth and depth of Vygotsky's writings, but just as much to investigate and verify, particularly in the field of second language acquisition about which Vygotsky did not write explicitly and the implications for which are only now being explored.

If a word is indeed a microcosm of human consciousness, as Vygotsky (1978) wrote, then linguistics has made curious progress from 2,500 years ago when Athenian rhetorician Isocrates (436-338 BC) wrote of speech (*"logos"*), the rational faculty underlying and informing the spoken word in all its forms:

> In most of our abilities we differ not at all from the animals; we are in fact behind in swiftness and strength and other resources. But because there is born in us the power to persuade each other and to show ourselves whatever we wish, we not only have escaped from living as brutes, but also by coming together have founded cities and set up laws and invented arts, and speech has helped us attain practically all of the things we have devised. For it is

> speech that has made laws about justice and injustice and honor and disgrace, without which provisions we should not be able to live together. By speech we refute the wicked and praise the good. By speech we educate the ignorant and inform the wise.. We regard the ability to speak properly as the best sign of intelligence, and truthful, legal and just speech is the reflection of a good and trustworthy soul... (Harris & Taylor, 1989, p. xi)

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