

THE COLLECTED WORKS OF
L. S. VYGOTSKY

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Including the Volume *Thinking and Speech*

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Chapter 7

THOUGHT AND WORD

*I forgot the word that I wanted to say,
And thought, unembodied, returns to the hall of shadows.*
O.E. Mandelstam, *The Swallow*

1

Our investigation began with an attempt to clarify the internal relationships between thought and word at the most extreme stages of phylogenetic and ontogenetic development. In the prehistoric development of thinking and speech, we found no clearly defined relationships or dependencies between the genetic roots of thought and word. Thus, 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.

With the anthropoids -- the ultimate development of the animal world -- we find forms of speech and intellect that are phenotypically similar to their counterparts in man. However, they are not connected with one another in any way. In the initial stages of child development, we can clearly identify a preintellectual stage in the formation of speech and a pre-speech stage in the development of thinking. Once again, the connection between thought and word is neither inherent or primal. This connection emerges, changes, and grows with the development of thought and word.

As we tried to show at the outset, however, it would be incorrect to represent thinking and speech as processes that are externally related to one another, as two independent forces moving and acting in parallel with one another or intersecting at specific points and interacting mechanically. The absence of a primal connection between thought and word does not imply that this connection can arise only as an external connection between two fundamentally heterogeneous forms of the activity of consciousness. On the contrary, the basic methodological defect of nearly all studies of thinking and speech -- that which underlies the fruitlessness of this work -- is the ten-

dency to view thought and word as two independent and isolated elements whose external unification leads to the characteristic features of verbal thinking.

We have attempted to demonstrate that those who begin with this mode of analysis are doomed to failure from the outset. To explain the characteristics of verbal thinking, they decompose the whole into the elements that form it. They decompose verbal thinking into speech and thinking, elements that do not contain the characteristics inherent to the whole. This closes the door to any real explanation of these characteristics. We have compared the researcher who takes this approach to one who decomposes water into hydrogen and oxygen in the attempt to explain why water extinguishes fire. As we noted, this researcher would find to his surprise that oxygen sustains combustion while hydrogen is itself combustible. We also argued that decomposition into elements is not analysis in the true sense of the word but *a process of raising the phenomenon to a more general level*. It is not a process that involves the internal partitioning of the phenomenon which is the object of explanation. It is not a method of analysis but a method of generalization. To say that water consists of hydrogen and oxygen is to say nothing that relates to water generally or to all its characteristics. It is to say nothing that relates to the great oceans and to a drop of rain, to water's capacity to extinguish fire and to Archimedes's law. In the same way, to say that verbal thinking contains intellectual processes and speech functions is to say nothing that relates to the whole of verbal thinking and to all its characteristics equally. It is to say nothing of relevance to the concrete problems confronting those involved in the study of verbal thinking.

From the outset, then, we have tried to frame the entire problem in a new way and apply a new method of analysis. We attempted to replace the method based on decomposition into elements with a method of analysis that involves partitioning the complex unity of verbal thinking into units. In contrast to elements, units are products of analysis that form the initial aspects not of the whole but of its concrete aspects and characteristics. Unlike elements, units do not lose the characteristics inherent to the whole. The unit contains, in a simple, primitive form, the characteristics of the whole that is the object of analysis.

We found the unit that reflects the unity of thinking and speech in the *meaning* of the word. As we have tried to show, word meaning is a unity of both processes that cannot be further decomposed. That is, we cannot say that word meaning is a phenomenon of either speech or thinking. The word without meaning is not a word but an empty sound. Meaning is a necessary, constituting feature of the word itself. It is the word viewed from the inside. This justifies the view that word meaning is a phenomenon of speech. In psychological terms, however, word meaning is nothing other than a generalization, that is, a concept. In essence, generalization and word meaning are synonyms. Any generalization -- any formation of a concept -- is unquestionably a specific and true act of thought. Thus, word meaning is also a phenomenon of thinking.

Word meaning, then, is a phenomenon of both speech and intellect. This does not, however, represent a simultaneous and external membership in two different domains of mental life. Word meaning is a phenomenon of thinking only to the extent that thought is connected with the word and embodied in it. It is a phenomenon of speech only to the extent that speech is connected with thought and illuminated by it. Word meaning is a phenomenon of verbal thought or of the meaningful word. It is a unity of word and thought.

No further evidence is needed to support this basic thesis. Our experimental studies have consistently supported and justified it. They have shown that by taking word meaning as a unit of verbal thinking we create the potential for investigating its

development and experimental stages. The subsequent conclusion, the finding that word meaning develops and changes is our main contribution. It is our main contribution to the theory of constancy and its foundation for previous research.

From the perspective of meaning is associative in perceptual word meaning reminds an individual of the previous change once it has been reinforced or weakened of the same type, or contrast of objects, or contrast. In other words, the changes. It cannot, however, require that it cease to be, in perspective, the development of word meaning -- becoming

This is expressed in adult speech. Having linguistics that is concerned with semantics) has continued sound-form and its most abstract -- are a connection that unite for meaningful speech we have seen his coat remember its meaning there is nothing unique not pose the question of the development reduced to changes in word may initially develop through the processes of another, may initially development of the meaning the object content of might change through linguistics. Linguistic meaning changes, that to higher and more complex organization of reality in the process of the historical

This associative development of the meaning is a variable. The development and quantitative changes

development and explaining its most important characteristics at the various developmental stages. The primary result of this work, however, is not this thesis itself but a subsequent conclusion that constitutes the conceptual center of our investigation, that is, the finding that word meaning *develops*. The discovery that word meaning changes and develops is our new and fundamental contribution to the theory of thinking and speech. It is our major discovery, a discovery that has allowed us to overcome the postulate of constancy and unchangableness of word meaning which has provided the foundation for previous theories of thinking and speech.

From the perspective of traditional psychology, the connection between word and meaning is associative; it is a connection established as a result of a repeated coincidence in perceptual consciousness of the word and the thing the word designates. The word reminds an individual of its meaning in the same way that a person's coat reminds him of the person. From this perspective, word meaning cannot develop or change once it has been established. Associations that connect word and meaning can be reinforced or weakened. It can be enriched through connections with other objects of the same type, extended in accordance with similarity or contiguity to a wider circle of objects, or contracted as this circle of objects narrows or becomes more restricted. In other words, the association may undergo a series of quantitative and external changes. It cannot, however, change its internal psychological nature. This would require that it cease to be what it is, that it cease to be an association. From this perspective, the development of the meaningful aspect of speech -- the development of word meaning -- becomes inexplicable and impossible.

This is expressed in linguistics and in the psychological study of both child and adult speech. Having assimilated the associative conception of the word, the field of linguistics that is concerned with the study of the meaningful aspect of speech (i.e., semantics) has continued to view the word as an association between the word's sound-form and its object content. Word meanings -- from the most concrete to the most abstract -- are assumed to have a single common structure. Since the associative connection that unites the word and its meaning constitutes the foundation not only for meaningful speech but for processes such as being reminded of a person because we have seen his coat there is nothing unique to speech as such. The word forces us to remember its meaning in the same way that one thing reminds us of another. Because there is nothing unique in the connection of the word with its meaning, semantics cannot pose the question of the development of the meaningful aspect of speech, the question of the development of word meaning. The entire process of development is reduced to changes in the associative connections between words and objects. The word may initially designate one object and then become connected with another through the processes of association. The coat, being transferred from one owner to another, may initially remind us of one person and subsequently of another. The development of the meaningful aspect of speech is reduced to the changes that occur in the object content of words. The notion that the semantic structure of word meaning might change through the historical development of language is completely foreign to linguistics. Linguistics cannot perceive the possibility that the psychological nature of meaning changes, that linguistic thought moves from primitive forms of generalization to higher and more complex forms, that the very nature of the reflection and generalization of reality in the word changes with the emergence of abstract concepts in the process of the historical development of language.

This associative perspective on word meaning also leads to the view that the development of the meaningful aspect of speech in ontogenesis is impossible and inexplicable. The development of word meaning in the child is reduced to purely external and quantitative changes in the associative connections that unite word and meaning,

to the enrichment or reinforcement of these connections. The notion that the structure and nature of the connections between word and meaning might change during the development of the child's speech -- the fact that they do change during ontogenesis -- is inexplicable from the associative perspective.

Finally, this perspective leads to the notion that there is nothing in the verbal thinking of the adult other than an unbroken, lineal, associative movement from the word to its meaning and from the meaning to the word. The understanding of speech is conceptualized as a chain of associations that arise in the mind under the influence of familiar word forms. The expression of thought in the word is conceptualized as the reverse movement along this same associative path, beginning this time with the representation of objects in thought and moving to their verbal designation. These kinds of mutual connections between two representations are always insured by associations. At one point, the coat may remind us of the person who wears it, while at another the form of the person may remind us of his coat. Thus, there is nothing in the understanding of speech nor in the expression of speech in thought that is new or unique when compared to other acts of remembering or associative connection.

The inadequacy of associative theory was recognized and demonstrated (both experimentally and theoretically) some time ago. This has not, however, influenced the associative understanding of the word and its meaning. The Wurzburg school considered its main task to be that of demonstrating that thinking cannot be reduced to an associative flow of representations, that the movement, cohesion, and recall of thoughts cannot be explained in associative terms. It assumed the task of demonstrating that the flow of thought is directed by several unique laws. However, the Wurzburg school not only failed to reanalyze the associative perspective on the relationship between word and meaning but failed to see why this kind of reanalysis was necessary. Instead, it separated speech and thinking, granting to God what is God's and to Caesar what is Caesar's. It liberated thought from all images and from everything sensual. It liberated thought from the power of associative laws, transforming it into a purely mental act. In the process, it returned to ideas that have their roots in the pre-scientific spiritualistic conceptions of Augustine⁷⁵ and Descartes.⁷⁶ The final product was an extreme subjective idealism that surpassed even that of Descartes. In Kulpe's words: "We not only say: 'I think therefore I am.' We argue that 'the world exists only as we establish it and define it'" (1914, p. 81). Since thinking belonged to God it was granted to God. As Kulpe himself recognized, this opened the door for the psychology of thinking to move toward the ideas of Plato.

Having liberated thought from any sensual component and returned it to a pure, unembodied, mental act, these psychologists simultaneously tore thinking from speech and assigned the latter entirely to the domain of associative laws. Thus, the connection between the word and its meaning continued to be viewed as a simple association. The word was seen as the external expression of thought, as its clothing. The word had no place in the inner life of thought. Never have thinking and speech been as isolated from one another in psychological theory as they were in the Wurzburg epoch. The process of overcoming associationism in the domain of thinking led to its reinforcement in the domain of speech. As Caesar's, speech was granted to Caesar.

Psychologists who have extended this line of thought within the tradition of the Wurzburg school have not only failed to transform it but have continued to deepen and develop it. Having demonstrated the complete inadequacy of the constellational theory of productive thinking (ultimately, the inadequacy of the associative theory of productive thinking), Seltz replaced it with a new theory that deepened and strengthened the gap between thought and word that was inherent in the works of this tradition from the outset. Seltz continued to analyze thinking in and of itself, estranged

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from speech. He comes out of the mental to the intellectual, introduced nothing new into speech.

Even Ach, who moves toward overcoming the recognition that determines the process of construction of word meaning. He is fatal for change and emerged, it remained word meaning is finalized assumed the same representations of the that the initial moment

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The word and the ever, this structure is There is nothing that is and some fruit or a word accordance with the same among other things. In the general structural other things? What does How does the word relate word? All these questions of the unique character of these particular connections characteristic of the new psychology

To clarify the concept again use the example of

from speech. He concluded that man's productive thinking is identical in its fundamentals to the intellectual operations of the chimpanzee. To the extent that the word introduced nothing new to the nature of thought, thinking remained independent of speech.

Even Ach, who made special studies of word meaning and who first made the move toward overcoming associationism in concept theory, was unable to go beyond a recognition that determining tendencies were present alongside associative tendencies in the process of concept formation. He did not escape from the earlier understanding of word meaning. He identified the concept with word meaning, excluding any potential for change and development in concepts. Ach assumed that once meaning emerged, it remained unchanged and constant. He assumed that the development of word meaning is finished at the moment of its formation. The psychologists Ach criticized assumed the same thing. Thus, though Ach and his opponents differed in their representations of the initial moment in the formation of word meaning, both assumed that the initial moment and end point in the process of concept development coincide.

We find the same thesis concerning the theory of thinking and speech in contemporary structural psychology. This tradition has made a more profound and consistent attempt to overcome associative psychology. Therefore, it has not been limited to the indecisive resolutions of the question characteristic of its predecessors. It has attempted to remove not only thinking but speech from the domain of associative laws, to subordinate both to the laws of structural formations. However, this tradition not only failed to advance in its theory of thinking and speech but took a profound step backward in comparison to its predecessors.

First, this new theory preserved a fundamental break between thinking and speech. The relationship between thought and word was represented as a simple analogy, as a reduction of both to a common structural denominator. Within this tradition, researchers conceptualized the origin of true meaningful words in the child as analogous to the intellectual operations of the chimpanzee in Kohler's experiments. They argued that the word enters the structure of things and acquires a certain functional significance in the same way that the stick entered into the structure of the situation of attaining fruit for the chimpanzee and acquired the functional significance of a tool. The connection between the word and meaning is no longer thought of as an associative connection. It is represented as a structural connection. Of course, this is a step forward. However, if we carefully consider the foundations of this new perspective, we quickly find that this step forward is an illusion, that we remain in the rut laid down by associative psychology.

The word and the thing that it designates form a single unified structure. However, this structure is analogous to any structural connection between two things. There is nothing that is unique to the word. Any two things, whether they are a stick and some fruit or a word and the object it designates, merge into a unified structure in accordance with the same laws. Once again, the word turns out to be just one thing among other things. It is a thing which is united with other things in accordance with the general structural laws that unite all things. What distinguishes the word from other things? What distinguishes the structure of the word from other structures? How does the word represent the thing in consciousness? What makes the word a word? All these questions remain outside the researcher's field of view. The rejection of the unique character of the word and its relationship to meaning, the dissolving of these particular connections into the sea of all structural connections, is no less characteristic of the new psychology than it was of the old.

To clarify the concept of the word's nature in structural psychology, we can once again use the example of the man and his coat. That is, we can use the same example

we used in clarifying the concept of the connection between word and meaning in associative psychology. The word reminds us of its meaning in the same way that the coat reminds us of the man on which we are accustomed to seeing it: this thesis preserves its force for structural psychology. Here, the coat and the man that wears it form a unified structure, a structure which is entirely analogous to the word and the thing it designates. The fact that the coat may remind us of its owner and that the man's form may remind us of his coat are once again explained in this new psychology through a single set of structural laws. The principle of association is replaced with the principle of structure.

Like the principle of association, this new principle is extended to all relationships, extended universally and without differentiation. Representatives of the old psychology argue that the connection between the word and its meaning is formed in the same way as the connection between the stick and the banana. Is this not the same connection that we have discussed in our example? In the new psychology, as in the old, any possibility of explaining the unique relationships between word and meaning is excluded. There is no fundamental distinction between these relationships and other object relationships. In the twilight of universal structural relations, all cats are gray. As had earlier been the case in the twilight of universal associative connections, it is impossible to distinguish them.

Ach attempted to overcome the concept of associations by using the concept of the determining tendency. Gestalt psychology made the same attempt, relying on structural principles. In both cases, however, two basic features of the old theory were preserved. First, Ach and the Gestalt psychologists preserved the concept that the connections between word and meaning are fundamentally identical to the connections between other things. Second, they preserved the notion that the word -- by its nature -- does not develop. The concept that the development of word meaning is completed at the moment the word emerges is as basic to Gestalt psychology as it was for traditional psychology. This is why the succession of research traditions in psychology -- while producing sharp advances in areas such as perception and memory -- appear to be ceaselessly marking time or revolving in a circle in their treatment of the issue of thinking and speech. One principle is replaced by another and the new is in radical opposition to what has preceded it. In their understanding of the relationship between thinking and speech, however, the old and new are like identical twins. In the words of the French proverb, the more things change the more they stay the same.

In its theory of speech, the new psychology retains the thesis of the old; it preserves the concept that thought is independent of word. In its theory of thinking, however, it actually takes a significant step backward. First, Gestalt psychology tends to reject the notion that there are laws that are specific to thinking as such; it tends to merge the laws of thinking with general structural laws. The Wurzburg school raised thought to the rank of a purely mental act, leaving the word in the domain of unchanging sensory associations. As we said, this was its basic flaw. Nonetheless, the Wurzburg school was able to differentiate the laws that govern the coupling, movement, and flow of thoughts from the more elementary laws that govern representations and perceptions. This psychology was more advanced than Gestalt psychology in this respect. Reducing the domestic chicken's perception, the chimpanzee's intellectual operations, and the child's first meaningful word to a common structural denominator, Gestalt psychology has not only erased any boundary between the structure of the meaningful word and the structure of the stick and banana -- it has erased the boundary between the highest forms of thinking and the most elementary perception.

If we summarize this modest critical outline of the basic contemporary theories of thinking and speech, we find two basic theses inherent to them. First, none of these

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theories has grasped the word; none has grasped longer be one. All this unique mode of analysis points are internally can lead us to an analysis of the word and its meaning of research tradition conflicts among the various and speech are rendered the old and venerable him:

The discovery of the key to liberation currently finds itself in development and with dynamic formation. defining it correctly. and central feature of

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theories has grasped what is most basic and central to the psychological nature of the word; none has grasped what makes the word a word and without which it would no longer be one. All have overlooked the generalization that is inherent in the word, this unique mode of reflecting reality in consciousness. Second, these theories consistently analyze the word and its meaning in isolation from development. These two points are internally linked. Only an adequate conception of the word's mental nature can lead us to an understanding of the possibilities that exist for the development of the word and its meaning. These features are preserved at each stage in this sequence of research traditions. To this extent, they merely repeat one another. Thus, the conflicts among the various research traditions in the contemporary psychology of thinking and speech are reminiscent of Heine's humorous poem where he tells of the reign of the old and venerable Template (Schablon) who was killed by a dagger raised against him:

*When they had finished with the coronation,
The new heir to kingdom and throne
Seemed to those who called him New Temmplate
Like the Old Template they'd already known.*

2

The discovery of the changeable nature of word meanings and their development is the key to liberating the theory of thinking and speech from the dead end where it currently finds itself. Word meaning is inconstant. It changes during the child's development and with different modes of the functioning of thought. It is not a static but a dynamic formation. To establish the changeable nature of meaning, 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.

It is important to emphasize, however, that the fact that the internal nature of word meaning changes implies that the relationship of thought to word changes as well. To understand the changeable and dynamic relationship of thought to word, we need to take a cross-section of the genetic scheme of changes in meaning that we developed in our basic research. We need to clarify *the functional role of verbal meaning in the act of thinking*.

We have not yet had the opportunity to consider the process of verbal thinking as a whole. However, we have brought together all the information necessary to outline the basic features of this process. At this point, we will attempt to outline the complex structure of the actual process of thinking, the complex movement from the first vague emergence of a thought to its completion in a verbal formulation. For this purpose, we must move from a genetic to a functional plane of analysis. That is, we must now analyze not the development of meanings and their structure, but the process through which *meanings function in the living process of verbal thinking*. If we succeed in this, we will have shown that with 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. Functional problems are resolved most easily when we are studying the higher, developed forms of some activity, where the whole complexity of the functional structure appears in a well articulated, mature form. Therefore, we will consider issues of development only briefly, turning then to the study of the relationships of thought to word in the development of consciousness.

When we attempt to realize this goal, a grand and extraordinarily complex picture emerges before us, a picture that surpasses in subtlety the architectonics of researchers' richest expressions. In the words of Tolstoy, "the relationship of word to

thought and the formation of new concepts is the most complex, mysterious, and delicate process of the spirit (1903, p. 143).

Before moving on to a schematic description of this process, we will state our leading concept. This central idea -- a concept we will develop and clarify in the following discussion -- can be expressed in the following general formula: The relationship of thought to word is not a thing but a process, a movement from thought to word and from word to thought. Psychological analysis indicates that this relationship is a developing process which changes as it passes through a series of stages. Of course, this is not an age related development but a functional development. The movement of thinking from thought to word is a developmental process. Thought is not expressed but completed in the word. We can, therefore, speak of the establishment (i.e., the unity of being and nonbeing) of thought in the word. Any thought strives to unify, to establish a relationship between one thing and another. Any thought has movement. It unfolds. It fulfills some function or resolves some task. This flow of thought is realized as an internal movement through several planes, as a transition from thought to word and from word to thought. Thus, the first task in an analysis of the relationship of thought and word as a movement from thought to word is to analyze the phases that compose this movement, to differentiate the planes through which thought passes as it becomes embodied in the word. To paraphrase Shakespeare, much opens up before us here of which "even wise men have not dreamed."

Our analysis leads first to the differentiation of two planes of speech. Though they form a unity, the inner, meaningful, semantic aspect of speech is associated with different laws of movement than its external, auditory aspect. The unity of speech is complex, not homogeneous. This differentiation in the movement of the semantic and sound aspects of speech is reflected in several factors related to the ontogenesis of speech development. In the present context, we will note only two major factors.

First, we know that the development of the external aspect of speech in the child begins with the initial single word utterance and moves to the coupling of two or three words, then to the simple phrase and the coupling of phrases, and still later to the complex sentence and connected speech composed of a series of complex sentences. Thus, in mastering the external aspect of speech, the child moves from the part to the whole. In its meaning, however, we know that the child's first word is not a one word sentence but a whole phrase. Thus, in the development of the semantic aspect of speech, the child begins with the whole -- with the sentence -- and only later moves to the mastery of particular units of meaning, to the mastery of the meanings of separate words. The child begins with the whole and only subsequently partitions its fused thought which is expressed in the one word sentence into a series of separate though interconnected verbal meanings. Thus, the development of the semantic and external aspects of speech move in opposite directions. The semantic aspect of speech develops from the whole to the part or from the sentence to the word. The external aspect of speech moves from the part to the whole or from the word to the sentence.

This alone is sufficient to demonstrate the necessity of distinguishing the development of the meaningful and the external aspects of speech. Movement along these two planes does not coincide; it does not merge into a single line. As this example indicates, it can follow lines that move in opposite directions. Of course, this does not imply a rupture in the relationship between these two planes of speech. It does not imply that they are autonomous of one another. On the contrary, the differentiation of these two planes is a first and a necessary step in establishing their internal unity. This unity presupposes that each of these two aspects of speech has its own movement and that the relationships between these movements are complex. We can analyze the relationships underlying the unity of speech only after we have differentiated the aspects

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Even at the outset, then, thought and word are not cut from a single mold. In a certain sense, one can say that we find more opposition than agreement between them. The structure of speech is not a simple mirror image of the structure of thought. It cannot, therefore, be placed on thought like clothes off a rack. Speech does not merely serve as the expression of developed thought. Thought is restructured as it is transformed into speech. It is not expressed but completed in the word. Therefore, precisely because of their contrasting directions of movement, the development of the internal and external aspects of speech form a true unity.

A second fact of no less importance characterizes a later phase of development. As we noted earlier, Piaget established that the child masters the complex structure of the subordinate clause (composed of conjunctions such as "because," "despite," "since," and "although") earlier than he masters the semantic structures that correspond with these syntactic forms. In other words, the child's grammar develops before his logic. Over the entire extent of the school age, the child uses conjunctions correctly and adequately in spontaneous speech in expressing causal, temporal, adversative, conditional, and other dependencies. He is not, however, consciously aware of the semantic aspect of these conjunctions nor is he able to use them voluntarily. Once again, then, the movements of the semantic and external aspects of the word in the mastery of complex syntactic structures do not coincide. Analysis of the word indicates, however, that this lack of correspondence does not exclude the unity of grammar and logic in the development of the child's speech. In fact, this lack of correspondence is fundamental to the internal unity of meaning and word that is expressed in complex logical relations.

This lack of correspondence between the semantic and external aspects of speech emerges less directly but even more clearly in the functioning of developed thought. To see this, we must shift our analysis from the genetic to the functional plane. First, however, it is important to note that the facts which have emerged in our discussion of the genesis of speech allow us to draw several important conclusions concerning the nature of functional relationships. We have seen that the development of the meaningful and external aspects of speech move in opposing directions during the entirety of the early childhood period. It is, therefore, no surprise that we would never find complete correspondence between them at any point in the developmental process.

A more striking set of facts can be taken directly from the functional analysis of speech, facts that are well known to psychologically oriented contemporary linguistics. Of many relevant facts, the most significant are those which indicate a lack of correspondence between the grammatical and the psychological subject and predicate.

Fasler argues that it is wrong to use a grammatical framework in interpreting the meaning of linguistic phenomena, since the psychological and grammatical articulation of speech do not always correspond. Uland⁷⁷ begins the prologue to "Herzog Ernst Shvabskii" with the words: "A severe spectacle opens up before you." Grammatically,

"severe spectacle" is the subject of this sentence and "opens up" is the predicate. If we consider the psychological structure of the phrase, however, "opens up" is the subject and "severe spectacle" the predicate. The poet is trying to say here that what is going to occur before us is a tragedy. In the listener's consciousness, what is represented first is that he is going to observe a spectacle. This is what the phrase speaks about. It is the psychological subject of the phrase. What is new -- what is said about this subject -- is that the spectacle will be a tragedy. This, then, is the psychological predicate.

The following example clarifies this lack of correspondence between the grammatical and psychological subject and predicate still more clearly. Consider the phrase, "The clock fell." Here, the "clock" is the grammatical subject and "fell" the predicate. This phrase can be used in different situations and can express different thoughts while retaining this form.

Consider two situations. In the first, I notice that the clock has stopped and I ask why. I am told: "The clock fell." Here, the clock is in my consciousness initially. It is the psychological subject that is spoken about. The representation that it fell arises second. Here, "fell" is the psychological predicate. It is "fell" that says something about the subject. Here, there is correspondence between the grammatical and psychological partitioning of the phrase. However, this kind of correspondence is not inevitable.

Consider the following situation: I am working at my desk. I hear a noise from a falling object and ask what it was that fell. The same phrase is used to answer my question, but here it is the falling that is initially represented in consciousness. "Fell" is what is spoken about in this phrase; it is the psychological subject. The clock is what is said of this subject, what arises in consciousness second; it is the psychological predicate. This thought might better be expressed as follows: "What fell is the clock." In the first situation, the psychological and grammatical predicate correspond. In the second, they do not.

Any part of a complex phrase can become the psychological predicate and will carry the logical emphasis. The semantic function of this logical emphasis is the isolation of the psychological predicate. According to Paul⁷⁸, the grammatical category is to some extent a fossil of the psychological category. It therefore needs to be revived by a logical emphasis that clarifies its semantic structure. Paul demonstrates that a wide variety of meanings can reside in a single grammatical structure. Thus, correspondence between the grammatical and psychological structure of speech may be encountered less frequently than we generally assume. Indeed, it may merely be postulated and rarely if ever realized in fact. In phonetics, morphology, vocabulary, and semantics -- even in rhythm, metrics, and music -- the psychological category lies hidden behind the grammatical or formal category. If the two appear to correspond with one another in one situation, they diverge again in others. We can speak not only of the psychological elements of form and meaning, not only of the psychological subject and predicate, but of psychological number, gender, case, pronouns, superlatives, and tenses. Thus, what is a mistake from the perspective of language, may have artistic value if it has an original source. Consider Pushkin's poem:

Like rosy lips without a smile, I would not love Russian speech,
Without grammatical errors.

This has a more profound meaning than is generally assumed. Only in mathematics do we find a complete elimination of incongruities in the use of common and unquestionably correct expressions. It appears that it was Descartes who first saw in mathematics a form of thinking that has its origins in language but has nonetheless surpassed it. We

can say only one thing about the psychological outcome of the transition between the ideal and the real state of continuous nature.

These examples show that the semantic aspect does not exclude the psychological aspect. The correspondence does not exclude the difference. It is necessary for the transition to be complete.

To clarify this idea, let us consider two examples of how the transition to profound changes is represented. In the first, the dragonfly is substituted for the grasshopper. The dragonfly is a more noble epithet "the jump well suited to embolden." In Russian -- because of the difference of meaning -- the dragonfly has been translated as "the grasshopper" -- substituted for the grasshopper. The dragonfly is the grammatical subject of the phrase.

We find something similar in the second example, "The Palm." In Greek, the palm symbolizes love for war. In the transition, a cedar for the palm is substituted. The poem literature gives the poem a function. Thus, a change in the word leads to a change in the whole.

We can summarize the transition in the following way: second, inner, plane of thought, grammar of thought, simplest of verbal expression, external aspects of speech, static or dynamic. What is the syntax of meanings to be embodied in words.

Obviously, if the transition is complete, the verbal expression is seen, the semantic aspect is the transition and movement. This complex process is the development of thinking. The partitioning of the aspects of speech. He must permit the gradual development of speech. In the child, the verbal meanings.

can say only one thing: In its oscillation and in the incongruity of the grammatical and the psychological our normal conversational language is in a state of dynamic equilibrium between the ideals of mathematics and the harmony of imagination. It is in the state of continuous movement that we call evolution.

These examples demonstrate the lack of correspondence between the external and the semantic aspects of speech. At the same time, however, they show that this does not exclude their unity. On the contrary, it presupposes such a unity. This lack of correspondence does not interfere with the realization of thought in the word. Indeed, it is necessary for the movement from thought to word.

To clarify this internal dependency between the two planes of speech, we will give two examples of how changes in the formal and grammatical structure of speech lead to profound changes in its sense. Krylov, in the fable, "The Dragonfly and the Ant", substituted the dragonfly for La Fontaine's grasshopper while retaining the inapplicable epithet "the jumper." In French, the word grasshopper is feminine. It is, therefore, well suited to embody the image of a carefree attitude and feminine lightheadedness. In Russian -- because the grammatical gender of "grasshopper" is masculine -- this nuance of meaning critical to the illustration of frivolity would have disappeared had the fable been translated literally. Therefore, Krylov took grammatical gender over actual meaning -- substituting the dragonfly for the grasshopper -- while preserving characteristics of the grasshopper such as jumping and singing that are clearly not characteristic of the dragonfly. Thus, to adequately translate the sense of the tale, the feminine grammatical gender had to be preserved.

We find something similar in the Russian translation of Heine's poem, "The Fir and the Palm." In German, "fir" is masculine in gender. Thus, in German, the poem symbolizes love for women. To preserve the sense of the German text, Tiutchev substituted a cedar for the fir, since in Russian "cedar" is masculine. In contrast, by translating the poem literally, Lermontov lost this sense. As a consequence, his translation gives the poem a fundamentally different sense, one that is more abstract and generalized. Thus, a change in a single, seemingly insignificant, grammatical detail can lead to a change in the whole meaningful aspect of speech.

We can summarize what we have learned from this analysis of the two planes of speech in the following way. First, these two planes do not correspond. There is a second, inner, plane of speech standing beyond words. The independence of this grammar of thought, of this syntax of verbal meanings, forces us to see -- even in the simplest of verbal expressions -- a relationship between the meaningful and the external aspects of speech that is not given once and forever, a relationship that is not constant or static. What we do see is movement. We see a continuous transition from the syntax of meanings to the grammar of words, a transformation of sense structure as it is embodied in words.

Obviously, if the external and the semantic aspects of speech do not correspond, the verbal expression cannot emerge directly in its fully developed form. As we have seen, the semantic and the verbal syntax arise neither simultaneously nor together. Transition and movement from one to the other is inherent in the process. Moreover, this complex process involved in the transition from meanings to sounds itself develops. This development constitutes an important aspect of the development of verbal thinking. The partitioning of speech into semantics and phonology is not given at the outset. It arises in the course of development. The child must differentiate these two aspects of speech. He must become consciously aware of the different nature of each to permit the gradual descension that is presupposed in the living process of meaningful speech. In the child, we initially find a lack of conscious awareness of verbal forms and verbal meanings. The two are not differentiated. The word and its sound

structure are perceived as a part or characteristic of the thing. They are not differentiated from its other characteristics. This phenomenon appears to be inherent in any primitive linguistic consciousness.

Humboldt⁷⁹ relates an anecdote about a peasant who was listening to student astronomers as they were discussing the stars. At one point, the peasant turned to the students and said: "I understand that people have measured the distance from the Earth to the most distant stars with these instruments, that they have identified their distribution and movement. What I want to know is how they learned their names." Here, the peasant has assumed that the names of the stars can only be learned from the stars themselves. Simple experiments with children have shown that children explain the names of objects by referring to their characteristics even in the preschool age: "A cow is called "cow" because it has horns, a calf "calf" because his horns are still small, a horse "horse" because it has no horns, a dog "dog" because it has no horns and is small, and an automobile "automobile" because it is not alive at all." When asked if one could substitute the name of one object for another (e.g., calling a cow "ink" and ink "cow") children answer that this is impossible because you write with ink and a cow gives milk. The characteristics of the thing are so closely connected with its name that to transfer the name means to transfer the characteristics.

The difficulty the child has in transferring the name of one thing to another becomes apparent in experiments where the child is asked to establish temporary names for objects. In one experiment, the names of "cow and dog" and those of "window and ink" were interchanged. The child was asked: "If the dog has horns, does the dog give milk?" The child answered: "It'll give." The child was then asked: "Does a cow have horns?" The child answered: "It has." The experimenter responded: "Cow -- that is a dog. Does a dog really have horns?" The child answered: "Of course. Here the dog is a cow. If it is called a cow there must be horns. With the kind of dog that is called a cow there must be little horns." Here, we can see how difficult it is for the child to distinguish the name of the thing from its characteristics. We can see how its characteristics follow the name in the way that property follows its owner. Similar results emerged with questions about the characteristics of ink and window when their names were exchanged. Though with great difficulty, correct answers were initially given to questions. However, we received a negative answer to the question of whether ink is transparent. The experimenter responded: "But "ink" is "window and "window" is "ink."" The child countered: "It doesn't matter. Ink is ink and non-transparent."

This example illustrates the thesis that the *auditory aspect of the word is an immediate unity* for the child, that it is undifferentiated and lacking in conscious awareness. One extremely important line of speech development in the child is the *differentiation of this unity and emergence of conscious awareness of it*. Thus, in early development we have a merging of the two planes of speech. With age, there is gradual differentiation. The distance between the two planes increases. To each stage in the development of verbal meaning and the emergence of conscious awareness of these two planes, there corresponds a specific relationship of the semantic and external aspects of speech and a specific path from meaning to sound. The inadequate differentiation of these planes of speech in the earlier ages is linked with a limited potential for expressing and comprehending thought.

If we consider what we said at the outset about the communicative function of meanings, it becomes clear that the child's social interaction through speech is immediately linked with his differentiation and conscious awareness of verbal meanings. To clarify this thought, we must consider an extremely important characteristic of word meanings that we discussed in the analysis of our experimental findings. In our analysis of the word's semantic structure, we distinguished between its object relatedness

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and its meaning. We tried to show that the two do not coincide. In functional terms, this caused us to differentiate the word's indicative and nominative function from its signifying function. If we compare these structural and functional relationships in the initial, middle, and end points of development, the following genetic sequence becomes apparent. Initially, we have only object relatedness in the structure of the word. The word's function is exclusively indicative and nominative. Meaning independent of object relatedness, signification independent of the indication and naming of the object, arises later, developing along the path that we attempted to outline earlier.

This makes it apparent that from the moment these structural and functional characteristics of the word emerge in the child they diverge from the characteristics of the word in both its opposing aspects. On the one hand, the word's object relatedness is expressed more clearly and more strongly in the child than in the adult. For the child, the word is part of the thing. It is one of the characteristics of the thing. Thus, the child's word is much more closely connected with the object than the adult's. This underlies the much greater relative weight of object relatedness in the word of the child. On the other hand, precisely because the word is connected more closely with the object for the child -- precisely because it is a part of the thing -- it can more easily be isolated from the object than can the adult's word. It can more easily take an independent place in thought, more easily live an independent life. In this way, the insufficient differentiation of object relatedness and word meaning in the child leads to a situation where the child's word is simultaneously closer to reality and further from it than the adult's. The child does not initially differentiate between word meaning and the object nor between the meaning and the sound form of the word. In development, this differentiation occurs in accordance with the development of generalization. It is only with the completion of the developmental process -- at the point where we find true concepts -- that the complex relationships between the partitioned planes of speech first arise.

This ontogenetic differentiation of the two speech planes is accompanied by the development of the path that thought follows in the transformation of the syntax of meanings into the syntax of words. Thought imprints a logical emphasis on one word in a phrase, isolating the psychological predicate. Without this, no phrase would be comprehensible. Speaking requires a transition from the internal to the external plane. Understanding presupposes movement in the reverse direction, from the external plane of speech to the internal.

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We must take an additional step to penetrate the internal aspect of speech more deeply. The semantic plane is only the first of the internal planes of speech. Beyond it lies the plane of inner speech. Without a correct understanding of the psychological nature of inner speech, we cannot clarify the actual complex relationships between thought and word.

There has been more confusion in attempts to address this problem than with any of the other issues associated with the theory of thinking and speech. Much of this confusion has its source in a lack of terminological clarity. The term "inner speech" or "endophasia" is used in the literature to refer to a wide variety of phenomena. This has led to a great deal of misunderstanding, with researchers often arguing about very different things that are designated by a single term. Until some terminological clarity is introduced, it will be impossible to systematize our knowledge of the nature of inner

speech. It is because this work has not yet been done that there currently exists no systematic presentation of even the simplest empirical data on this problem.

Initially, it appears that the term "inner speech" referred to verbal memory. I can learn a poem by heart and reproduce it only in memory. Like any object, the word can be replaced by a mental representation or image in memory. Within this framework, inner speech differs from external speech in the same way that a representation of an object differs from the object itself. It is in precisely this sense that inner speech was understood by French scholars in their studies of the memory images through which this reproduction of the word is realized (i.e., autistic, optical, motoric, or synthetic images). Of course, memory is one feature that defines the nature of inner speech. However, memory alone does not exhaust the content of this concept. It does not even correspond with it directly. The older scholars consistently equate the reproduction of the word through memory with inner speech. However, these are two different processes that must be carefully distinguished.

The second meaning commonly attributed to the term "inner speech" implies an abbreviation of the normal speech act. Here, inner speech is called unpronounced, silent, or mute speech. In accordance with Miller's well known definition, it is speech minus sound. According to Watson, inner speech is precisely the same as external speech with the exception that it is not completed. Bekhterev⁸⁰ similarly defined inner speech as a speech reflex where the motor component is not manifested. Sechenov⁸¹ defined it as a reflex that is cut off when two thirds of its course is completed. Recently, Shilling has proposed the term "speaking" [*govorenje*], using this term to designate the concept of inner speech that is shared by the authors we have just mentioned. This concept differs from inner speech qualitatively in that it incorporates only the active, not the passive, processes of speech activity. It differs qualitatively from inner speech in that it refers to the initial motor activity of the speech function. From this perspective, inner speaking is only part of the function of inner speech. It is a speech-motor act of an initial character, an impulse that is not completely expressed in articulatory movements or one that is manifested in movements that are silently and unclearly expressed but nonetheless accompany, reinforce, or hinder the thinking function. These ideas identify a feature basic to a scientific concept of inner speech. Once again, however, this conception does not exhaust the concept inner speech nor even correspond with it entirely.

The third and most diffuse of all conceptions of inner speech reflects an extremely broad interpretation of the concept. For example, Kurt Goldstein⁸² uses the phrase to refer to all that precedes the motor act of speaking, the entire internal aspect of speech itself. He breaks this down into two components. The first is the linguist's inner speech form or Wundt's speech motive. The second is an experience specific to speech. It is an experience that is neither sensory nor motor in nature and is well known to all -- though it defies precise characterization. Thus, uniting the entire internal aspect of speech activity in the concept of inner speech -- fusing the French scholars' conception of inner speech with the German word-concept -- Goldstein places inner speech at the center the whole speech process. This conception of inner speech correctly addresses the negative aspect of the phenomenon's definition. Sensory and motor processes do indeed have a subordinate significance in inner speech. However, the positive aspect of Goldstein's definition of inner speech is extremely confused and, consequently, false. The center of the entire speech process cannot be identified with an experience consecrated only in intuition, an experience that is not submitted to any objective analysis -- whether functional or structural. It is equally wrong to identify this experience with inner speech. The identification of inner speech with this experience dissolves the structural planes that have been distinguished

7. Thought and Word

through psychological processes common to all forms of speech. It is as a unique speech act that we find that inner speech includes speech motives and concepts actually reflecting speaking, that is, the

If we are to understand inner speech as a unique form of complex relationship between speech to thought and word from thought and word

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through psychological analysis. In fact, precisely because this speech experience is common to all forms of speech activity it is useless as a means of isolating inner speech as a unique speech function. If we take Goldstein's perspective to its conclusion, we find that inner speech is not speech but thought and affective-volitional activity. It includes speech motives as well as the thought that is expressed in the word. What this concept actually refers to are all the internal processes that occur before the act of speaking, that is, the entire internal aspect of external speech.

If we are to understand this phenomenon, we must begin with the thesis that *inner speech is a psychological formation that has its own unique nature*, the thesis that inner speech is a unique form of speech activity that has unique characteristics and stands in complex relationships to other speech forms. To study the relationships of inner speech to thought and to the word, we must identify what distinguishes inner speech from thought and word. We must clarify its unique function.

In our view, it is important in this connection that in one case I am speaking to myself and in the other to another. Inner speech is speech for oneself. External speech is speech for others. This is a fundamental functional difference in the two types of speech that will have inevitable structural consequences. In our view, then, it is incorrect to view the difference between inner and external speech as one of degree rather than of kind (as Jackson and Head, among others, have done). The presence or absence of vocalization is not a cause that explains the nature of inner speech. It is the consequence of its nature. Inner speech is not merely what precedes or reproduces external speech. Indeed, in a sense, it is the opposite of external speech. External speech is a process of transforming thought into word; it is the materialization and objectivization of thought. Inner speech moves in the reverse direction, from without to within. It is a process that involves the evaporation of speech in thought.* This is the source of the structure of inner speech, the source of all that structurally differentiates it from external speech.

Inner speech is among the most difficult domains of psychological research. As a consequence, most theories of inner speech are arbitrary and speculative constructions based on little empirical data. The experiment has been used primarily as a demonstration or illustration. Research has centered on attempts to identify subtle shifts in articulation and respiration, factors that are at best three stages removed from the phenomenon of inner speech. This problem has remained almost inaccessible to the experiment because genetic methods have not been utilized. Development is the key to understanding this extremely complex internal function of human consciousness. By identifying an adequate method for investigating inner speech, we can move the entire problem from its current stalemate. The first issue we must address, then, is that of method.

Piaget was apparently the first to recognize the special function of egocentric speech in the child and to understand its theoretical significance. Egocentric speech is a common phenomenon in the child, one familiar to all who deal with children. Piaget did not overlook its significance. He attempted to study it and interpret it theoretically. However, he remained entirely blind to the most important characteristics of egocentric speech, that is, to its genetic origins and its connections with inner speech. As a consequence, his interpretation of its nature was false in functional, structural, and genetic terms.

* It is apparent from the context that in using the expression "the evaporation of speech in thought," Vygotsky is referring to a qualitative change in the speech process with the act of thought, not to the disappearance of the word. Editors' note.

Using Piaget as a point of departure, our research has focused on the relationship between egocentric and inner speech. As a consequence, we have identified a means for studying inner speech experimentally.

Earlier, we outlined the basic considerations that caused us to conclude that *egocentric speech passes through a several stages that precede the development of inner speech*. These considerations can be classed in three groups. First, in functional terms, we found that egocentric speech fulfills an intellectual function similar to that of inner speech. Second, we found that the structure of egocentric speech is similar to that of inner speech. Third, in our genetic analysis, we combined Piaget's observation that egocentric speech atrophies in the school-age child with several facts that forced us to associate this event with the initial development of inner speech. This led to the conclusion that as egocentric speech atrophies it is transformed into inner speech. This new working hypothesis concerning the structure, function, and ontogenetic fate of egocentric speech facilitated a radical restructuring of our entire theory of the phenomenon. More importantly, however, this new hypothesis provided an access route to the problem of the nature of inner speech. If our proposal that egocentric speech is an early form of inner speech is verified, the problem of finding a method of studying inner speech is resolved.

This implies that egocentric speech is the key to the study of inner speech. Egocentric speech is still vocal and audible. Though internal in function and structure, egocentric speech is external in manifestation. In any investigation of a complex internal process, we must externalize that process to allow experimentation; we must connect it to some form of external activity. This permits an objective functional analysis based on observable external aspects of the internal process. With egocentric speech, we have what might be called a natural experiment. *Egocentric speech -- a process internal in nature but external in manifestation -- is accessible to direct observation and experimentation*. Thus, the study of egocentric speech is the method of choice for the study of inner speech.

The second advantage of this method is that it allows us to study egocentric speech dynamically in *the process of its development*. It allows us to study the gradual disappearance of certain characteristics and the gradual development of others. This provides us with the potential for understanding the trends characteristic of the development of inner speech. By analyzing what drops out in the developmental process, we can identify what is inessential to inner speech. Correspondingly, by analyzing what tends to be strengthened, what emerges more and more clearly in the developmental process, we can identify what is essential to it. Relying on methods of interpolation, we can follow the development from egocentric to inner speech and draw conclusions concerning the nature of inner speech itself.

Before we discuss the results we have obtained by using this method, we must first clarify its theoretical foundation by outlining our general conception of egocentric speech. We will begin by contrasting Piaget's theory of egocentric speech with our own.

According to Piaget, the child's egocentric speech is a direct expression of the egocentrism of his thought. In turn, the child's egocentrism is a compromise between the initial autism of the child's thinking and its gradual socialization. This compromise differs with each stage in the child's development. It is a dynamic compromise. As the child develops, the elements of autism decrease while those of socialized thought increase. The result is that egocentrism in both thinking and speech is gradually reduced to nothing.

Piaget's view of the structure, function, and fate of egocentric speech flows directly from this understanding of its nature. In egocentric speech, the child need not

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accommodate himself to adult thought. As a consequence, his thought remains maximally egocentric. This is reflected in the incomprehensible nature of egocentric speech, in its abbreviation, and in several other structural characteristics. Functionally, egocentric speech does nothing more than accompany the basic melody of the child's activity, changing nothing in the melody itself. It has no independent functional significance. Because it is simply the expression of the child's egocentrism -- a phenomenon that is doomed to atrophy in the course of the child's development -- the genetic fate of egocentric speech is to disappear along with the egocentrism of the child's thought. Thus, the development of egocentric speech follows a falling curve. The apex of this curve lies at the beginning of the developmental process and drops to nothing at the threshold of the school age.

Thus, we can say of egocentric speech what Liszt said of the child prodigy: Its whole future lies in its past. Egocentric speech has no future. It does not arise and develop with the child; it simply atrophies. With egocentric speech, change is not an evolutionary but an involutionary process. At any stage of the child's development, this speech reflects the insufficient socialization of speech, the insufficient socialization of a speech that is initially individual in nature. Egocentric speech is the direct expression of the inadequate and incomplete socialization of speech.

In contrast, our own theory suggests that the child's egocentric speech is one aspect of the general transition from inter-mental functions to intra-mental functions, one aspect of the transition from the child's social, collective activity to his individual mental functions. As we have shown in one of our earlier works,^{*} this transition constitutes the general law of the development of all higher mental functions. Initially, these functions arise as forms of cooperative activity. Only later are they transformed by the child into the sphere of his own mental activity. Speech for oneself has its source in a differentiation of an initially social speech function, a differentiation of speech for others. Thus, the central tendency of the child's development is not a gradual socialization introduced from the outside, but a gradual individualization that emerges on the foundation of the child's internal socialization.

This changes our perspective on the structure, function, and fate of egocentric speech. Having received a new assignment, speech is naturally reconstructed and takes on a new structure that corresponds with its new functions. We will consider the structural characteristics of inner speech in more detail later. At this point, we would only emphasize that these characteristics do not atrophy. They are not smoothed away and reduced to nothing. They are strengthened and grow. They evolve and develop in correspondence with the child's age. Like egocentric speech as a whole, they follow a rising not a falling curve.

Our experiments make it clear that the function of egocentric speech is closely related to the function of inner speech. It is not an accompaniment of the child's activity. It is an independent melody or function that facilitates intellectual orientation, conscious awareness, the overcoming of difficulties and impediments, and imagination and thinking. It is speech for oneself, a speech function that intimately serves the child's thinking. The genetic fate of egocentric speech is much different from that depicted by Piaget. Egocentric speech develops along not a falling but a rising curve. Its development is not an involution but a true evolution. It has no relationship to the processes of involution so well known to biology or pediatrics, to processes such as the healing and shedding of the umbilical cord or the obliteration of Botallov's channel and the umbilical veins in the newborn. It is more comparable to processes of the child's development that are directed forward, processes that are by nature construc-

* Here, Vygotsky is referring to, "The Development of the Higher Mental Functions," which will be published in a later volume of the Collected Works. Editors' note.

tive and creative and have an entirely positive significance for development. Our hypothesis suggests that egocentric speech is speech that is internal in its mental function and external in its structure. It is fated to develop into inner speech.

This hypothesis has several advantages over Piaget's. It allows a more adequate explanation of the structure, function, and fate of egocentric speech. It is in closer agreement with the experimental data we obtained which indicate that the coefficient of egocentric speech increases with the introduction of difficulties that require conscious awareness and reflection. These facts are not explained by Piaget.

The decisive advantage of our hypothesis, however, is that it explains an important and pervasive characteristic of the development of egocentric speech that is paradoxical and inexplicable from Piaget's perspective. According to Piaget's theory, egocentric speech atrophies as the child gets older. Its quantitative significance decreases in accordance with the level of the child's development. This perspective would cause us to anticipate that the unique structural characteristics of egocentric speech would become less and less prominent as egocentric speech disappears. It is difficult to imagine that the process through which egocentric speech gradually atrophies would be reflected in the quantity of egocentric speech but not in its internal structure. If the structural characteristics of egocentric speech are rooted in the child's egocentrism, one would expect that they would fade into the background as the child's egocentrism atrophies. That is, one would expect that the structural characteristics of egocentric speech -- characteristics expressed primarily in its incomprehensibility for others -- would gradually disappear entirely along with egocentric speech itself. The internal structure of egocentric speech should become increasingly similar to that of socialized speech. It should become increasingly comprehensible.

What do we find when we look at the empirical data? Is the three year old's egocentric speech in fact less comprehensible than that of the seven year old? Among the most important and decisive empirical findings of our research is that the structural characteristics of egocentric speech that differentiate it from social speech -- the characteristics that make it incomprehensible to others -- increase rather than decrease with age. At three years of age, the differences between egocentric and social speech are minimal. They reach their peak at seven years of age. Thus, these characteristics do not atrophy but evolve, reversing the pattern that characterizes the coefficient of egocentric speech. While the latter steadily decreases, dropping to nothing at the threshold of the school age, the structural characteristics of egocentric speech continue to develop in the opposite direction. That which is unique to egocentric speech increases from almost nothing at three years of age to nearly one hundred percent.

Piaget's theory cannot explain how this atrophy of childhood egocentrism and egocentric speech can be associated with the rapid development of the characteristics that distinguish egocentric speech from social speech. Our own hypothesis allows us to reconcile these facts. Moreover, it helps us understand why the coefficient of egocentric speech decreases as the child develops, that is, it helps explain the phenomenon that provided the foundation on which Piaget constructed his entire theory of egocentric speech.

What is the fundamental significance of the finding that the coefficient of egocentric speech decreases as the age of the child increases? As we have seen, the structural characteristics of inner speech and its functional differentiation from external speech increase with age. Only one characteristic of egocentric speech fades away -- its vocalization. Does this fading of vocalization indicate that the whole of egocentric speech atrophies? Such an assumption leaves the development of the structural and functional characteristics of egocentric speech entirely unexplained. The reduction of the coefficient of egocentric speech becomes fully comprehensible and meaningful,

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however, if we consider it in the context of the development of the other characteristics of egocentric speech. In fact, the contradiction between the rapid disappearance of one symptom of egocentric speech (i.e., its vocalization) and the equally rapid strengthening of its other symptoms (i.e., its structural and functional differentiation) is only apparent.

Our data indicate 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 the functional and structural characteristics of egocentric speech differ from those of social speech. In our view, this finding indicates the progressive differentiation of the two speech functions, *the isolation of speech for oneself and speech for others from a general, undifferentiated speech function* that fulfills both these tasks in early childhood. There is no question about this. It is a fact, and it is widely known that it is difficult to argue with facts.

Once this is understood, related issues are immediately clarified. The structural and functional characteristics of egocentric speech -- its internal structure and its mode of activity -- develop and differentiate it from external speech. To the extent that these specific characteristics of egocentric speech develop, *its external, acoustic aspect will inevitably atrophy*. Its vocalization and external expression will become less prominent and, in the end, disappear. This in fact occurs, and is expressed in the drop in the coefficient of egocentric speech that has been observed between the ages of three and seven years. To the extent that the function of egocentric speech is differentiated from that of social speech, its vocalization becomes functionally superfluous and meaningless. We know our own phrase before we pronounce it. Moreover, to the extent that the structural characteristics of egocentric speech develop, vocalization becomes impossible. Speech for oneself is very different in its structure from speech for others. It simply cannot be expressed in the foreign structure of external speech. This structurally unique form of speech *must have a special form of expression*; its structure and organization has ceased to correspond with that of external speech. The development of the functional characteristics of egocentric speech, its isolation as an independent speech function, and the gradual formation of its independent internal nature, inevitably lead to a situation where its external manifestations become impoverished. It is at this point that its vocal aspect is lost. At a certain moment in development, when speech for oneself is finally differentiated from speech for others, it must cease to be vocal speech. This creates the illusion that it disappears or atrophies entirely.

However, this is precisely an illusion. It is as much an error to view the drop in the coefficient of egocentric speech as a symptom of its disappearance as it would be to assume that the moment when the child stops using his fingers to count -- the moment when he moves from counting aloud to counting in his mind -- indicates that counting itself has disappeared. In both cases a systematic disappearance, a negative symptom of involution, masks an entirely positive content. As we have shown, the drop in the coefficient of egocentric speech -- the fading of its vocalization -- is closely linked with the internal development and differentiation of this new speech form. What appear to be negative, involutory symptoms are in fact evolutionary symptoms indicating that development is moving forward. They are symptomatic *not of a process of atrophy but of the emergence of a new form of speech*.

Thus, the fading external manifestations of egocentric speech reflect its developing abstraction from the vocal aspect of speech, that is, from a feature that is fundamental to external speech. It is, then, simply one aspect of the broader progressive differentiation of egocentric from communicative speech. It is a sign of the child's developing capacities to think or represent words while not pronouncing them, to operate

not with the word itself but with its image. The drop in the coefficient of egocentric speech has a clearly defined significance. It is part of the process where the development of the functional and structural characteristics of egocentric speech is realized. It is part of the development of egocentric speech toward inner speech. The fundamental difference between inner and external speech is the absence of vocalization in the former.

Inner speech is mute, silent speech. This is its basic distinction. It is precisely in this direction, in the gradual emergence of this distinction, that the evolution of egocentric speech occurs. Its vocalization fades. It becomes mute speech. This is inevitable, however, if egocentric speech is an early stage in the genesis of inner speech. That the disappearance of vocalization is a gradual process, that egocentric speech is differentiated from social speech in its function and structure before it is differentiated in its vocalization, is an extremely important fact. It indicates that the development of inner speech does not have its roots in the external weakening of the vocal aspect of speech; it does not move from speech to whisper and from whisper to mute speech. It indicates that the development of inner speech begins with its functional and structural differentiation from external speech, that it moves from external to egocentric speech, and then from egocentric to inner speech. This concept is the foundation of our hypothesis concerning the development of inner speech.

The contradiction is only apparent. The drop in the coefficient of egocentric speech is a symptom of the development of a basic characteristic of inner speech, its abstraction from the vocal aspect of speech. It is a symptom of the final differentiation of inner and external speech. Thus functional, structural, and genetic analysis -- indeed all the data we have on the development of egocentric speech (including that of Piaget's) -- provide consistent support for a single idea, the idea that *egocentric speech develops in the direction of inner speech*. The development of egocentric speech can be understood only as a gradual and progressive growth of the basic distinguishing characteristics of inner speech.

In this, we see irrefutable support for the hypothesis that we have developed concerning the nature and origin of egocentric speech. Moreover, in our view, this proves that the study of egocentric speech provides the foundation for understanding inner speech. However, for our hypothetical proposal to be transformed into a theoretical certainty, we must find a critical experiment, an experiment that will resolve which of these two conceptions of egocentric speech and its development corresponds with reality. We will turn to this critical experiment.

Consider the theoretical problem this experiment must resolve. In Piaget's view, egocentric speech arises from the inadequate socialization of what is initially an individual form of speech. In our view, it arises from the inadequate individualization of an initially social speech, from the inadequate isolation and differentiation of egocentric from social speech. In the first case, egocentric speech is a point on a falling curve that culminates in its disappearance. Here, egocentric speech has nothing but a past. In the second case, egocentric speech is a point on a rising curve, the culmination of which lies in the future in inner speech. Here, egocentric speech has a future. In the first case, speech for oneself -- inner speech -- is introduced from the outside in the socialization process in accordance with the principle mentioned earlier through which the red water is forced out by the white. In the second case, speech for oneself arises from egocentric speech; it develops from within.

To decide which of these views is correct, we had to demonstrate experimentally the direction of the effects of two types of changes in the situation in which egocentric speech occurs, specifically, changes that weaken the social aspects of the situation and changes that reinforce them. The data we have introduced in support of our concep-

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tion of egocentric speech up to this point -- though of tremendous significance in our view -- provide only indirect support for our conception. Their significance depends on one's general framework of interpretation. In contrast, this experiment can provide a direct answer to our central question. It is an *experimentum crucis*.

If the child's egocentric speech stems from the egocentrism and inadequate socialization of his thinking, then any weakening of the social aspects of the situation, any seclusion or liberation of the child from his links with the collective, any increase in his psychological isolation, any loss of psychological contact with other people -- anything that liberates the child from the necessity of adapting to the thought of others and using socialized speech -- should lead to a sharp increase in the coefficient of egocentric over socialized speech. This would create the most favorable conditions possible for the liberation and full manifestation of the child's inadequately socialized thought and speech. If, on the other hand, egocentric speech stems from the inadequate differentiation of speech for oneself from speech for others, if it flows from an inadequate individualization of what is initially a social form of speech, these changes in the situation will be reflected in a sharp reduction in egocentric speech.

This is the question that motivated our experiment. As a point of departure for the construction of this experiment, we selected features of egocentric speech identified by Piaget himself. As a consequence, there can be no question of their empirical relationship to the circle of phenomena we are studying.

Though Piaget did not attribute any theoretical significance to them -- describing them merely as external features of egocentric speech -- three characteristics of egocentric speech struck us from the outset:

1. The fact that egocentric speech is a collective monologue, that it accompanies the child's activity in the collective (i.e., in the presence of other children) but not when the child is by himself.
2. The fact (noted by Piaget) that this collective monologue is accompanied by an illusion of understanding. The child believes and assumes that the egocentric expressions that he addresses to no one are understood by those around him.
3. The fact that speech for oneself has the character of external speech, that it is similar to socialized speech. It is not pronounced in a whisper for oneself.

These three essential characteristics of egocentric speech cannot be accidental. Egocentric speech has not yet been adequately differentiated from social speech. This is true subjectively, from the child's perspective. The result is the illusion of understanding. It is also true objectively, in terms of the situation. The result is that egocentric speech has the characteristic of collective monologue. Finally, this is true with respect to form. The result is that egocentric speech is vocalized. This alone causes us to question the validity of the notion that the source of egocentric speech lies in inadequate socialization. On the contrary, these characteristics of egocentric speech indicate that socialization is too extensive, that there is an inadequate differentiation of speech for oneself from speech for others. Egocentric speech, speech for oneself, seems to emerge in the objective and subjective conditions characteristic of social speech, of speech for others.

Our evaluation of these three features of egocentric speech is not the product of our own assumptions. In fact, Grunbaum reached a similar conclusion on the basis of Piaget's data. Grunbaum argues that superficial observation will frequently indicate that the child is entirely immersed in himself. This false impression is a function of our expectation that the three year old will relate logically to those around him. Because a logical relationship to reality is in fact not typical of the child, we falsely as-

sume that he lives immersed in his own thought and fantasy, that he has an egocentric set. When they are engaged in joint play, children between three and five years of age are frequently occupied only with themselves. Each speaks only to himself. If this talk is printed, it looks like conversation. Analysis indicates that it is a collective monologue where the participants do not listen or respond to one another. In reality, however, this prototype of the child's egocentric set demonstrates the social connectedness of the child's mind. The collective monologue does not represent an intentional isolation from the collective, an autism as that is defined by modern psychiatry. Indeed, it is symptomatic of the opposite mental structure. Even Piaget, who takes the child's egocentrism as the cornerstone of his whole theory of the child's mental characteristics, recognizes that children believe that they are speaking and listening to one another in the collective monologue. It is true, of course, that they do not attend to one another. This, however, reflects a shared assumption that the thoughts of each are the common property of all, even if these thoughts are expressed inadequately or remain entirely unexpressed.

Grunbaum argues that this demonstrates the inadequate differentiation of the child's individual mind from the social whole. However, the final resolution of this question cannot be found in a particular interpretation of these facts. A critical experiment is required. Our experiment involved the variation of the three characteristics of egocentric speech mentioned earlier: its vocalization, the illusion of understanding, and the fact that it is collective monologue. To clarify the nature and origin of egocentric speech, we systematically strengthened and weakened each of these characteristics through variations introduced into the experimental setting.

In the initial series of experiments, we attempted to destroy the illusion that egocentric speech is understood by other children by placing our subjects either among children who were either deaf or spoke a different language. In other respects, the experimental situations were no different from those where the coefficient of egocentric speech had been measured earlier with the same subjects, situations similar to those in Piaget's experiments. The sole variable in the experiment was the illusion of understanding. In the original experimental situation this illusion had emerged naturally. In these new experiments it was carefully excluded. We found that when the illusion of understanding was excluded the coefficient of egocentric speech fell sharply. In the majority of cases it fell to nothing. In the remaining cases, it was reduced on the average by a factor of eight.

Thus, the illusion of understanding is not accidental. It is not a by-product, an appendage or an epiphenomenon of egocentric speech but is functionally connected with it. These results are paradoxical for Piaget's theory. The less psychological contact between the child and the children around him, the weaker the child's connection with the collective, the less the situation presents the child with demands for socialized speech and for adapting his thought to the thought of others, the more freely egocentrism should be manifested in the child's thinking and, consequently, in his speech. If the child's egocentric speech is actually a function of the inadequate socialization of his thought and speech, no other conclusion is possible. From this perspective, when we exclude the illusion of understanding we should find not an increase but a decrease in the coefficient of egocentric speech. Our hypothesis suggests the true source of egocentric speech is the inadequate individualization of speech for oneself, the failure to differentiate it from speech for others. These data indicate that egocentric speech cannot live and function in isolation from social speech. When we exclude the illusion of understanding -- a critical psychological feature of social speech -- egocentric speech atrophies.

The second series of experiments was designed to measure the coefficient of egocentric speech in a child with unfamiliar surroundings, during, or after a period of isolation from these situations, the child alone. In general, the first series of experiments excluded the illusion of egocentric speech. The second series of experiments were assumed to be a basic tendency toward

The argument can be repeated here. The illusion of egocentric speech presents a paradox. The illusion of egocentric speech lies in the inadequate differentiation of the child from the collective. The foundation of egocentric speech is the illusion of oneself from speech. This leads to a reduction in the coefficient of egocentric speech.

In the third and fourth series of experiments, the child was trained to restrict or exclude the illusion of understanding. Seated in a large hall, the child heard other loud noise was excluded. In the third, fourth, and fifth series, we observed that the coefficient of egocentric speech was reduced. In the second series of experiments, we observed that the various modes of egocentric speech were excluded. Again, these results provide direct support for our hypothesis.

These three series of experiments demonstrate phenomena that are associated with egocentric speech; they focused on the illusion of understanding. In our experiments, the illusion of understanding was present and absent. We found

The second series of critical experiments differed from the basic series on the variable of collective monologue. As in the first series of critical experiments, we initially measured the coefficient of egocentric speech in the basic situation where it appeared as collective monologue. We then transferred the child's activity to a situation where the potential for collective monologue was excluded. Specifically, we either placed the child with unfamiliar children (children with whom he did not enter conversation before, during, or after the experiment), placed him behind a table in the corner of a room in isolation from other children, or placed him in complete isolation. In each of these situations, the experimenter left midway through the experiment leaving the child alone. In general, the results of these experiments correspond with those of the first series. Excluding the collective monologue led to a sharp drop in the coefficient of egocentric speech, though the drop was generally less dramatic than in the first experiments. The mean relation of the coefficient of egocentric speech in the basic and second experiments was six to one. The various methods of excluding the collective monologue were associated with different levels of egocentric speech. However, the basic tendency toward a reduction was clearly manifested.

The argument we developed in our discussion of the first series of experiments can be repeated here. Obviously, collective monologue is not an accidental characteristic of egocentric speech. It is not a mere epiphenomenon. It has functional connections with egocentric speech. From the perspective of Piaget's hypothesis, this again presents a paradox. By excluding the collective, we should give full play to the manifestation of egocentric speech. If the source of egocentric speech for oneself actually lies in the inadequate socialization of the child's thinking and speech, the exclusion of the collective should lead to a rapid increase in the coefficient. If, on the other hand, the foundation of egocentric speech lies in the inadequate differentiation of speech for oneself from speech for others, the exclusion of the collective monologue should lead to a reduction in the coefficient.

In the third and final series of experiments, we focused on the vocalization of egocentric speech. After measuring the coefficient of egocentric speech in the basic situation, the child was transferred to a situation where the possibility for vocalization was restricted or excluded. Three arrangements were used. In the first, the child was seated in a large hall far from other children. In the second, an orchestra or some other loud noise was used to drown out the child's own voice as well as the voices of others. In the third, the child was forbidden to speak loudly. He was instructed to carry on conversation only quietly or in a soundless whisper. In each of these critical situations, we observed a drop in the coefficient of egocentric speech. The reduction in the coefficient was expressed in a somewhat more complex form than it had been in the second series of experiments. The relationship of the coefficient in the basic and critical experiments was five-and-four-tenths to one. The differences associated with the various modes of excluding or interfering with vocalization were even greater than in the second series. However, the basic pattern once again emerged clearly. When vocalization was excluded, there was a reduction in the coefficient of egocentric speech. Again, these data present a paradox for Piaget's hypothesis while providing direct support for our own.

These three series of experiments had a single goal. They focused on three phenomena that are associated with almost any expression of the child's egocentric speech; they focused on the illusion of understanding, the collective monologue, and vocalization. These three characteristics are shared by egocentric and social speech. In our experiments, we compared situations where these phenomenon were present and absent. We found that where these features were excluded, where we excluded

the features of speech common to speech for oneself and speech for others, there was inevitably a reduction in egocentric speech.

This provides a basis for our claim that the child's egocentric speech is a special form of speech. It provides a foundation for our claim that egocentric speech is a form of speech that is being differentiated functionally and structurally from social speech, but has not yet been fully differentiated from it. Egocentric speech has not become fully differentiated from social speech, the womb where it steadily develops and matures.

Consider the following situation: I sit at a desk and converse with a person who is behind me, a person whom I do not see. Unnoticed, this person leaves the room. However, I continue to speak guided by the illusion that I am heard and understood. Here, my speech is externally reminiscent of egocentric speech (i.e., speech in private and for oneself). Psychologically, however, it is social speech.

Compare this to the child's egocentric speech. Piaget assumes that the psychological nature of the child's egocentric speech is the opposite of that in our illustration. From the perspective of the child (i.e., psychologically and subjectively) his speech is egocentric; it is speech for himself. Only in its external manifestation is it social speech. Thus, its social character is an illusion, just as in the illustration the egocentric character of my speech is an illusion.

Our hypothesis suggests that the situation is much more complex. Functionally and structurally, the child's speech is egocentric. It is a special and independent form of speech. The special and independent nature of this form of speech has not, however, developed fully. It has not attained conscious awareness as inner speech either subjectively or psychologically. The child has not yet isolated it from speech for others. Objectively, this speech function has been differentiated from social speech. However, this process has not been completed. Thus, this speech continues to function only in situations where social speech is possible. If we consider both subjective and objective criteria, then, egocentric speech is a mixed speech form, a speech form that emerges in the transition from speech for others to speech for oneself. This constitutes the basic law of the development of inner speech. Speech for oneself (i.e., inner speech) becomes more internal in its function and structure -- in its psychological nature -- than in the external forms through which it is manifested.

This provides the empirical foundation required for the thesis we have advanced. The key to the investigation of the psychological nature of inner speech lies in the investigation of egocentric speech, in the analysis of the development of the characteristics fundamental to its function and structure. We can turn, then, to the basic results of our investigation, to a brief characterization of the third plane in the movement from thought to word, to the plane of inner speech.

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Studying the development of inner speech in the child's egocentric speech has convinced us that the former is not speech minus sound but a speech function that is unique in its structure and function. Correspondingly, it has an entirely different organization than external speech. It has its own syntax. One characteristic of egocentric speech that manifests a clear developmental tendency is its fragmentation and abbreviation.

This observation is not new. All who have carefully studied inner speech have recognized that this fragmentation and abbreviation is its central feature. Even those such as Watson who have studied it from a behaviorist perspective have recognized

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this fact. Inner speech is not just for those who reduce it to a mere sound. They know, however, no more. Indeed, a systematic analysis of the phenomena associated with inner speech and abbreviated natural speech is a single confused knot.

Through genetic analysis we have found that characteristics that characterize inner speech are causes and explanations of the development of thinking had its roots in the development of language generally. Processes, their abbreviations, are not identifiable unless we focus on them from the point where they serve not social but individual purposes.

Differing only in degree, inner speech can be observed in the development of language that culminates in the development of an approximate inner speech. It arises, egocentric speech is a special form of speech. The dynamics of this development lead to the complete inner speech. Thus, by a gradual development, they are separating them from one another.

If we take abbreviated speech as a model, it shows us directly how inner speech manifests a simple transition toward a form of abbreviation in which the subject is omitted.

Inner speech is manifested in all our speech. It is extremely regular. It is that of pure and absolute speech.

To help us understand the development of inner speech, we will consider a few examples of inner speech. A purely predicative sentence, either where a subject is known to both the speaker and the hearer, is known to both the speaker and the hearer: "Yes, my brother wants a glass of tea?" Again, no one would say: "Yes, my brother wants a glass of tea." In the first case, the speaker reads it. This type of sentence speaks for itself.

An analogous situation exists in the case of interlocutors. Imagine a speaker and a hearer. Having sighted the speaker, the hearer, which we are waiting for, has abbreviated to a single word.

this fact. Inner speech has been seen as a mirror image of external speech only by those who reduce it to the reproduction of external speech in memory. As far as we know, however, no one has gone beyond the descriptive study of this characteristic. Indeed, a systematic descriptive analysis has not been completed. There are many phenomena associated with inner speech that find their expression in its fragmentary and abbreviated nature. Previous analyses have left these phenomena tangled in a single confused knot.

Through genetic analysis, we have attempted to partition the separate phenomena that characterize inner speech from this confused tangle and clarify their respective causes and explanations. Watson argued that this characteristic of silent speaking or thinking had its roots in the phenomenon of short circuiting common to habit development generally. He argued that even if we could record these hidden internal processes, their abbreviations, short circuits, and economies would make them unrecognizable unless we followed their genetic development from beginning to end, that is, from the point where they are complete and social in character to the point where they serve not social but individual adaptation.

Differing only in that it develops before our eyes, an analogous phenomenon can be observed in the development of the child's egocentric speech, a developmental process that culminates on the threshold of the school age as egocentric speech begins to approximate inner speech. As Piaget noted, if you do not know the situation where it arises, egocentric speech is abbreviated and incomprehensible. Studies on the dynamics of this development leave no doubt that if it were extended further it would lead to the complete incomprehensibility and abbreviation characteristic of inner speech. Thus, by studying the development of egocentric speech we can trace the gradual development of these features of inner speech, creating the possibility of isolating them from one another and explaining them.

If we take abbreviation as the first independent phenomenon, a genetic analysis shows us directly how and why it arises. As egocentric speech develops, it does not manifest a simple tendency toward abbreviation or the omission of words, a simple transition toward a telegraphic style. On the contrary, it manifests a tendency toward a form of abbreviation where the predicate and related words are preserved while the subject is omitted. This tendency toward a predicative syntax in inner speech was manifested in all our experiments. With almost no exceptions, its development is extremely regular. Interpolating, we can assume that the syntactic form of inner speech is that of pure and absolute predicativity.

To help us understand how and why this feature of the syntax of inner speech develops, we will consider the kinds of situations where it is manifested in external speech. A purely predicative syntax is manifested in external speech in two basic situations, either where a question is being answered or where the subject of the discussion is known to both the interlocutors. First, no one would answer the question, "Do you want a glass of tea?", with the fully expanded phrase: "No, I do not want a glass of tea." Again, no one would answer the question, "Has your brother read this book?," by saying: "Yes, my brother read that book." In both cases, the answer would be purely predicative. In the first case the answer might be "No"; in the second "Yes" or "He read it." This type of predicative sentence is possible only because its subject -- what the sentence speaks about -- is implied by the interlocutors.

An analogous situation occurs where the subject of an expression is known to the interlocutors. Imagine that several people are waiting at a stop for the "B" tram. Having sighted the approaching tram, none of these people would say: "The 'B' tram, which we are waiting for to go somewhere, is coming." The expression will always be abbreviated to a single predicate: "It's coming." or "B." Here, we find the predicative

sentence in external speech because the subject and associated words are known directly from the situation where the interlocutors find themselves.

In both cases, pure predication arises where the subject of the expression is present in the interlocutors' thoughts. If their thoughts coincide, if both have the same thing in mind, complete understanding can be realized through a single predicate. If the predicate is related to different subjects, however, inevitable and often humorous misunderstandings arise.

We find many examples of the abbreviation of external speech -- of the reduction of external speech to a single predicate -- in the works of Tolstoy (an author who dealt regularly with issues related to the psychology of understanding). Consider, for example: "No one heard what he [i.e., the dying Nikolai Levin - L.V.] had said; only Kitty understood. She understood because she constantly followed his thought so that she might know what he needed" (1893, v. 10, p. 311). Because Kitty followed the thought of the dying man, her thoughts contained the subject to which the word that no one had understood was related. The most striking example of the phenomenon of abbreviation in Tolstoy's works is found in the interchange between Kitty and Levin in which they communicated using nothing more than the initial letters of words:

"I have long wanted to ask you one thing."

"Please, ask."

"Here," he said and wrote the initial letters: W,Y,A,M,I,C,B,D,T,M,N,O,T." These letters meant: "When you answered me, 'It cannot be,' did that mean never or then?" It seemed impossible that she would understand this complex phrase.

Blushing, she said, "I understand."

"What is this word?", he asked, indicating the "N" that represented the word "never."

"That word means "never," she said. "But that is not right." He quickly erased what was written, gave her the chalk, and waited.

She wrote: "I,C,N,A,O,T."

He quickly brightened; he understood. It meant: "I could not answer otherwise then."

She wrote the initial letters: "C,Y,F,A,F,W,H,H." This meant: "Can you forget and forgive what has happened?"

He took the chalk, breaking it with his tense and trembling fingers, and then wrote the initial letters of the following: "I have nothing to forget and forgive. I never stopped loving you."

"I understand," she said in a whisper.

He sat and wrote a long phrase. She understood all. Taking the chalk she answered immediately. For a long time he was not able to understand what she had written. He glanced frequently into her eyes. His mind was blank with happiness. He could not fill in the words that she had in mind, but in her lovely, radiant eyes he understood all that he had to know. He wrote three letters. He had not finished writing when she had read beyond his hand and finished herself, writing the answer, "Da." In their conversation everything had been said: that she loved him; that she would tell her father and mother; that tomorrow he would arrive in the morning (*Anna Karenina*, Chap. 13, Part 4).

This example is of extraordinary psychological significance, because it was borrowed from Tolstoy's own biography, as indeed was the entire love affair between Levin and Kitty. This was precisely the way that Tolstoy declared his love for his future wife, C.A. Bers.

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Like that which breviation in inner speech are one, the role of speech is a minimum. Tolstoy's abbreviated speech is not a psychological contact.

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Like that which preceded it, this example is closely related to the problem of abbreviation in inner speech. When the thoughts and consciousness of the interlocutors are one, the role of speech in the achievement of flawless understanding is reduced to a minimum. Tolstoy turned to our attention the fact that understanding through abbreviated speech is more the rule than the exception for people who live in close psychological contact.

Levin had grown used to being able to speak his thought without clothing it in precise words. He knew that, in intimate moments such as this, his wife would understand what he wanted to say on the basis of nothing more than a hint or allusion; and she did (1893, v.11, p. 13).

Studying this kind of abbreviation in dialogic speech, Yakubinskii⁸³ concluded that where there is common knowledge of the matter at hand, where we find this understanding through allusion and conjecture, the commonality of the interlocutors' apperceptive mass plays a tremendous role in the speech exchange. The understanding of speech requires a knowledge of the matter at hand. In Polivanov's⁸⁴ view, everything we say requires a listener who understands the nature of the matter at hand. If we had to include everything we wanted to say in formal word meanings, we would have to use many more words to express each thought than we do. We speak through hints and allusions. Yakubinskii was right in claiming that where we find these abbreviations we have a unique speech syntax with tremendous objective simplicity compared with that of more discursive speech. 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.

The comic misunderstandings that we referred to earlier are the polar opposite of this understanding based on abbreviated syntax. A useful illustration is found in this well known parody, where the thoughts of the interlocutors are completely unconnected:

Before the deaf judge two deaf men bow.
The first cries: "Judge! He stole my cow."
"Beg pardon," says the second, in reply,
That meadow was my father's in days gone by."
The judge: "To fight among each other is a shame.
Neither one nor the other but the girl's to blame."

These two extremes are the poles between which the abbreviation of external speech moves. Where the thoughts of the interlocutors focus on a common subject, full understanding can be realized with maximal speech abbreviation and an extremely simplified syntax. Where they do not, understanding cannot be achieved even through expanded speech. Thus, two people who attribute different content to the same word or who have fundamentally different perspectives often fail to achieve understanding. As Tolstoy says, people who think in original ways and in isolation find it difficult to understand the thought of others. They also tend to be particularly attached to their own thought. In contrast, people who are in close contact can understand mere hints which Tolstoy called "laconic and clear." They can communicate and understand the most complex thoughts almost without using words.

Having discussed these examples of abbreviation in external speech, we return enriched to the analysis of this phenomenon in inner speech. As we have said, abbreviation is not something that is manifested in inner speech only in special situations. It is a consistent feature of inner speech. The significance of abbreviation becomes apparent when we compare external speech to written and inner speech.

Polivanov has noted that if we included all that we wanted to say in the formal meanings of the words we use, we would need to use many more words to express each of our thoughts than we do. This is precisely the situation we find in written speech. To a much greater extent than in oral speech, thought is expressed in formal word meanings. Written speech is speech without the interlocutor. It is, therefore, maximally expanded and syntactically differentiated. Because of the separateness of the interlocutors, understanding through hints and predicative expressions is rarely possible in written speech. The differing situations in which the interlocutors find themselves in written speech preclude the presence of a common subject in their thought. Thus, compared with oral speech, written speech is maximally expanded as well as syntactically complex. As Thompson has pointed out, we commonly use words, expressions, and constructions in written expositions that would seem artificial in oral speech. Griboedov's phrase, "and you speak as you write," refers to the comic transfer of the word-rich and syntactically complex language of written speech to oral speech.

In linguistics, this problem of the *variation in speech functions* has recently attracted a good deal of attention. It turns out that even from the linguist's perspective, language is not a single form of speech activity but a collection of varied speech functions. Researchers have begun to focus on the functional analysis of language, an analysis of language that focuses on the conditions and goals of the speech expression. As early as Humboldt, linguists addressed the issue of the functional variety of speech in their distinction between the language that is used in poetry and that which is used in prose. Poetry and prose differ from one another in their intention as well as their means. They can never merge because poetry is inseparable from music while prose belongs exclusively to language. In Humboldt's view, prose is distinguished by the fact that language enjoys its own advantages here, though they are subordinated to the governing goal. By subordinating and collecting sentences in prose, there develops a logical eurhythmy that corresponds to the development of thought, a logical eurhythmy in which prose constructs its own goal. Each of these forms of speech is characterized by its unique modes of selecting expressions, using grammatical forms, and incorporating words syntactically into speech.

According to Humboldt, then, speech forms that differ in their function have their own unique lexicon, grammar, and syntax. This is an extremely important concept. Neither Humboldt nor Potebnia -- who adopted and developed Humboldt's ideas -- understood the full significance of this thesis. Neither went significantly beyond the initial differentiation between poetry and prose, though there was an additional differentiation within prose between forms of conversation that are filled with thoughts and forms of mundane conversation or chatter that serve only for the communication of daily matters. For a period of time, linguists largely forgot this basic concept. As Yakubinskii notes, the very statement of this problem is foreign to linguistics. It is an issue that has generally not been mentioned in collections on general linguistics. However, this concept has tremendous significance for the psychology of language and linguistics and is currently enjoying a rebirth.

Though following its own path, the psychology of speech has also become involved in this task of differentiating the functional varieties of speech. For the psy-

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chology of speech and for linguistics the differentiation of dialogic and monologic forms of speech has become particularly important. Written speech and inner speech are *monologic* speech forms. Oral speech is generally *dialogic*.

Dialogue always assumes the interlocutors' knowledge of the crux of the matter. As we have seen, this knowledge allows abbreviations in oral speech. In certain situations, it produces purely predicative statements. Dialogue presupposes visual perception of the interlocutor (of his mimics and gestures) as well as an acoustic perception of speech intonation. This allows the understanding of thought through hints and allusions. Only in oral speech do we find the kind of conversation where (as Tarde⁸⁵ where stated it) speech is only a supplement to the glances between the interlocutors.

Because we discussed the tendency of oral speech toward abbreviation earlier, we will limit ourselves here to a discussion of its acoustic aspects. Dostoevskii's⁸⁶ writing provides us with an excellent example of the extent to which intonation facilitates subtle differentiations in the comprehension of word meaning.

Dostoevskii describes the language of several drunks which consisted of a single unprintable noun:

Once on Sunday, near evening, we happened to walk alongside a crowd of six drunken workers for fifteen paces. I suddenly became convinced that it is possible to express all thoughts and sensations -- even a whole chain of reasoning -- through a single short noun. One member of the group sharply and energetically pronounced a word, expressing his own scornful rejection of something they had been talking about. In response, another repeated this same noun using an entirely different tone and sense, expressing serious doubt about the validity of the first speaker's rejection. A third, suddenly becoming indignant with the first, sharply and heatedly entered into the conversation. He shouted the same noun at the first but with a sense that was abusive and reproachful. Here the second reentered, indignant with the third (i.e., the offender); he cautioned him: "Why did you fly in like that? We were talking calmly and in you come swearing." He expressed this thought using the same venerable word, the name of a single object. His speech differed from the others only in that he raised his hand and took the third speaker by the shoulder. Suddenly a fourth speaker -- the youngest who previously had been silent -- discovered a solution to the difficulty that had initially given rise to the argument. He raised his hand in delight and shouted... "Eureka,"... "I found it, I found it!" No, not, "Eureka," nor, "I found it"; he merely repeated that same noun, only the one word. But he said it with delight, a visage of ecstasy. This seemed too strong. The sixth, a sullen individual and the oldest in the group, did not like it. He quickly snubbed the naive delight of the younger. He turned to him and sullenly repeated that same noun -- a noun forbidden to women -- with a nasal base tone. His meaning was clear and precise: "What are you screaming about?." Not saying another word, then, they repeated their pet word six times in sequence and understood each other completely. I was a witness (1929, pp. 111-112).⁸⁷

Here we see another of the sources that underlie the tendency for abbreviation in oral speech. Dostoevskii writes that it is possible to express all thoughts, all sensations -- even a whole chain of argument -- through a single word. Here, this becomes possible when we use intonation to transfer the internal psychological context, that is, the context within which the word's sense can be understood. In this conversation, this context consists in sharp rejection, doubt, or indignation. When the internal content of thought can be expressed through intonation, speech will tend to become abbreviated.

Thus, we have identified two features that facilitate abbreviation, that is, the interlocutors' shared knowledge of the subject and the direct transfer of thought through intonation. Written speech precludes both. This is why we have to use more words to express a thought in written than in oral speech. As a consequence, *written speech has more words, is more precise, and is more expanded than any other form of speech*. In written speech, we must use words to transmit what is transmitted in oral speech through intonation and the immediate perception of the situation.

Shcherba⁸⁸ notes that dialogue is the most natural form of oral speech. He argues that monologue is to a large extent an artificial language form, that language reflects its true nature only in dialogue. This is true. In psychological terms, the initial form of speech is dialogic. Yakubinskii expresses this idea in his argument that dialogue -- though clearly a cultural phenomenon -- is still much more a natural phenomenon than monologue. Monologue is a higher, more complex speech form. It developed later than dialogue. In this context, however, we are interested only in the tendency of these two speech forms toward abbreviation, in their tendencies to be reduced to purely predicative utterances.

The rapid tempo of oral speech is not conducive to the development of speech activity as a complex volitional action, that is, as an action characterized by reflection, the conflict of motives, and selection. The rapid tempo of oral speech presupposes a simple volitional action, one with significant elements of habit. This is simply an observation. In contrast to monologue, and written speech in particular, dialogic social interaction implies immediate expression. Dialogue is speech that consists of rejoinders. It is a chain of reactions. In contrast, written speech is connected with consciousness and intentionality from the outset. Therefore, the potential for incomplete expression is inherent in dialogue. There is no need to mobilize the words that must be mobilized for expressing the same complex of thought in monologic speech. In contrast to dialogue's compositional simplicity, monologue is characterized by a compositional complexity that introduces speech facts into the field of consciousness. It is much easier to focus attention on speech facts in monologue than in dialogue. In monologue, the speech relationships become the determinants or sources of the experiences that appear in consciousness.

It is no surprise that written speech is the polar opposite of oral speech. The situation that is clear to the interlocutors in oral speech, and the potential for expressive intonation, mimic, and gesture, is absent in written speech. The potential for abbreviation is excluded from the outset. Understanding must be produced through words and their proper combination. Written speech facilitates speech as a complex activity. This underlies the use of the rough draft. The path from the rough to the final draft is a complex activity. However, even without the rough draft, the process of reflecting on one's work in written speech is extremely powerful. Frequently, we say what we will write to ourselves before we write. What we have here is a rough draft in thought. As we have tried to show in the preceding chapter, this rough draft that is constructed in thought as part of written speech is inner speech. Inner speech acts as an internal rough draft in oral as well as in written speech. We must, therefore, compare the tendency for abbreviation in inner speech with that of oral and written speech.

We have seen that the tendency for abbreviation and pure predicativity of expression arises in two circumstances in oral speech -- where the situation being referred to is clear to the interlocutors and where the speaker expresses the psychological context of his expression through intonation. We have also seen that both circumstances are excluded in written speech. Again, this is why written speech does not manifest the tendency for predicativity characteristic of oral speech. This is why it is the most expanded speech form.

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What do we find if we analyze inner speech from this perspective? Our detailed discussion of predicativity in oral speech permits the clear expression of one of the most subtle and complex theses to which our research on inner speech has led us, the thesis that inner speech is predicative. This thesis is fundamental to the resolution of all related issues. In oral speech, the tendency for predicativity arises frequently and regularly in particular types of situations. In written speech, it never arises. In inner speech, it is always present. It is the basic and indeed the only form assumed by inner speech. Inner speech consists entirely of psychological predicates. We do not find a predominance of predicate over subject. We find absolute predicativity. As a rule, written speech consists of expanded subjects and predicates. In inner speech, however, the subject is always dropped. Only the predicate is preserved.

Why do we find this complete, absolute, and consistent predicativity in inner speech? The predicative nature of inner speech can be demonstrated experimentally. Our task here, however, is to explain and interpret this fact. This task can be approached in two ways. We can follow the ontogenetic development of pure predicativity or we can conduct a theoretical analysis of the tendencies of written and oral speech for abbreviation and compare these with the same tendency in inner speech.

We will begin with the second approach, with a comparison of inner speech with oral and written speech. In fact, we have nearly completed this task, having prepared the foundation for our final clarifying thought. Simply stated, the circumstances that sometimes create the potential for purely predicative expressions in oral speech, circumstances that are absent entirely in written speech, are a consistent characteristic of inner speech. They are inseparable from it. As a consequence, this same tendency for predicativity is a consistent characteristic of inner speech. It is expressed here in its pure and absolute form. Thus, written and oral speech are polar opposites because the former is maximally expanded, because it is characterized by a complete absence of the circumstances that result in dropping the subject. Correspondingly, inner and oral speech are also polar opposites, but in the reverse sense, with absolute and constant predicativity governing inner speech. Oral speech occupies a middle position between written and inner speech in this respect.

Let us analyze the circumstances that facilitate abbreviation in inner speech in more detail. Remember, with oral speech, elision and abbreviation arise where the subject of the expression is known to the interlocutors. In inner speech, we always know what our speech is about; we always know our internal situation, the theme of our inner dialogue. Piaget once noted that we easily believe our own word, that the need for proof and the ability to provide evidence for our thought emerges only in the encounter between our own ideas and the foreign ideas of others. In the same way, it is particularly easy to understand ourselves through hints and allusions. In inner speech, we are always in the kind of situation that arises from time to time in oral dialogue, the kind of situation that we have illustrated in our examples. Inner speech always occurs in a situation comparable to that where the speaker expressed an entire thought at the tram stop through the single predicate "B." We always know our own expectations and intentions. We never need to resort to the expanded formula: "The B tram that we are waiting for to go somewhere is coming." In inner speech, the predicate is always sufficient. The subject always remains in the mind, just as the remainders beyond ten remain in the student's mind when he is doing multiplication or addition.

Moreover, we always have the capacity to express our thought in inner speech without clothing it in precise words. This was what happened in the conversation between Levin and his wife. As we indicated above, the mental intimacy of the interlocutors creates a shared apperception⁸⁹ that is critical for attaining comprehension

through allusions, critical for the abbreviation of speech. This shared apperception is complete and absolute in the social interaction with oneself that takes place in inner speech. Therefore, the nearly wordless yet laconic and clear communication of complex thoughts is a consistent characteristic of inner speech, where in external speech it is possible only where there is a profound internal intimacy between the speakers. In inner speech, we never need to name the subject. We limit ourselves to what needs to be said of this subject, to the predicate. This is the source of the dominance of predicativity in inner speech.

Thus, analyzing the tendency for predicativity in oral speech has allowed us to conclude that this tendency arises where the subject is known to the interlocutors, where it is present in the speakers' shared apperception. The fact that these characteristics are found in their extreme and absolute form in inner speech helps us to understand the absolute dominance of pure predicativity that we find here. We have also seen that in oral speech these conditions lead to the reduction of syntactic complexity and differentiation, that is, to a unique syntactic structure. However, what we find expressed weakly in oral speech is manifested in its absolute form in inner speech. In inner speech, we find the ultimate syntactic simplification, the absolute condensation of thought, and an entirely new syntactic structure. We find the complete abolition of the syntax of oral speech in a purely predicative sentence structure.

Our analysis of oral speech also indicated that it is the functional change in speech that leads to structural changes. Once again, the structural changes we found in oral speech are found in absolute form in inner speech. Our genetic and experimental studies demonstrated that what is initially only a functional differentiation of egocentric and social speech leads directly and systematically to structural changes as well. With the development of functional differentiation, we find structural changes in egocentric speech that gradually approach the complete abolition of the syntax of oral speech.

We can trace the developing predicativity of inner speech. Initially, the structural characteristics of egocentric speech are identical to those of social speech. As egocentric speech develops and becomes functionally isolated from social speech, as it becomes an independent and autonomous speech form, we find increasing manifestations of the tendency for abbreviation, continual reduction in the levels of syntactic differentiation, and increasing tendencies for condensation. Before it atrophies, before it is transformed into inner speech, the syntax of egocentric speech is almost purely predicative.

Experimental observations illustrate the nature of the process through which this new syntax of inner speech develops as well as the source of that development. The child talks about what he is occupied with at the moment. He speaks of what he is doing, of what is before his eyes. As a consequence, he increasingly drops, abbreviates, and condenses the subject. Increasingly, speech is reduced to a single predicate. The remarkable law that these experiments establish can be stated in the following way: *As the functional character of egocentric speech is increasingly expressed, we begin to see the emergence of its syntactic characteristics. We begin to see its simplicity and its predicativity.* We see this clearly if we compare that egocentric speech which assumes the role of inner speech and acts as a means of interpreting problems and difficulties with that egocentric speech which is manifested in isolation from these intellectual functions. The stronger the specifically intellectual function of inner speech, the more clearly its unique syntactic structure emerges.

The predicativity of inner speech is not the only phenomenon that lies hidden behind its obvious abbreviation. When we analyze the abbreviation of inner speech, we

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find an entire series we will mention only

First, the abbreviation. We have seen several conversations between Kitty and I that indicate that the role of orientation in consciousness is not complete to its extreme.

This situation -- in inner speech, we are in a relation between Kitty and I. The meaning of the conversation is reduced to a few words. In Lemetre's conversation between Kitty and I, the phrase, "Les montagnes derrière lesquelles se trouvent les premières étapes de l'abréviation. They never have the need already understood."

This comparison of initial letters in inner speech and identical mechanism. Simply stated, the role of orientation there is a shared orientation. The phonetic aspect of speech is almost without examples of inner and their initial letters in mechanism seems to relationship between the here.

The abbreviated significance for understanding have named two sources of activity and its reduced entirely different relation than we find in oral speech are reduced. Word meaning advances of word meaning.

To explain this, that is, its unique semantic structure of the meaning sound structure. In the semantics of inner speech constitute its unique

First, in inner speech. Paulhan⁹⁰ signifying the distinction

find an entire series of structural characteristics reflected in it. In the present context, we will mention only a few of the most important.

First, the abbreviation of inner speech includes a reduction in its phonetic aspect. We have seen several examples of this already in the abbreviation of oral speech. The conversation between Kitty and Levin based on only the initial letters of words indicates that the role of verbal stimuli is reduced to a minimum where there is a shared orientation in consciousness. Once again, this reduction in the role of verbal stimuli is taken to its extreme in inner speech. Here, the shared orientation of consciousness is complete.

This situation -- a rarity in oral speech -- is a consistent aspect of inner speech. In inner speech, we are always in a situation comparable to that in which the conversation between Kitty and Levin took place. In inner speech, we are always guessing the meaning of the complex phrase through nothing more than the initial letters of the words. In Lemetre's studies of inner speech, we find striking analogies to the conversation between Kitty and Levin. In one of his studies, twelve year olds thought the phrase, "Les montagnes de la Suisse sont belles," as a series of letters (l,m,n,d,l,s,s,b) behind which there was a vague outline of a row of hills (Lemetre, 1905, p. 5). In the initial stages of the formation of inner speech, we find an analogous mode of speech abbreviation. The phonetic aspect of the word is reduced to its initial letters. We never have the need to pronounce the word fully in inner speech. In our intention, we already understand the word we will pronounce.

This comparison is not meant to imply that the word is always replaced by its initial letters in inner speech. Nor do we mean to imply that speech unfolds through identical mechanisms in inner and external speech. Our point is much more general. Simply stated, the role of verbal stimuli is reduced to a minimum in oral speech where there is a shared orientation of consciousness. In inner speech, this reduction in the phonetic aspect of speech is pervasive and consistent. Inner speech is speech carried out almost without words. This is why we find such a profound similarity in these examples of inner and external speech. The fact that we find a reduction of words to their initial letters in certain cases in both oral and inner speech and that the same mechanism seems to be operating in both cases further convinces us of the close relationship between the phenomena of oral and inner speech that have been compared here.

The abbreviated nature of inner speech masks a second feature of substantial significance for understanding the psychological nature of this phenomenon. So far, we have named two sources of the abbreviated nature of inner speech, that is, its predicativity and its reduced phonetic aspect. Both indicate that in inner speech we find an entirely different relationship between the semantic and phonetic aspects of speech than we find in oral speech. In inner speech, the syntactic and phonetic aspects of speech are reduced to a minimum. They are maximally simplified and condensed. Word meaning advances to the forefront. Thus, in inner speech, the relative independence of word meaning and sound is graphically illustrated.

To explain this, we must analyze a third source of abbreviation in inner speech, that is, its unique semantic structure. The syntax of meanings -- indeed the whole structure of the meaningful aspect of inner speech -- is no less unique than its syntax or sound structure. In our studies, we were able to establish three basic characteristics of the semantics of inner speech. These characteristics are interconnected and together constitute its unique semantics.

First, in inner speech, we find a predominance of the word's sense over its meaning. Paulhan⁹⁰ significantly advanced the psychological analysis of speech by introducing the distinction between a word's sense and meaning. A word's sense is the ag-

gregate of all the psychological facts that arise in our consciousness as a result of the word. Sense is a dynamic, fluid, and complex formation which has several zones that vary in their stability. Meaning is only one of these zones of the sense that the word acquires in the context of speech. It is the most stable, unified, and precise of these zones. In different contexts, a word's sense changes. In contrast, meaning is a comparatively fixed and stable point, one that remains constant with all the changes of the word's sense that are associated with its use in various contexts. Change in the word's sense is a basic factor in the semantic analysis of speech. The actual meaning of the word is inconstant. In one operation, the word emerges with one meaning; in another, another is acquired. The dynamic nature of meaning leads us to Paulhan's problem, to the problem of the relationship between meaning and sense. Isolated in the lexicon, the word has only one meaning. However, this meaning is nothing more than a potential that can only be realized in living speech, and in living speech meaning is only a cornerstone in the edifice of sense.

The fable, "The Dragon-fly and the Ant," as translated by Krylov, can be used to illustrate the difference between the word's meaning and its sense. The word "dance" with which the fable ends has a definite and constant meaning. This meaning is identical in all contexts. In the context of this fable, however, it acquires a much broader intellectual and affective sense. It simultaneously means "be merry" and "die." This enrichment of the word through the sense it acquires in context is a basic law of the dynamics of meaning. The word absorbs intellectual and affective content from the entire context in which it is intertwined. It begins to mean both more and less than it does when we view it in isolation. It means more because the scope of its meaning is expanded; it acquires several zones that supplement this new content. It means less because the abstract meaning of the word is restricted and narrowed to what the word designates in this single context.

Paulhan states that the word's sense is complex, fluid, and constantly changing. To some extent, it is unique for each consciousness and for a single consciousness in varied circumstances. In this respect, the word's sense is inexhaustible. The word acquires its sense in the phrase. The phrase itself, however, acquires its sense only in the context of the paragraph, the paragraph in the context of the book, and the book in the context of the author's collected works. Ultimately, the word's real sense is determined by everything in consciousness which is related to what the word expresses. According to Paulhan, the sense of the Earth is the solar system, the sense of the solar system the Milky Way, and the sense of the Milky Way.... We never know the complete sense of anything, including that of a given word. The word is an inexhaustible source of new problems. Its sense is never complete. Ultimately, the sense of a word depends on one's understanding of the world as a whole and on the internal structure of personality.

Paulhan's most important contribution, however, lies in his analysis of the relationship between word and sense. Paulhan demonstrated that the relationship between a word and its sense is not characterized by the same direct dependency as the relationship between a word and its meaning. Words can be disassociated from the sense that is expressed in them. It has long been known that words can change their sense. More recently, it has been noted that we must also study how senses change their words or, more precisely, how concepts change their names. Paulhan provides several examples illustrating how the word can remain after sense has evaporated. He analyzed stereotyped phrases such as, "How are you doing?", as well as other situations that illustrate the independence of word from sense. Paulhan also shows how sense can be isolated from the word that expresses it, how it can become fixed in another word. He argues that in the same way that the word's sense is connected not with each

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of its sounds but with the word as a whole, sense is connected not with each of the words that constitute the phrase but with the phrase as a whole. This creates the potential for one word to take the place of another, for sense to be isolated from the word yet still preserved. However, the word cannot exist without sense nor can sense exist without the word.

Once again, we will use Paulhan's analysis to identify a phenomenon in oral speech that has a kinship with a characteristic of inner speech. In oral speech, we generally move from the more stable and constant element of sense -- from the word's meaning -- to its more fluid zones, that is, to its sense as a whole. In inner speech, on the contrary, the predominance of sense over meaning that we find in oral speech in unusual situations approaches its mathematical limit. It is manifested in absolute form. The prevalence of sense over meaning, of the phrase over the word, and of the whole context over the phrase is the rule rather than the exception in inner speech.

This characteristic of the semantic aspect of inner speech is the source of two of its other characteristics, both of which are associated with the process of word unification. The first is comparable with agglutination, a means of unifying words basic to some languages though comparatively rare in others. In German, the single noun is frequently formed from several words or an entire phrase that carry the functional meaning of a single word. In other languages, this type of agglutination is pervasive. Wundt argues that these complex words are not accidental word aggregates, that they are formed according to definite laws. These languages take words that designate simple concepts and unite them into words that express complex concepts, concepts that nonetheless continue to designate each of the particular representations they contain. In this mechanical connection or agglutination of linguistic elements, the greatest accent is given to the main root or main concept, facilitating ease of comprehension. Thus, in the Delaware language, there is a complex word formed from the three words "to obtain", "boat," and "us." The literal meaning of the word is "to obtain something for us on the boat" or "to ferry something to us on the boat." The word is most commonly used, however, as a challenge to an enemy to cross a river. This word is conjugated in all the many moods and tenses of other Delaware verbs. Two aspects of this situation should be noted. First, the words that constitute the complex word often undergo phonetic abbreviation as they are incorporated in it. Second, the complex word has the function and structure of a unified word. It does not act as a unification of independent words. Wundt notes that the complex word is viewed in precisely the same way as the simple word in the American Indian languages -- that it is declined and conjugated in the same way.

Something analogous can be observed in the child's egocentric speech. As egocentric speech begins to approximate inner speech, agglutination emerges with increasing frequency and clarity as a means of forming unified complex words that are used to express complex concepts. The increasing manifestations of this tendency for an asyntactic fusing of words in the child's egocentric expressions parallels the drop in the coefficient of egocentric speech.

The third and final semantic characteristic of inner speech can once again be illustrated by analyzing a phenomenon found in oral speech. Word sense -- broader and more dynamic than word meaning -- is characterized by different laws of unification and fusion. We have referred to the unique mode of word unification that we observed in egocentric speech as the *influence* of sense, understanding the word "influence" here both in its literal sense (i.e., that of infusion) and in its broader commonly accepted meaning. Senses infuse or influence one another such that one is contained in or modifies the other.

With external speech, similar phenomena can be observed most frequently in literary speech. Passing through a work of literature, the word acquires all the varied units of sense included within it. Its sense becomes equivalent to that of the work as a whole. The title of a literary work clearly illustrates this. The title has a different relationship to the work in literature than it does in poetry or music. It expresses and crowns the entire sense content of the work much more than it does in painting. Words such as "Don Quixote," "Hamlet," "Eugene Onegin", or "Anna Karenina" express this law of sense-influence in its pure form. The sense-content of the entire work can be contained in a single word.

Gogol's work, "Dead Souls," provides a remarkable example of this law of sense influence. Initially, these words designate dead serfs who have not been removed from official lists, dead serfs that can therefore be bought and sold like the living. These words are used in this sense throughout the poems, poems that focus on the trafficking in these dead souls. As they pass through the poems, however, these two words acquire an entirely new and an immeasurably richer sense. As a sponge absorbs the ocean mist, these words absorb the profound sense of the various chapters. Only toward the end do they become completely saturated with sense. By this time, however, these words designate something entirely different than they did initially. "Dead souls" refers not only to the dead, yet still counted, serfs but to all the poems' central characters, characters who live but who are spiritually dead.

There is an analogous phenomenon in inner speech, though it is again taken to the extreme. Here, the word assumes the sense of preceding and subsequent words, extending the boundaries of its meaning almost without limit. In inner speech, the word is much more heavily laden with sense than it is in external speech. Like the title of Gogol's poems, it is a concentrated clot of sense. To translate this meaning into the language of external speech, it must be expanded into a whole panorama of words. This is why the full revelation of the sense of the title of Gogol's poems requires the entire text of, "Dead Souls," for its development. However, just as the entire sense of the poems can be included in these two words, tremendous sense content can be fit into a single word in inner speech.

These characteristics of the meaningful aspect of inner speech result in the incomprehensible nature of egocentric and inner speech that has been noted by all who have observed them. It is impossible to understand the child's egocentric expression if you do not know what is referred to by the predicates that constitute it, if you do not see what the child is doing and seeing. Watson suggested that inner speech would remain completely incomprehensible even if one were to succeed in recording it. Though noted by all observers, the incomprehensible nature of inner speech -- like its abbreviated nature -- has not been subjected to analysis. What analysis indicates is that, like the abbreviation of inner speech, its incomprehensible nature is a product of many factors. It is the summary expression of a wide variety of phenomena.

A sufficient explanation and clarification of the psychological nature of the incomprehensibility of inner speech has been provided by our discussion of its characteristics, that is, its unique syntax, its phonetic reduction, and its special semantic structure. Nonetheless, we will consider two additional factors that lead to the incomprehensible nature of inner speech. The first is the integral consequence of all the characteristics of inner speech listed above. It stems from the unique function of inner speech. Inner speech is not meant for communication. It is speech for oneself. It occurs under entirely different internal conditions than external speech and it fulfills an entirely different function. Thus, we should not be surprised by the fact that inner speech is incomprehensible but by the fact that we expect it to be comprehensible.

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The second is associated with the unique nature of the sense structure of inner speech. We will again clarify our thought through an illustration from external speech. In *Childhood, Adolescence, and Youth*, Tolstoy notes that among people who live the same life a special dialect or jargon often emerges that is comprehensible only to those who have participated in its development. The brothers Irten'ev had their own dialect, as do street children. Under certain conditions, the usual sense and meaning of a word changes and it acquires a specific meaning from the conditions that have led to this change. It should be no surprise that this kind of inner dialect also arises in inner speech. In its internal use, each word gradually acquires different colorations, different sense nuances, that are transformed into a new word meaning as they become established. Our experiments show that word meanings are always *idiomatic* in inner speech, that they are always untranslatable into the language of external speech. The meaning of the word in inner speech is an individual meaning, a meaning understandable only in the plane of inner speech. It is as idiomatic as an elision or password.

The infusion of varied sense content into a single word constitutes the formation of an individual, untranslated meaning -- an idiom. What occurs here is similar to what we found in the conversation among the six drunken workmen that was described by Dostoevskii. However, once again, what is the exception for external speech is the rule for inner speech. In inner speech, we can always express all thoughts and sensations -- even a whole chain of reasoning -- through a single word. Of course, the meaning of this word cannot be translated into the language of external speech. It is incommensurate with the word's common meaning. It is because of this idiomatic nature of the semantics of inner speech that it is so difficult to comprehend and translate inner speech into normal language.

With this we can end our outline of the characteristics of inner speech. It is important to emphasize that we first identified these characteristics in our experimental investigation of egocentric speech. We have analyzed analogous or closely related phenomena in external speech in order to more fully understand their nature. This comparison was important because it provided a means of generalizing the data we found in our experiments. Even more significantly, however, this comparison demonstrated that the potential for the formation of these characteristics is already present in external speech. This provides additional support for the hypothesis that egocentric and external speech constitute the source of inner speech. Given the proper circumstances, all these characteristics of inner speech (i.e., the tendency for predication, the reduction in the phonetic aspect, the predominance of sense over meaning, the agglutination of semantic units, the influence of word sense, and idiomatic speech) can be found in external speech. This is an extremely important fact, since it demonstrates that the word's nature permits the emergence of these phenomena. In our view, this provides the best support for the hypothesis that inner speech has its origins in the differentiation and circumscription of the child's egocentric and social speech.

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 verbal thinking which mediates the dynamic relationship between thought and word. After all that we have said about the nature of inner speech, about its structure and its function, there is no question that the movement from inner to external speech is incomparable to the direct translation of one language to another. The movement from inner to external speech is not a simple unification of silent speech with sound, a simple vocalization of

* The present Russian text reads "inner" where I have translated "external." Earlier versions read "external" which is clearly indicated by the context. N.M.

inner speech. This movement requires a complete *restructuring* of speech. It requires a transformation from one distinctive and unique syntax to another, a transformation of the sense and sound structure of inner speech into the structural forms of external speech. External speech is not inner speech plus sound any more than inner speech is external speech minus sound. The transition from inner to external speech is complex and dynamic. It is the transformation of a predicative, idiomatic speech into the syntax of a differentiated speech which is comprehensible to others.

We can now return to the definition of inner speech and the contrast of inner and external speech which served as the point of departure for our analysis. We said then that inner speech is a unique function that can be considered the polar opposite of external speech. We rejected the view that inner speech is what precedes external speech, that it is the latter's internal aspect. External speech is a process that involves the transformation of thought into word, that involves the materialization and objectivization of thought. Inner speech involves the reverse process, a process that moves from without to within. Inner speech involves the evaporation of speech into thought. However, speech does not disappear in its internal form. Consciousness does not evaporate and dissolve into pure spirit. Inner speech is speech. It is thought that is connected with the word. However, 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." Inner speech is a dynamic, unstable, fluid phenomenon that appears momentarily between the more clearly formed and stable poles of verbal thinking, that is, between word and thought. Consequently, its true role and significance can be clarified only if we take an additional analytic step inward, only if we establish some general representations about the next stable plane of verbal thinking.

This plane is thought itself. The first task of our analysis is to isolate this plane, to partition it from the unity where we always encounter it. We have said that any thought strives to unite something with something else. Thought is characterized by a movement, an unfolding. It establishes a relationship between one thing and another. In a word, thought fulfills some function. It resolves some task. Thought's flow and movement does not correspond directly with the unfolding of speech. The units of thought and speech do not coincide. The two processes manifest a unity but not an identity. They are connected with one another by complex transitions and transformations. They cannot, however, be superimposed on one another.

This can best be seen where the work of thought is unsuccessful, where -- in Dostoevskii's words -- thought does not move into word. Once again, consider an example from literature, an observation made by one of Uspenskii's⁹¹ characters. In the relevant scene, the unfortunate character has failed to find the words to express a thought that possesses him. He tortures himself helplessly as he wanders in silence, hoping that God will provide the concept and relieve his unspeakable burden. There is no essential difference between what this poor dispirited mind is experiencing and the similar tormented words of the poet or thinker. He speaks with almost the same words:

"...My friend, our sort does not have language... What I say seems to shape up as thoughts,... but not in language. That's our sorrow and stupidity. At times the fog clears... and, like a poet, we think that at any moment the mystery will assume a familiar image" (1949, p. 184).

Here, the boundary that separates thought from word, the uncrossable Rubicon that separates thinking from speech for the speaker, becomes apparent. If thought coincided directly in its structure and tendency with speech, this situation described by

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Uspenskii would be impossible. Thought has its own special structure and course. The transition from this to speech can be extremely difficult.

The theater faced this problem of the thought that lies behind the word earlier than psychology. In Stanislavskii's system in particular, we find an attempt to recreate the subtext of each line in a drama, to reveal the thought and desire that lies behind each expression. Consider the following example: Chatskii says to Sophia: "Blessed is the one who believes, for believing warms the heart." Stanislavskii reveals the subtext of this phrase as the thought: "Let's stop this conversation." We would be equally justified, however, in viewing this phrase as an expression of a different thought, specifically: "I do not believe you. You speak comforting words to calm me." It might express still another thought: "You cannot fail to see how you torture me. I want to believe you. For me, that would be bliss." The living phrase, spoken by the living person, always has its subtext. There is always a thought hidden behind it.

In the examples given above where we tried to show the lack of correspondence between the psychological and grammatical subject and predicate, we broke off our analysis at midpoint. We can now complete it. Just as a single phrase can serve to express a variety of thoughts, one thought can be expressed in a variety of phrases. The lack of correspondence between the psychological and grammatical structure of the sentence is itself determined by the way the thought is expressed in it. By answering the question, "Why has the clock stopped?", with, "The clock fell.", we can express the thought: "It is not my fault that the clock is broken; it fell!" However, this thought can be expressed through other words as well: "I am not in the habit of touching other's things. I was just dusting here." Thus, phrases that differ radically in meaning can express the same thought.

This leads us to the conclusion that thought does not immediately coincide with verbal expression. Thought does not consist of individual words like speech. I may want to express the thought that I saw a barefoot boy in a blue shirt running down the street today. I do not, however, see separately the boy, the shirt, the fact that the shirt was blue, the fact that the boy ran, and the fact that the boy was without shoes. I see all this together in a unified act of thought. In speech, however, the thought is partitioned into separate words. Thought is always something whole, something with significantly greater extent and volume than the individual word. Over the course of several minutes, an orator frequently develops the same thought. This thought is contained in his mind as a whole. It does not arise step by step through separate units in the way that his speech develops. *What is contained simultaneously in thought unfolds sequentially in speech.* Thought can be compared to a hovering cloud which gushes a shower of words.

Therefore, the transition from thought to speech is an extremely complex process which involves the partitioning of the thought and its recreation in words. This is why thought does not correspond with the word, why it doesn't even correspond with the word meanings in which it is expressed. The path from thought to word lies through meaning. There is always a background thought, a hidden subtext in our speech. The direct transition from thought to word is impossible. The construction of a complex path is always required. This is what underlies the complaint of the word's incompleteness, the lamentation that the thought is inexpressible:

How can the heart express itself,
How can the other understand...⁹²

or:

If only it were possible to express the spirit without words!⁹³

To overcome this, attempts arise to fuse words, to create new paths from thought to word through new word meanings. Khlebnikov⁹⁴ compared this kind of work with the construction of a road from one valley to another. He spoke of it as the direct path from Moscow to Kiev rather than one that goes via New York (he called himself a language traveler).

We said earlier that experiments have shown that thought is not expressed but completed in the word. However, as with Uspenskii's character, sometimes thought remains uncompleted. Did Uspenskii's character know what he wanted to think? He knew in the way that those who want to remember something -- but fail to remember -- know. Had he begun to think? He had begun as they have begun to remember. But had his thought succeeded as a process? To this question we must give a negative answer. Thought is not only mediated externally by signs. It is mediated internally by meanings. The crux of the matter is that the immediate communication of consciousness is impossible not only physically but psychologically. The communication of consciousness can be accomplished only indirectly, through a mediated path. This path consists in the internal mediation of thought first by meanings and then by words. Therefore, thought is never the direct equivalent of word meanings. Meaning mediates thought in its path to verbal expression. The path from thought to word is indirect and internally mediated.

We must now take the final step in the analysis of the internal planes of verbal thinking. Thought is not the last of these planes. It is not born of other thoughts. Thought has its origins in 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. Only here do we find the answer to the final "why" in the analysis of thinking. We have compared thought to a hovering cloud that gushes a shower of words. To extend this analogy, we must compare the motivation of thought to the wind that puts the cloud in motion. A true and complex understanding of another's thought becomes possible only when we discover its real, affective-volitional basis. The motives that lead to the emergence of thought and direct its flow can be illustrated through the example we used earlier, that of discovering the subtext through the specific interpretation of a given role. Stanislavskii teaches that behind each of a character's lines there stands a desire that is directed toward the realization of a definite volitional task. What is recreated here through the method of specific interpretation is the initial moment in any act of verbal thinking in living speech.

Because a volitional task stands behind every expression, Stanislavskii notes the desire that underlies the character's thought and speech in each line of a play. As an example, we will present the text and subtext in an interpretation that is similar to that of Stanislavskii's.

Text of the play	Parallel desires
Sophia: Oh Chatskii, I am glad to see you. Chatskii: You're glad, that's good. Though, can one who becomes glad in this way be sincere? It seems to me that in the end, People and horses are shivering, And I have pleased only myself.	Wants to hide her confusion. Wants to appeal to her conscience through mockery. Aren't you ashamed! Wants to elicit openness.

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<p>Liza: But, sir, had you been behind the door, Not five minutes ago, You'd have heard us speak of you, Miss, tell him yourself!</p>	<p>Wants to calm Chatskii and to help Sophia in a difficult situation.</p>
<p>Sophia: It is always so -- not only now. You cannot reproach me so.</p>	<p>Wants to calm Chatskii. I am guilty of nothing!</p>
<p>Chatskii: Let's assume it is so. Blessed is the one who believes, And warm his life.</p>	<p>Let us cease this conversation.</p>

Understanding the words of others also requires understanding their thoughts. And even this is incomplete without understanding their motives or why they expressed their thoughts. In precisely this sense we complete the psychological analysis of any expression only when we reveal the most secret internal plane of verbal thinking -- its motivation.

With this, our analysis is finished. We will now briefly consider the results to which it has led. In our analysis, verbal thinking has emerged as a complex dynamic whole where the relationship between thought and word is manifested as a movement through several internal planes, as a transition from one plane to another. We carried our analysis from the most external to the most internal plane. In the living drama of verbal thinking, movement takes the reverse path. It moves from the motive that gives birth to thought, to the formation of thought itself, to its mediation in the internal word, to the meanings of external words, and finally, to words themselves. However, it would be a mistake to imagine that this single path from thought to word is always realized. On the contrary, the current state of our knowledge indicates that extremely varied direct and reverse movements and transitions from one plane to another are possible. We also know in general terms that it is possible for movement to be broken off at any point in this complex path in the movement from the motive through the thought to inner speech, in the movement from inner speech to thought, or in the movement from inner to external speech. However, our task was not to study the varied movements that are actually realized along the trajectory from thought to word. Our goal was merely to show that the relationship between thought and word is a dynamic process. It is a path from thought to word, a completion and embodiment of the thought in the word.

We followed several unusual paths in this investigation. We attempted to study the internal aspect of the problem of thinking and speech, what is hidden from immediate observation. We attempted to analyze word meaning, a phenomenon that has always been as foreign to psychologists as the other side of the moon, a phenomenon that has always remained unstudied and unknown. The sense aspect of speech, indeed the entire internal aspect of speech that is oriented toward the personality, has until recently been unfamiliar territory for psychology. Psychology has primarily studied the external aspects of speech, those that are oriented toward us. 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. The basic conclusion of our investigation can therefore be expressed in the thesis that these processes -- which have previously been thought of as connected permanently and uniformly -- in fact have changing and dynamic connections. What has previously been considered a simple construction has turned out to be a complex structure. Our desire to differentiate the external and sense aspects of

speech, word, and thought has concluded with the attempt to illustrate the complex form and subtle connections of the unity that is verbal thinking. The complex structure of this unity, the complex fluid connections and transitions among the separate planes of verbal thinking, arise only in process of development. The isolation of meaning from sound, the isolation of word from thing, and the isolation of thought from word are all necessary stages in the history of the development of concepts.

Our goal has never been to provide an exhaustive account of the complex structure and dynamics of verbal thinking. Our goal was to illustrate the tremendous complexity of this dynamic structure. Our only remaining task at this point is that of summarizing the general understanding of the relationships between thought and word that has emerged in this investigation.

Associative psychology represented the relationship between thought and word as an external relationship that is formed through repetitive connections between two phenomena. In principle, this relationship was thought to be analogous with the associative connections that arise between two meaningless words. Structural psychology replaced this representation with one based on a structural connection between thought and word. However, it left unchanged the underlying postulate that this connection is non-specific. It placed this connection alongside all other structural connections that can arise between two objects such as the stick and the banana in the chimpanzee experiments.

All theories that have attempted to resolve this question have remained polarized around two opposing positions. At one pole is the behaviorist⁹⁵ conception of thinking and speech, expressed in the formula that thought is speech minus sound. At the other is extreme idealism, a view developed by the Wurzburg school and Bergson in their conception of the complete independence of thought from word and in their view that the word distorts thought. Tiutchev's line, "Thought verbalized is a lie." expresses the essence of this view. This is the source of the attempts of psychologists to isolate consciousness from reality. In Bergson's words, it is the attempt to grasp our concepts in their natural state, in the form in which they are perceived by consciousness, by destroying the parameters of language.

These perspectives share a common point that is inherent to nearly all theories of thinking and speech. They share a profound and fundamental antihistorical perspective. All these theories oscillate between the poles of pure naturalism and pure spiritualism. They view thinking and speech in isolation from their history. However, only an historical psychology, only *an historical theory of inner speech, has the capacity to lead us to a correct understanding of this complex and extraordinary problem.* This is the path that we have attempted to follow in our research.

The basic finding of our research can be expressed in a few words: The relationship of thought to word is a vital process that involves the birth of thought in the word. Deprived of thought, the word is dead. As the poet writes:

And as the bees which have sunk into their silent Yule season,
So do dead words sink.⁹⁶

However, in the words of another poet, thought that is not embodied in the word remains a Stygian shadow, it remains in the "mist, bells, and radiance." In Hegel's view, the word is existing, vitalized thought. This kind of existence is absolutely necessary for our thoughts.

The connection between thought and word is not an primal connection that is given once and forever. It arises in development and itself develops. "In the beginning was the word."⁹⁷ Goethe answered this Biblical phrase through Faust: "In the beginning was the deed."⁹⁸ Through this statement, Goethe wished to counteract the word's

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overvaluation. Gutsman has noted, however, that we can agree with Goethe that the word as such should not be overvaluated and can concur in his transformation of the Biblical line to, "In the beginning was the *deed*." Nonetheless, if we consider the history of development, we can still read this line with a different emphasis: "In the *beginning* was the deed." Gutsman's argument is that the word is a higher stage in man's development than the highest manifestation of action. He is right. The word did not exist in the beginning. In the beginning was the deed. The formation of the word occurs nearer the end than the beginning of development. The word is the end that crowns the deed.

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In concluding, we should say a few words about the prospects that lie beyond the present study. Our investigation has brought us to the threshold of a problem that is broader, more profound, and still more extraordinary than the problem of thinking. It has brought us to the threshold of the problem of consciousness. In our investigation, we have tried to consistently keep in view that aspect of the word which has been unfamiliar ground for experimental psychology. We have tried to study the word's relationship to the object, its relationship to reality. We have tried to study the dialectical transition from sensation to thinking and show that reality is reflected in thinking differently than it is reflected in sensation. We have tried to show that the word's distinguishing feature is a generalized reflection of reality. In the process, however, we have touched on an aspect of the word's nature whose significance exceeds the limits of thinking as such, an aspect of the word that can be studied only within the framework of a more general problem, the problem of the relationship between the word and consciousness.

The consciousness of sensation and thinking are characterized by different modes of reflecting reality. They are different types of consciousness. Therefore, *thinking and speech are the key to understanding the nature of human consciousness*. If language is as ancient as consciousness itself, if language is consciousness that exists in practice for other people and therefore for myself, then it is not only the development of thought but the development of consciousness as a whole that is connected with the development of the word. Studies consistently demonstrate that the word plays a central role not in the isolated functions but the whole of consciousness. In consciousness, the word is what -- in Feuerbach's⁹⁹ words -- is absolutely impossible for one person but possible for two. The word is the most direct manifestation of the historical nature of human consciousness.

Consciousness is reflected in the word like the sun is reflected in a droplet of water. The word is a microcosm of consciousness, related to consciousness like a living cell is related to an organism, like an atom is related to the cosmos. The meaningful word is a microcosm of human consciousness.