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## **Vygotsky's Analysis of Children's Meaning Making Processes**

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# Vygotsky's Analysis of Children's Meaning Making Processes

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## **Abstract**

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Vygotsky's work is extensive and covers many aspects of the development of children's meaning-making processes in social and cultural contexts. However, his main focus is on the examination of the unification of speaking and thinking processes. His investigation centers on the analysis of the entity created by this unification – an internal speaking/thinking system with meaning at its center. Despite the fact that this speaking/thinking system is at the center of Vygotsky's work, it remains little explored. This article relies on Vygotsky's writings, particularly *Thinking and Speech*, to describe his examination of the speaking/thinking system. To analyze it he derives the unit – *znachenie slova* – "meaning through language." In *Thinking and Speech* Vygotsky describes the origins and development of *znachenie slova* as a unit of the speaking/thinking system. He also details his genetic, functional, and structural analysis of the processes through which children internalize meaning in social interaction and organize it in an internal, psychological system. The foundation of this system is the child's ability to generalize by using symbolic representation in meaningful communication. Vygotsky's analysis of the structure of generalization in the speaking/thinking system is central to his examination of how children make meaning of their sociocultural worlds.

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**Keywords:** meaning making, psychological systems, Vygotsky, methodology, unit analysis

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The ways in which children make meaning of their physical, social, and cultural worlds and of their own cognitive and affective processes have been studied extensively by educators and psychologists and other social scientists, but because the concept *meaning* has a variety of uses reflecting different disciplines, its meaning is often elusive. Therefore, a question is raised for educational psychologists, “What is the nature of the concept of meaning used in studies on children’s meaning making in classrooms?” The search for an answer to this question comprises a substantial portion of the life work of the Russian educational psychologist, Lev Vygotsky (1896-1934).

An important aspect of Vygotsky’s analysis of children’s meaning-making processes is his examination of the origins and development of the human species’ ability to make and communicate meaning. He compares it to the processes used higher primates to make meaning of their worlds and highlights a fundamental difference – the sociocultural world into which the child is born, including cultural practices and the communicative use of language. Vygotsky’s examination of the processes the individual child develops to create meaning through the acquisition and use of language addresses the central question posed above on the nature of children’s meaning-making processes.

Vygotsky (1987) makes it clear in his main work *Thinking and Speech* that the central focus of his research is the examination of the relationship between the processes used in thinking and the processes involved in the reception and production of spoken and written speech and their unification in *rechnoi myshlenie*, (literally “speech thinking”). The fact Vygotsky uses this concept to represent a psychological process/formation/system is lost when translating it “verbal thinking.” In spite of its centrality, Vygotsky’s analysis of the speaking/thinking system at the center of the creation of meaning has not received as much attention as his analyses of other concepts. This article’s purpose is to describe the system created through the unification of speaking and thinking processes through a precise and explicit examination of Vygotsky’s writings on children’s meaning-making processes.

Unlike other psychologists of his time, who examined mental

functions in isolation, Vygotsky analyzed the human psyche and consciousness as interconnected systems and examined mental functions as processes interrelated in systems. Internal systems of the human psyche are based on the unity of the brain and mind and are activated and shaped through sensuous activity and communicative interactions in specific social situations of development. Vygotsky's examination of the origins and development of the speaking and thinking processes and their unification into a system with meaning at its core rests on the concept of the human psyche as a system of systems. "The structure of meaning is determined by the systemic structure of consciousness" (1997a, p. 137); therefore, Vygotsky examines "the systemic relationships and connections between the child's separate mental functions in development" (1987, p. 323). Vygotsky views the speaking/thinking system as a "unified psychological formation" (1987, p. 44), as a "complex mental whole" (p. 45). The internal, dynamic relationship between thinking and speaking processes represents a "unique and changing set of relations," the development of which should be viewed as "a *psychological system*" (1997a, p. 92).

In his study of the human psyche and its systems, Vygotsky relies heavily on Marx and Engels to develop a methodological approach that analyzes phenomena as processes, as dynamic systems in which unification with other processes and systems is central to development. Vygotsky's approach investigates a phenomenon's origins, examines the forces behind its development, and reveals interconnections and interactions with its environment.

### **Vygotsky's Methodological Approach**

Early in his career, Vygotsky argues, in *The Historical Meaning of the Crisis in Psychology* (1997a), that developing a methodological approach appropriate to the investigation of the human psyche is the main challenge facing psychology. He articulates a goal of developing a methodological approach to the study of consciousness that addresses the problems inherent in the two dominant approaches to psychology of his time: behaviorist approaches that attempt to legitimize psychology by adopting methodological approaches wholesale from the hard

sciences, and metaphysical approaches that deal exclusively with subjective reactions and therefore do not even attempt to explain the origins and development of human consciousness. Vygotsky describes three key aspects to his approach: 1) the use of Marx and Engels' dialectical approach; 2) analysis of complex systems by examining interconnections with other systems; and 3) analysis using units. He analyzes mental functions as processes in systems examining their origins, development, and interfunctional relationships with the goal of revealing "the unified and integral nature of the process being studied" (1987, p. 46). To establish his methodology for this analysis, Vygotsky turns to the works of Marx and Engels, particularly *German Ideology* (1976) and *Theses on Feuerbach* (1969), in which they describe their methodological approach (Mahn, 2010).

Vygotsky's approach incorporates the key tenet of dialectical logic that nothing is constant but change and that all phenomena are processes in motion. "To study something historically means to study it in motion. Precisely this is the basic requirement of the dialectical method" (1997b, p. 43). To study the relationship between think and speaking, Vygotsky examines their unique origins and initial independent paths of development.

The internal relationships between thought and word with which we are concerned are not primal. They are not something given from the outset as a precondition for further development. On the contrary, these relationships emerge and are formed only with the historical development of human consciousness. They are not the precondition of man's formation but its product (1987, p. 243).

Understanding the development of the thinking and speaking processes is key to understanding the nature of their unification. Vygotsky analyzes the dialectical relationship of thinking and speaking processes in a "pure, independent, uncovered form" (1997b, p. 53), focusing times of *qualitative transformation* in the relationships between mental processes, that lead to the creation of the new mental formations, bringing about new systems.

### Analysis of Units

In *Thinking and Speech*, Vygotsky reports on experimental studies he and his colleagues conducted to analyze the *unification* of the thinking and speaking processes and of “the unified psychological formation” (1987, p. 44) – the speaking/thinking system of meaning – that results. After emphasizing the importance of maintaining the integrity of the system as a whole when analyzing the unification of thinking and speaking processes, Vygotsky poses the question: “What then is a unit that possesses the characteristics inherent to the integral phenomenon of *rechnoi myshlenie* [the speaking/thinking system] and that cannot be further decomposed? In our view, such a unit can be found in *znachenie slova*, the inner aspect of the word, its meaning” (p. 47). In partitioning the whole into a unit, “the term ‘unit’ designates a product of analysis that possesses *all the basic characteristics of the whole*. The unit is a vital and irreducible part of the whole” (p. 46) that is derived through an analysis that examines the “concrete aspects and characteristics” (p. 244) of the whole.

During a conference with his closest collaborators in 1933 near the end of his life, Vygotsky clarified how he was using *znachenie slova*: “Meaning is not the sum of all of the psychological operations which stand behind the word. Meaning is something more specific – it is the internal structure of the sign operation” (1997a, p.133). However, Vygotsky’s analysis of *znachenie slova* as the internal structure of the speaking/thinking system is lost when it is translated into English as “word meaning.” The Russian *znachenie* translates to “meaning” and *slova* to “word,” but *slova* represents language as a whole, as reflected in the sentence, “In the beginning was the word.” More accurate, expanded renditions of *znachenie slova* are “meaning through language use” or “meaning through the use of the sign operation.” The key is that *znachenie slova* reflects the essence of the internal psychical system created by the unification of speaking/thinking processes. Meaning communicated through language is a central aspect of *znachenie slova*, but focusing on the external meanings of words and processes of semiotic mediation without analyzing the origins and development of their interrelationship with thinking processes overlooks what Vygotsky

feels is essential – that *znachenie slova* maintain the essence of the internal psychical system of which it is a unit.

### **Analysis of *Znachenie Slova***

In *Thinking and Speech* Vygotsky presents his analysis of *znachenie slova* revealing the relationship between thinking and speaking and disclosing “the internal essence that lies behind the external appearance of the process, its nature, its genesis” (1997b, p. 70). He analyzes *znachenie slova* from three perspectives: *genetic*, looking at its origins; *structural*, examining the development of psychological functions and processes and their interconnections; and *functional*, investigating psychological activity and motivating factors in the speaking/thinking system. Vygotsky looks at the development of meaning as a process, one that is shaped by its systemic relationship with other psychical functions, processes, structures, and systems. As a preliminary step to the study of the unification of thinking and speaking processes and the discovery of its qualitative and quantitative characteristics and categories and concepts, Vygotsky argues that a first step is “an analysis of available information on its phylogenesis and ontogenesis” (1987, p. 40), which he does in chapters 2 and 3 in *Thinking and Speech* critically analyzing theories of Piaget and Stern on the relationship between thinking and speaking. Then in chapter 4 he examines the “theoretical issues concerning the genetic roots of thinking and speech” (p. 40) – looking at the origins of symbolic representation in early humans and comparing and contrasting human thinking processes and language use to higher primates’ thinking and communicative abilities. These chapters provide the foundation for Vygotsky’s analysis of the unit *znachenie slova* in the last three chapters.

In summarizing his work at the end of *Thinking and Speech*, Vygotsky states: “The discovery that *znachenie slova* changes and develops is our new and fundamental contribution to the theory of thinking and speech. It is our major discovery” (1987, p. 245). The development of meaning is a *process* that has its foundation in the infant’s physical brain and in those elementary thinking processes with which humans are born and which develop in infancy – mechanical

memory, involuntary attention, perception, etc. These elementary mental functions are shaped by the sociocultural situation into which children are born, as well as through their interactions with others and their environment. The development of perception, attention, and memory leads to communication between the child and caretakers, with the latter ascribing communicative intent to the infant's gestures and sounds. This early social interaction provides a foundation for the development of children's communicative intentionality and symbolic representation – key elements in the acquisition of language. As children develop, a qualitative transformation in social interaction takes place as communication of meaning is enhanced by the development of the ability to generalize through “the creation and the use of signs” (1997b, p. 55).

It turns out that just as social interaction is impossible without signs, it is also impossible without meaning. To communicate an experience of some other content of consciousness to another person, it must be related to a class or group of phenomena. As we have pointed out, this requires generalization. *Social interaction presupposes generalization and the development of verbal meaning*; generalization becomes possible only with the development of social interaction (1987, p. 48).

Two basic functions of speech – revealing reality in a generalized way and communicating meaning in social interaction – are important components of Vygotsky's speaking/thinking system. “It may be appropriate to view *znachenie slova* not only as a *unity of thinking and speech*, but as a *unity of generalization and social interaction, a unity of thinking and communication*” (1987, p. 49, italics in original). Vygotsky uses *generalization* to refer to the mental act of abstracting from a concrete object to develop a concept of the object in its manifold manifestations and not to *general* versus *local* meaning.

Understanding the potential for confusion about the significance of *meaning*, and having established “the changeable nature of meaning”, Vygotsky says, “we must begin by defining it correctly. The nature of meaning is revealed in generalization. The basic and central feature of any word is generalization. All words generalize” (1987, p. 249).



Meaning is a necessary, constituting feature of the word itself. It is the word viewed from the inside. This justifies the view that *znachenie slova* is a phenomena of speech. In psychological terms, however, *znachenie slova* is nothing other than a generalization, that is a concept. In essence generalization and *znachenie slova* are synonyms. Any generalization – any formation of a concept – is unquestionably a specific and true act of thought. Thus, *znachenie slova* is also a phenomenon of thinking (1987, p. 244).

The structure of generalization that is produced through ongoing development of the ability to generalize provides the foundation for the internal speaking/thinking system and is revealed in Vygotsky's analysis of *znachenie slova*. Through the development of this system, children acquire the ability to generalize and use symbolic representation, underscoring Vygotsky's main discovery that the psychological nature of meaning changes.

At the conclusion of *Thinking and Speech* Vygotsky writes that he has not fully analyzed the speaking/thinking system but has only revealed its complexity, which I have tried to capture in the figure below. In the discussion following the diagram, I use Vygotsky's writings to describe the significance of the numbered items within the diagram as well as their relationships with other aspects in the diagram. (The numbers of each section below refer to the numbers in the diagram.) The concept being described in each section is written in capital letters for clarification. (Referring back to this diagram at the beginning of each numbered section may help to see the particular interrelationship being described.)

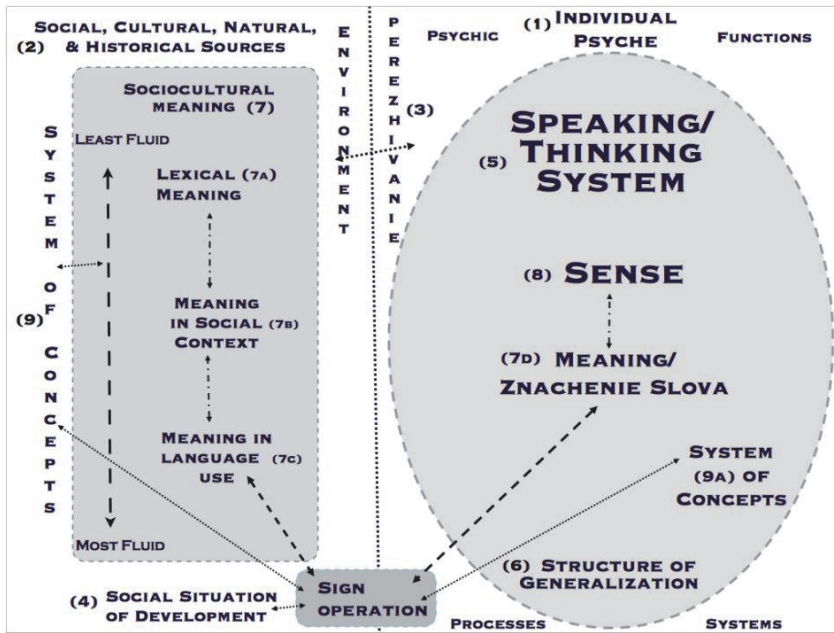


Figure 1. Vygotsky's Speaking/Thinking System with Meaning at its Center

(1). The INDIVIDUAL PSYCHE is demarked by the vertical line near the middle of the figure and includes the psychological functions, processes, structures, and systems that determine its course of development. The psyche as the unification of the brain and mind, involves interrelationships of numerous systems – historical, social, cultural, biological, natural, emotional, chemical, electrical, physical, activity, mental... among others. Vygotsky recognizes the importance of the interrelationships of all of these systems, but his focus is on how these interrelationships lead to and enhance the development of the human psyche. In critiquing an approach that isolates functions for analysis, Vygotsky writes:

Because [that approach] causes the researcher to ignore the unified and integral nature of the process being studied, this form of analysis leads to profound delusion. The internal relationships of the unified whole are replaced with external mechanical relationships between two heterogeneous processes. (1987, p. 46). The result has been that the relationships between thought and word have been understood as constant, eternal relationships between things, not as internal, dynamic, and mobile relationships between processes (1987, p. 283).

These processes are essential in the development of the systems that constitute consciousness. In his analysis of the origins and development of these systems, for both the species and the individual, Vygotsky incorporates an examination of the roles played by social, cultural, historical, and natural forces. His central focus is on the interconnections among all of these processes and how they influence the development of humanity's and of the individual's ability to construct and communicate meaning through language.

(2). The individual psyche develops through interaction with SOCIAL CULTURAL NATURAL HISTORICAL SOURCES. For the SOCIAL aspect Vygotsky relies heavily on Marx and Engels' analysis of the role of labor in the development of human social formations and of how humans changing nature through labor changed humanity. Vygotsky focuses on "human sensuous activity" (Marx, 1933, p. 471) and in particular the way in which humans develop higher psychical processes. To do so he takes a HISTORICAL approach looking at the genesis of those processes for the species and for the individual. The historical development of humanity and its social forms of organization are key forces in the development of the human psyche.

Vygotsky's genetic analysis of the species looks at the time when "humanity...crossed the boundaries of animal existence" (1997b, p. 44) and examines two different processes in that crossing:

On the one hand, it is the process of biological evolution of animal species leading to the appearance of the species *Homo sapiens*; on the other, it is the process of historical development by means of which the primordial, primitive [hu]man became cultured. (1997b, p. 15)

Vygotsky argues that NATURAL and CULTURAL forces create “autonomous and independent lines of development” (p. 15) for the species and for the individual. For humanity, “Culture creates special forms of behavior, it modifies the activity of mental functions, it constructs new superstructures in the developing system of human behavior” (p. 18); for the child, natural and cultural processes “are merged in ontogenesis and actually form a single, although complex process” (p. 15), which has its origins at birth. Unlike for the human species, which had reached an almost complete biological form by the time higher psychical processes developed, growth and cultural development occur at the same time for the child.

Cultural development of the child is still characterized primarily by the fact that it occurs under conditions of dynamic change in organic type. It is superimposed on processes of growth, maturation, and organic development of the child and forms a single whole with these. Only by abstraction can we separate some processes from others. (p. 19)

Vygotsky uses abstraction to examine two interrelated but distinct processes that play a central role in the development of the human psyche:

First, the processes of mastering external materials of cultural development and thinking: language, writing, arithmetic, drawing; second, the processes of development of special higher mental

functions not delimited and not determined with any degree of precision and in traditional psychology termed voluntary attention, logical memory, formation of concepts, etc. (p. 14)

These processes are intertwined from the beginning, but it is only by abstracting one from the other that we can begin to understand their essence.

In his analysis of the cultural development of the child, Vygotsky focuses primarily on the role that language plays in the development the speaking/thinking system in phylo- and ontogenesis. Natural and cultural forces are central in the development of the human psyche. Vygotsky appreciates the tremendous force that culture has on an individual, but his focus is not primarily on cultural practices. Instead, it is on the *cultural development* of the individual, especially the acquisition of the ability to communicate through language. To study the relationships between individuals and their social, cultural, natural, and historical sources of development Vygotsky uses the concept of *perezhivanie*.

(3). *PEREZHIVANIE* describes individuals' interactions with and experiences in the environment – their sociocultural worlds. Vygotsky conceives of the environment broadly to include the whole “ensemble of social relations,” a phrase Marx uses to describe the essence of humanity in his *Theses on Feuerbach* (1933, p. 473). “The essential factors, which explain the influence of environment on the psychological development of children and on the development of their conscious personalities, are made up of their *perezhivanie*” (Vygotsky, 1994, p. 339). This term refers to the way people perceive, emotionally experience, appropriate, internalize, and understand interactions in their social situations of development. “*Perezhivanie* is a unity where, on the one hand, in an indivisible state, the environment is represented, i.e.that which is being experienced...and on the other hand, what is represented is how I, myself, am experiencing this, i.e., all the personal characteristics and all the environmental characteristics are represented in *perezhivanie*” (Vygotsky, 1994, p. 342). There is no adequate translation in English of the Russian term *perezhivanie*, and single or two-word translations do not do justice to the concept. The

translators of Vygotsky's article (1994), "The Problem of the Environment," in which he explains *perezhivanie*, write "the Russian term [*perezhivanie*] serves to express the idea that one and the same objective situation may be interpreted, perceived, experienced or lived through by different children in different ways" (p. 354). Vygotsky points out that the way in which an experience is perceived and made sense of actually affects the environment, not physically, but perceptually. *Perezhivanie* describes the way that individuals participate in and make meaning of "human sensuous activity." Throughout the discussion of the development of the speaking/thinking system, it is important to keep *perezhivanie* in mind, because a criticism of Vygotsky's work is that it focuses too narrowly on internal processes. However, in his analysis of the development of the speaking/thinking system, Vygotsky continually emphasizes the role that social interaction plays in its construction.

(4). SOCIAL SITUATION OF DEVELOPMENT describes the relationships of individuals to their environments and is key to the "unity of the social and the personal" (1998, p. 190). This unity expresses "a completely original, exclusive, single, and unique relation, specific to the given age, between the child and reality, mainly the social reality that surrounds him. We call this relation the *social situation of development* at the given age" (p. 198). It is important to note that Vygotsky conceives of the social situation of development as a *relation*, not a context.

The child is a part of the social situation, and the relation of the child to the environment and the environment to the child occurs through the experience and activity of the child himself; the forces of the environment acquire a controlling significance because the child experiences them. (p. 294)

The stage that children have achieved in their development is a key factor in determining the nature of interactions in their social situations of development. The concept of *perezhivanie*, experience in a social situation of development, is key to understanding the role social

processes play in the development of an individual's speaking/thinking system.

(5). The SPEAKING/THINKING SYSTEM is represented by the largest oval, reflecting a more developed system. Because this system develops, it would occupy far less space graphically in its initial stages. It is important to recognize that Vygotsky is looking at the unity of thinking and speaking processes by examining meaning/*znachenie slova* at the center of the internal speaking/thinking system. Using the foundation described in the four sections above, Vygotsky analyzes the structure that is created through the development of one's ability to generalize.

(6). The STRUCTURE OF GENERALIZATION co-develops with the speaking/thinking system and provides a framework for it. The ability to generalize develops as children acquire language and begin to develop various kinds of concepts, representing different modes of thinking. Both the meaning created in the speaking/thinking system and the structure of generalization change as children acquire a new and expanded understanding of different concepts.

The basic finding of our research is that relationships of generality between concepts are closely associated with the structure of generalization (i.e., they are closely associated with the stages of concept development that we studied in our experimental research). *Each structure of generalization (i.e., syncretic, complexes, preconcepts, and concepts) corresponds with a specific system of generality and specific types of relationships of generality between general and specific concepts* (p. 225, italics in original). ...Thus, in concept development, the movement from the general to the specific or from the specific to the general is different for each stage in the development of meaning depending on the structure of generalization dominant at that stage. (p. 226)

In chapter 5 of *Thinking and Speech* Vygotsky examines the origins of this structure – the initial unification of the thinking and speaking processes – through his analysis of *znachenie slova*. The foundation

for the structure of generalization includes the generalization involved in a pointing gesture. The use of a gesture as symbolic representation lays the foundation for the unification of thinking and speaking in a system. The speaking/thinking system is created when children, in interaction with adults, apply language to amalgamated visual images. In this act of generalization, children bring together “a series of elements that are externally connected in the impression they have had on a child but not unified internally among themselves” (1987, p. 134) into what Vygotsky calls a *syncretic heap* or group. An example is children associating the word “doggie” with their sensual and emotional experiences with their pet and then grouping other objects or events that evoke the same subjective impressions under the word “doggie”.

The next step in the development of the structure of generalization occurs when the “representatives of these [syncretic] groups are isolated and once again syncretically united” (p. 135) – a generalization of a generalization. To trace the development of the structure of generalization, Vygotsky describes how different modes of thinking create “the formation of connections, the establishment of relationships among different concrete impressions, the unification and generalization of separate objects, and the ordering and the systematization of the whole of the child’s experience” (p. 135). He illustrates the unification of speaking and thinking processes by showing how the use of a word facilitates the development of voluntary attention, partitioning, comparison, analysis, abstraction, and synthesis. The word *tail* will help the child focus attention, isolate, abstract, generalize and synthesize features. This kind of unification of speaking and thinking processes is critical to the entire process of the development of meaning.

As the syncretic form of thinking, the “connection-less, connectedness” (p. 134) of visual images develops, a qualitative transformation takes place and the next form of thinking – *thinking in complexes* – emerges and brings about fundamental changes in the structure of generalization. “The complex-collection is a generalization of things based on their co-participation in a single practical operation, a generalization of things based on their functional collaboration” (p.139). The child includes objects in a complex based on empirical connections.



Vygotsky (1987) gives an example of a chained-complex as a child uses a word for a duck in a pond and then uses the same word for any kind of liquid, for a coin with an eagle on it, and for anything round. In the development of thinking in complexes, children's *forms* of thinking move through five different phases, always in a dialectical relationship with the changing *content* of thinking, which is key to understanding Vygotsky's claim that *znachenie slova* develops.

The development of the *form* of thinking facilitates the development of the *content* of thinking – meaning created through the unification of thinking and speaking processes. The content of thinking reflects increased capacity with language, facilitating the ability of children to “use words or other signs as means of actively directing attention, partitioning and isolating attributes abstracting these attributes and synthesizing them” (1987, p. 130). This ability to use abstract thinking leads to “the isolation of the meaning from sound, the isolation of word from thing, and the isolation of thought from word [which] are all necessary stages in the history of the development of concepts” (1987, p. 284). At times in this process there are qualitative transformations such as those between syncretic thinking and thinking in complexes and those between thinking in complexes and thinking in concepts.

The *pseudoconcept* is key to the transformation from thinking in complexes to thinking in concepts. The child and the adult both focus on an object designated by a word, and in that shared contact they are able to communicate; however, they use different forms of thinking to arrive at the point where they are using the same word for an object. The “child thinks the same content differently, in another mode, and through different intellectual operations” (1987, p. 152). The child and the adult have different modes of thought as the basis for their speaking/thinking systems.

The child and adult understand each other with the pronunciation of the word “dog” because they relate the word to the same object, because they have the same concrete content in mind. However, one thinks of the concrete complex “dog” [the pseudoconcept] and the other of the abstract concept “dog”. (p. 155)

Adults also use pseudoconcepts as they go through the process of transforming everyday concepts into scientific concepts – ones within systems. Drawing on mathematics, Vygotsky gives an example of the transition from the mode of thinking in complexes to the mode of thinking in concepts.

The transition from precepts (e.g., the school child's arithmetic concept) to true concepts (e.g., the adolescent's algebraic concept) occurs through the generalization of previously generalized objects. The precept is an abstraction of the number from the object and, based on this, a generalization of the object's numerical characteristics. The concept is an abstraction from the number and, based on this a generalization of the relationships between numbers (1987, p. 230).

Critical of the theories of his day, Vygotsky writes, “all have overlooked the generalization that is inherent in the word, this unique mode of reflecting reality in consciousness” (1987, p. 249). Consequently, they miss that “Each structure of generalization has a characteristic degree of unity, a characteristic degree of abstractness or concreteness, and characteristic thought operations associated with a given level of development of *znachenie slova*” (1987, p. 225).

Before describing the final mode of thinking in the structure of generalization – thinking in concepts – I look at the different ways in which Vygotsky uses meaning and then relate them to his use of the concept of *sense (smysl)*.

(7). The concept of *meaning* is central to Vygotsky's theory, but because he uses *meaning* with a number of different connotations in *Thinking and Speech*, there is often confusion about what he means when he uses *znachenie slova*. Vygotsky argues that children do not have to create or invent their language draw on the developed speech of the adults around them. This adult speech is based on systems of meaning captured as SOCIOCULTURAL MEANING in human knowledge and understanding. Vygotsky examines how meaning develops in a historical, natural, sociocultural context from humans' first use of language to the fully developed systems of knowledge in modern times. At times, Vygotsky uses *meaning* to refer to individual

words – meanings captured in dictionaries – Lexical Meaning (7a). At other times he uses meaning to refer to Meaning in a Social Context (7b) – the way in which knowledge and concepts are conveyed in an individual’s particular sociocultural context. There is a level of fluidity in sociocultural meaning ranging from the most fixed, meanings that are codified in the dictionary, to the most fluid, Meaning in Language Use (7c) – language in specific utterances, written and spoken sign operations in particular social situations of development.

Meaning/*Znachenie Slova* (7d) that is internally appropriated through the sign operation and incorporated into an individual’s speaking/thinking system is influenced by the social situation of development – who is interacting with the individual, what is the meaning being conveyed, and where the child is in the developmental process. There is a constant interplay between the sociocultural meaning and the meaning that is being created in the speaking/thinking system. In analyzing external sociocultural meaning, the focus should go beyond just the meaning and use of a particular word and also focus on the *processes* through which meaning is conveyed in phrases, sentences, idioms, metaphors, and larger texts, and then how it is internalized into the individual’s meaning system. Vygotsky uses the concept of *sense* (smysl) to help explain the internalization process – a dialectical process through which *sense* develops the speaking/thinking system and is developed by it.

(8). Through the concept of SENSE Vygotsky examines the “three basic characteristics of the semantics of inner speech” (1987, p. 275) and focuses primarily on the “unique semantic structure” of inner speech, “indeed, the entire internal aspect of speech that is oriented toward the personality” (1987, p. 283). Attempts to describe Vygotsky’s use of *sense* without considering that he is specifically using it to analyze an internal system miss his central points. It is true that the internal “unique semantic structure” has its origins in sociocultural meanings, but there are always going to be degrees of divergence between sociocultural meanings and the SENSE of words or concepts incorporated as meaning in an individual’s speaking/thinking system.

Children’s first words are dominated by the sense of visual perception and their emotional experience of the social situation of

until their exposures to and interaction with adults in their social situations of development cause sociocultural meanings of words to play a more significant role in children's creation of meaning. The internalization process through which the child makes meaning of sociocultural meanings shapes the way that they are incorporated into an individual's Sense. In this process, Vygotsky points out that the "child's word may correspond with the adult's in object relatedness, but not in meaning" (1987, p. 153), thus creating a different sense. Sense (*smysl*) is an important component in the speaking/thinking system with sociocultural meaning as an essential but subordinate part of sense. This subordination is a defining characteristic of inner speech. "In inner speech, we find a predominance of the word's sense over its meaning" (1987, p. 274). "The meaning of the word in inner speech is an individual meaning, a meaning understandable only in the plane of inner speech" (p. 279). "To some extent, [sense] is unique for each consciousness and for a single consciousness in varied circumstances" (p. 276). Therefore, the sense of a word is never complete. Sense is "the aggregate of all the psychological facts that arise in our consciousness as the result of the word" (pp. 275-276) and is a transformative component in the development of the speaking/thinking system. "Ultimately, the word's real sense is determined by everything in consciousness which is related to what the word expresses...[and] ultimately sense depends on one's understanding of the world as a whole and on the internal structure of personality" (p. 276).

Essential to the speaking/thinking system is the *lifelong*, dynamic, dialectic interplay between sociocultural meaning and sense that develops in the internalization processes. *Sense's* course of development includes: the early trial and error period of syncretic images; the process of thinking in complexes; the development of everyday and scientific concepts; and adolescents' development of conscious awareness of their own thinking processes – thinking in concepts. There is an ongoing dialectical interaction in this development between the existing, relatively stable, external sociocultural meanings and sense in the speaking/thinking system.

The way in which sociocultural meaning is transformed as it is internalized can be seen at the level of single words in the difference

between the individual's sense of the word and common usage based on dictionary meanings. The word *mother*, for example, invokes for every individual a very personal *sense* of the word. At the same time there is the sociocultural meaning of the word denoting both a biological and cultural relationship. The divergence between sociocultural meaning and an individual's sense exists in both the internalization and externalization processes. Language can never fully express an individual's sense of a concept or a thought.

(9). Just as there is an individual's system of meaning and a sociocultural system of meaning, there is a sociocultural SYSTEM OF CONCEPTS (9) and an individual's System of Concepts (9a). The interaction with adults through the use of the pseudoconcept described above in (6) lays the groundwork for the next transformation in conceptual development as the child moves from concrete to abstract thinking, and from thinking in complexes to thinking in concepts. A system of concepts is built on the structure of generalization in the speaking/thinking system, being influenced by and influencing it, in a dialectical relationship. "The development of concepts or *znachenie slova* presupposes the development of a whole series of [mental] functions...voluntary attention, logical memory, abstraction, comparison, and differentiation" (1987, p. 170). Although the foundation for concepts is laid when children begin to acquire language, they do not use concepts existing in systems until they reach adolescence. As the child begins to isolate and abstract separate elements, and "to view these isolated, abstracted elements independently of the concrete and empirical connections in which they are given" (1987, p. 156), the speaking/thinking system undergoes a qualitative transformation as the child begins to think in concepts. "The concept arises when several abstracted features are re-synthesized and when this abstract synthesis becomes the basic form of thinking through which the child perceives and interprets reality" (p. 159).

The most important psychological process for adolescents in acquiring the ability to think in concepts is the development of an "internal meaningful perception of their own mental processes" (p. 190), through which they gain conscious awareness of their thinking processes. This introspection "represents the initial generalization or abstraction of internal mental forms of activity" (p. 190). Vygotsky argues that this

generalization and abstraction can only be accomplished through the process of developing a system of concepts, the source of which is the system that exists externally and includes scientific concepts, which are generally, but not exclusively, introduced at school. As it is internalized, this system of concepts becomes part of the process that is developing meaning in the speaking/thinking system. "Psychologically, the development of concepts and the development of *znachenie slova* are one and the same process" (1987, p. 180).

Vygotsky argues that scientific/academic concepts "can arise in the child's head only on the foundation provided by the lower and more elementary forms of generalization which previously existed" (p. 177). The systematic use of concepts transforms the structure of generalization as the system of scientific concepts "is transferred structurally to the domain of the everyday concepts, restructuring the everyday concept and changing its internal nature from above" (p. 192). A dialectical relationship is established with the everyday concepts in which the "scientific concept grows downward through the everyday concept and the everyday concept moves upward through the scientific.... In this process, [everyday concepts]...are restructured in accordance with the structures prepared by the scientific concept" (p. 220). The link between the everyday and scientific concepts as they move in opposite directions is that "*of the zone of proximal development*" (p. 220).

This systematization of concepts brings about a qualitative transformation in the speaking/thinking system, generating changes in adolescents' volition and creating a conscious awareness of their own thinking processes.

Only within a system can the concept acquire conscious awareness and a voluntary nature. Conscious awareness and the presence of a system are synonyms when we are speaking of concepts, just as spontaneity, lack of conscious awareness, and the absence of a system are three different [ways of] designating the nature of the child's concept (pp. 191-192).

The adolescent's speaking/thinking system, which incorporates conscious awareness and systematization of concepts, yields a qualitatively different view of reality, because it has different relationships of generality than that of a system based on everyday concepts. (The following quote from Vygotsky, describing this different view, ends the description of the items in the diagram above.)

According to a well-known definition of Marx, if the form of a manifestation and the essence of things coincided directly, then all science would be superfluous. For this reason, thinking in concepts is the most adequate method of knowing reality because it penetrates into the internal essence of things, for the nature of things is disclosed not in direct contemplation of one single object or another, but in the connections and relations that are manifested in movement and in the development of the object, and these connect it to all of the rest of reality. The internal connection of things is disclosed with the help of thinking in concepts, for to develop a concept of some object means to disclose a series of connections and relations of that object with all the rest of reality, to include it in the complex system of phenomena (1998, p. 54).

### **Inner Speech and the Speaking/Thinking System**

After analyzing the construction of the structure of generalization and the creation of a system of concepts, Vygotsky uses functional analysis to examine the internalization of speech and its mediation of thought central to the creation of meaning in the speaking/thinking system. The unit *znachenie slova* reveals “the complex structure of the actual process of thinking, the complex movement from the first vague emergence of thought to a completion in a verbal formulation” and shows how “meanings function in the living process” of the speaking/thinking system (1987, p. 249). In each stage in development “there exists not only a specific structure of verbal meaning, but a special relationship between thinking and speech that defines this structure” (p. 249). Vygotsky examines this relationship by describing the different planes through which “thought passes as it becomes embodied in the word” (p. 250).

Vygotsky begins his analysis with the external plane and then proceeds to the different internal planes, focusing mainly on inner speech. "Without a correct understanding of the psychological nature of inner speech, we cannot clarify the actual complex relationships between thought and word" (p. 255). As opposed to Piaget, who proposed that egocentric speech – articulated speech directed to oneself – disappears, Vygotsky argues that it becomes internalized in the form of inner speech as part of the process of intermental/external functioning becoming intramental/internal functioning. In this internalization process the function and structure of language changes, which in turn changes the speaking/thinking system. The transformations in the internalization of speech include fragmentation, abbreviation, and agglutination, along with predicativity. "The simplification of syntax, the minimization of syntactic differentiation, the expression of thought in condensed form and the reduction in the quantity of words all characterize this tendency toward predicativity that external speech manifests under certain conditions" (p. 269). Experimental research on inner speech reveals that:

The structural and functional characteristics of egocentric speech develop along with the development of the child. At three years of age, there is little difference between egocentric and communicative speech. By seven years of age, nearly all of the functional and structural characteristics of egocentric speech differ from those of social speech. (p. 261)

Vygotsky's analysis of *znachenie slova* reveals the internal planes in the speaking/thinking system from external speech to inner speech, from inner speech to pure thought, and, ultimately, to the "motivating sphere of consciousness, a sphere that includes our inclinations and needs, our interests and impulses, and our affect and emotion. The affective and volitional tendency stands behind thought" (p. 282). Thought motivated in the affective/volition system combines with language in the speaking/thinking system leading to production of written or oral language. In this process "thought is not only mediated externally by y signs. It is mediated internally by meanings" (p. 282). "Where external speech involves the embodiment of thought in the word, in inner speech



the word dies away and gives birth to thought. To a significant extent, inner speech is thinking in pure meanings, though as the poet says ‘we quickly tire of it’” (p. 280). There is a qualitative difference between the external meaning and function of language and the meaning and function it acquires through internalization into internal speaking/thinking systems.

This outline of the characteristics of inner speech leaves no doubt concerning the validity of our basic thesis, the thesis that *inner speech is an entirely unique, independent, and distinctive speech function*, that it is completely different from external speech. This justifies the view that inner speech is an internal plane of *rechnoi myshlenie* [the speaking/thinking system] which mediates the dynamic relationship between thought and word. (1987, p. 279, italics in original)

### **Qualitative Transformations in the Speaking/Thinking System**

For Vygotsky, psychological systems do not proceed on a linear path; rather their courses are determined by qualitative transformations in the relationships between mental functions and other psychological processes. These qualitative transformations take place in the speaking/thinking system and affect and are affected by the development of the structure of generalization. Analyzing these qualitative changes leads Vygotsky to the central discovery of his research – that *znachenie slova* develops. His analysis of *znachenie slova* reveals that transformations in interpsychological relationships result in the speaking/thinking system’s development. They include the:

- (a) development of higher psychological processes through reconstruction of elementary processes;
- (b) development of the structure of generalization in stages marked by different modes of thinking – syncretic, complexive, and conceptual;
- (c) development of scientific/academic concepts in relationship to spontaneous/everyday concepts;

(d) internalization of speech and the development of inner speech; and

(e) transformations in the relationships of mental functions that bring about periods of “crisis” in children’s development at approximately ages one, three, seven, and thirteen.

The unification of speaking and thinking processes brings about transformations “*from direct, innate, natural forms and methods of behavior to mediated, artificial mental functions that develop in the process of cultural development*” (1998, p. 168, italics in original). The higher psychological processes depend on new mechanisms that result not from the gradual, linear development of the elementary processes, but from “a qualitatively new mental formation [that] develops according to completely special laws subject to completely different patterns” (1998, p. 34). The development of this new formation, the speaking/thinking system with meaning and concepts at its core, leads to a transformation in which elementary “processes that are more primitive, earlier, simpler, and independent of concepts in genetic, functional, and structural relations, are reconstructed on a new basis when influenced by thinking in concepts” (1998, p. 81).

### Conclusion

Vygotsky states that his study had only just begun and that he had merely been able to show the complexity of the system that is created through the unification of thinking and speaking. He was not able to conduct more research on it as he died shortly after completing *Thinking and Speech*. His work, banned by Stalin’s bureaucracy in 1936, remained virtually unavailable until 1956. When once again it began to see the light of day, it was through interpretations, which claimed that Vygotsky’s unit *znachenie slova* was used to analyze consciousness as a whole and that it was not adequate for that task (Leontiev, 1981). Vygotsky clearly states he is using *znachenie slova* to examine the speaking/thinking system and not consciousness as a whole; nevertheless, Leontiev rejects Vygotsky’s unit and substitutes an evolving series of units tied to human activity to analyze consciousness. Leaving to a further discussion the question of whether or not this substitution has merit, it has contributed to obscuring Vygotsky’s analysis of the unit *znachenie slova* to reveal the speaking/thinking

system, resulting in the phenomenon that Vygotsky put at the center of his analysis being overlooked.

While it is impossible in a short article to do justice to Vygotsky's analysis of *znachenie slova* to reveal the complexity of the speaking/thinking system through which children make meaning of their worlds, I hope that this exploration has shown the value of reading Vygotsky's work, both broadly and deeply. Through such a reading, scholars can gain a better understanding of his notion of consciousness as a system of systems and also can see the overall coherence in his work as it evolved during his lifetime. Such an understanding can also stimulate further exploration of Vygotsky's analysis of the way that children make meaning of their worlds through the development of speaking/thinking systems.

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