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## “Word-Meaning” and the Conceptual Determination of Meaning and Reference \*

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Some say that there is only an accidental and conventional relation between the word and the thing. Although this is partially true, it does not explain what happens when a phoneme is used to denote a phenomenon, an event or an entity.

For example, there is a merely arbitrary relation between the sound GREEN and the color green. Unless one knows English, no matter how one analyzes the vocal or written elements that constitute the word “green”, one will not understand what is meant by “green”. When one pronounces a word a particular sound is relayed to the interlocutor. Although the sound itself is devoid of meaning, it nonetheless somehow conveys the meaning.

There is no “essential” relation between a phoneme/word and the phenomenon this word picks out; yet, once the meaning of a word is understood, it becomes impossible for the word to pick out another entity or phenomenon. For instance, it becomes impossible for the word “green” not to pick out the color green but red. Of course, there is always a possibility that the same word, due to various reasons, picks out different entities as well. The members of such a set are not constant because of the historical evolution of language or due to stipulation or encryption. However, this does not change the fact that once the primary meaning of a word is understood, it becomes impossible for the word to pick out something else.

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For Vygotsky, meaning involves the transformation of a mere object into a tool of action. This transformation is the source of abstraction, which is the essence of meaning. A mere object is a function of its immediate environment; it is a particular concrete thing and therefore it is an “abstract particular”. A tool, on the contrary, is emancipated from its environment; it acquires, in principle, universal applicability and abstractness; it becomes a “concrete universal”.

The source of tool making, abstraction and meaning is activity and not mere thinking. In contrast to animal behaviour, activity is instrument-mediated. Behaviour is immediately bodily (physical); that is, behaviour, at its basis, is the body’s reaction to the stimuli. Mere thinking can be found in all animals, at least in those species that have a brain and a central nervous system. Mere thinking is problem-solving in its most fundamental sense; that is, overcoming problems that the creature confronts in its immediate surroundings. Probably, there is some sort of meaning inherent in the problem-solving behaviour of the animal; yet, this behaviour lacks wider significance. The “meaning” of animal behaviour is nothing more than this very behaviour that is always bound to the environment within which it is performed.

Activity, in contrast, is from the outset abstract and therefore universal. Due to its abstract nature, the meaning of activity can be conveyed to other members of human society through tools and signs. The meaning of the activity is the social significance of the tools used in the activity. The most important of these tools is human language.

The use of tools and the use of symbols are two processes in psychological development that should be considered interrelationally. The unification of these two genetically different activities represents a great leap in the process of the development of the child. As speech develops it becomes an integral part of the child’s problem-solving activity: “the child solves a practical task with the help of not only eyes and hands, but also speech” (Vygotsky, 1994 b: 109). Human activity, therefore, becomes a unity of perception, speech, and action.

With the onset of speech the child's behaviour assumes a qualitatively new form, which is expressed in two realms: the child's attempts to manipulate the environment becomes less spontaneous and more deliberate: "Direct manipulation is replaced by a complex psychological process, where inner motivation and the creation of intentions, postponed in time duration, stimulate their own development and realization" (Vygotsky, 1994b: 110). The child also uses speech to manipulate its own activity: "Speech introduces *the child's own behavior*" (Vygotsky, 1994b: 110). With the introduction of speech and symbolic tools, a child's relation to its environment and to itself undergoes a qualitative change. Similarly, with the introduction of concepts, this newly-established symbol-mediated activity becomes subject to a greater leap.

Vygotsky treats the relation between reference (object-relatedness) and meaning as a part of his analysis of the relation between thinking and speech. A proper methodological understanding of the relation between thinking and speech is the key to understanding human consciousness. Such an understanding is based on understanding the appropriate unit of analysis, which contains all the characteristics and properties of the system it belongs to. Vygotsky (1987: 244) states:

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 in the whole. The unit contains, in a simple, primitive form, the characteristics of the whole that is the object of analysis.

The unit of the analysis of the relation between thinking and speech is word-meaning. The unity of thinking and speech means that the word is a constituent element of thinking and that thinking is a constituent element of speech. They are not externally associated but unite to form the inner life of thinking and speech. Traditionally, psychology and psycholinguistics have ignored the question regarding the essence of the word, that is, they have ignored what makes a word a word; the element without which the word would not be one. Moreover, they have ignored the fact that word-meaning changes and develops.

The analysis of word-meaning as the unit of meaning is the analysis of the logical interdependence of thought and speech and the criteria of their individuation. As Bakhurst (1991: 72) states:

Thought owes its independence to speech and vice versa. Vygotsky holds that to tell the story of the development and mutual determination of the two related is to give an explanation of their nature. To do this, we must ask what factor explains the very possibility of the relation between thought and speech. To grasp this would provide a perspective from which the identity of the two opposites is visible, from which their « unity in diversity » is expressed. This factor is the “unit”. It is not invoked as a dialectical recipe for instant explanation, but as a response to the problem of the analysis of internal relations.

In identifying word-meaning as the unit of human language and consciousness, Vygotsky draws attention to a characteristic that is unique to human language. Word (phoneme or sound) and thought (problem-solving behaviour) have different genetic<sup>1</sup> roots; however, in human language the two conjoin and become inseparable. Both thinking and speech, or word and meaning, assume a tool-like (abstract) and therefore universally concrete form in human life; they acquire social significance. Once the sound takes on meaning, when speech becomes thoughtful and thinking becomes linguistic, both word (sound) and thinking (meaning) lose their contingent character and become “necessary”. The contingency of the word or sound is a function of its being a mere emotional response to some (mostly, external) stimuli. The contingency of thinking is expressed in its becoming the basis for conditioned reflexes. Both word and thought at this elementary stage are immediate responses to stimuli. This contingency is manifest, for instance, in the ontogenesis of language. The child’s syncretic images or complexes are contingent, not because they do not follow any logic or structure, but because they are fully determined by the logic or structure of the external stimuli.

In the early stages of the child’s development, reference depends on sympractical or situational factors. The sympractical factors or

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<sup>1</sup> “Genetic” pertains to genesis.

“situational context” are those factors “which communication partners need to know (and share) in order to be able to disambiguate situation-bound utterances such as short commands, requests, greetings, etc.” (Daalder & Mussolf, 2011: 239). Gradually, reference becomes emancipated from such sympractical factors (Luria, 1982: 46). The reference of the word in the early stages of the child’s development is amorphous. It becomes stable only once the concepts are formed. This shows that reference depends on word-meaning, that is, referential meaning is stabilized by concepts: a concept is not an association of similarities signified by a multitude of references; rather the concept unifies the different references of the word; the concept is an act of generalization. Moreover, the concept also changes at different stages of child development; the concept emerges on the basis of accidental-situational generalizations, family-resemblance terms, etc., and only acquires its categorical character at the final stage of ontogenetic development. Thus, meaning precedes the child; meaning is possible only within a “structure of generalizations” (Vygotsky, 1987: 227). In addition, “word meaning develops after the object reference of a word is stabilized” (Luria 1982: 53). This fact is evident in changes in the structure of consciousness : “The transition of word meaning to the stage of abstract concepts not only insures an improvement in the processing of the information, but also gives rise to a certain freedom in human perceptual processes” (Luria, 1982: 64).

This process makes possible the genesis of “pure” thinking from within thinking as an individual capacity. Thinking always exists prior to the child, *i.e.*, the child’s individual thinking is thinking a previously existing thought. Thinking exists prior to the child in two senses: it exists both potentially and actually. The potential existence of thinking is the manifestation of the different genetic roots of thinking and speech. The actualization of this potentiality requires speech. This explains the development of thinking that begins with egocentric speech, changes into inner speech, and reaches its completion in the form of conceptual thinking or thoughtful language. This is the process of the transformation of thinking as a

mere response to external stimuli in the form of basic problem-solving behaviour (as in animals) into meaningful thinking.

This priority is also manifest in the objectivity of human psyche. The reality of the psyche, the inner experience, is the reality of the sign. The psyche is not reducible to physiological and nervous processes. The subject, the consciousness or psyche, resides in the borderline that separates the organism from its surrounding world (Voloshinov, 1973: 26).

The actual existence of thought prior to the child, however, signifies the existence of thinking as a social relation. This aspect of thinking can be understood by analogy to the movement of capital and its relation to labour. Capital, first and foremost, is a social relation that cannot be reduced to the sum of individual capitals; its movement and growth requires its formal and real exchange with labour-force. The growth of capital is possible only if it appropriates the surplus-value that has been produced by labour-power. The existence of capital precedes that of labour yet capital requires labour in order to exist. As Ilyenkov (1982: 211) states:

Labour force as such, as ability for work in general, is one of the historical premises of the origin of capital, in the same way as land, air, and mineral deposits. As such, it remains a mere premise of the emergence of capital without being at the same time its consequence or product. On the other hand, capital actively reproduces (engenders as its product) labour force as a commodity, that is, as the concrete historical form in which labour force functions in the capacity of an element of capital.

Analogically, thinking as a social relation, in the form of socially available thought-material, precedes the child's thinking, yet the growth of concept is only possible once the child acquires full concepts and thinks conceptually. This explains why word-meaning (or the concept) is the unit of analysis of the relation between thinking and language, and of consciousness itself. The concept or word-meaning is equivalent to the commodity, the analysis of which reveals the characteristics of the capitalist mode of production. The analysis of word-meaning, similarly, also reveals the characteristics of meaning, thinking, and consciousness as historical phenomena. The aforementioned processes of the subordination of reference to

meaning and the emancipation of meaning from reference therefore show the movement of thinking and speech and their unity in the form of word-meaning. As Vygotsky (1994b: 119) states, with the acquisition of language:

The child applies to itself the method of behaviour that it previously applied to another, thus organizing its own behaviour according to a social type. The source of intelligent action and control over his own behaviour in the solution of a complex practical problem is, consequently, not an invention of some purely logical act, but the application of a social attitude to itself, the transfer of a social form of behaviour into its own psychological organization.

The existence of thought prior to the child is not a mere logical-ideal existence. Thought material precedes both the child's practical and theoretical intellect. Yet, be it practical or theoretical, thinking is realizable only as external, objective activity. The reflexivity of speech points toward a concrete level of thinking where speech, and therefore thinking, determines the child's activity externally. The emergence of the planning function of speech also signifies the interiorization of speech by the child and the unification of thinking and speech manifest in the intra-psychological function of speech.

The children's entrance into the world of language is followed by a leap from quasi-language or "proto-language" to language. Language "orders" and classifies experience by producing meaning as a tool. It is the deployment of the tool that is responsible for the production of meaning. Halliday (1995 / 2004: 9) maintains that grammatical stages correspond to different types of meaning production. In particular, by conceptualization (refined forms of linguistic tool-meanings) the language of science turns "happenings" into names (stabilized forms). This transformation is responsible for the emergence of surplus-meaning or what Halliday (2004: xiii) refers to as thickening of potential meaning

The production of meaning and surplus-meaning depends on the use of different linguistic systems and grammars. "All use of language embodies theory; the grammar of every language contains a theory of human experience: it categorizes the elements of our experience into basic phenomenal types, construing these into configurations of various kinds, and these configurations in turn

into logical sequences” (Halliday, 2004: xvii). Vygotsky (1987: 192), similarly, states that even the most basic human cognitive activity involves generalization due to the use of language and that scientific experience is conceptually mediated. Voloshinov (1973: 26) too, emphasizes the sign-mediated nature of the encounter between the human organism and the outside world: “Psychic experience is the semiotic expression of the contact between the organism and the outside environment. That is why *the inner psyche is not analyzable as a thing but can only be understood and interpreted as a sign*” (emphasis original). Science, for instance, is a particular language system; a symbolic machine that produces a certain type of meaning - in this case scientific knowledge. Similar to modern machinery, modern science is made of elements that are devoid of any particular meaning by themselves. However, the elements of this particular language are connected within a structure of generalization or a grammar, which, according to Halliday (1995 / 2004: 11), is responsible for « a semiotic flow - a flow of meaning - analogous to the flow of events that constitutes human experience ». Halliday’s (1998 / 2004: 66) account of the formation of a concept of motion in science is one of the many examples of the process of meaning production:

Semantically, motion realizes the junction of two features, (i) that of ‘process’, the category meaning of the congruent form *move*, and (ii) that of ‘entity’ or ‘thing’, which is the category meaning of the class ‘noun’ of motion. This kind of semantic junction is what is meant by saying that the meaning of the term is “condensed”. But, as Martin has shown, technicality involves more than the condensation of ideational semantic features. The term *motion* is now functioning as a theoretical abstraction, part of a metataxonomy - a theory which has its own taxonomic structure as a (semi-)designed semiotic system.

Meaning is an objective reconstruction of a system of relations and associations; sense is the transformation of meaning (Luria, 1982: 44). Meaning is a socially produced entity; it has a social history. As a socio-historical objective phenomenon it exists prior to the speaker. Yet, in order to be actualized, meaning must be put in use, that is, it must be used by the speaker as a means to mean: “one and the same word has an historically evolved meaning. In addition,

every use of a word has its sense” (Luria, 1982: 45). The meaning cannot appear unless it is used as an actual means to signify a system of relations and categories. Yet, the use of a term in order to produce sense is not possible independently of the system of relations that are objectified in the language as meaning. Meaning, as this objectified reconstruction of a system of relations is based on reference. Yet, the object reference of a word is not given at once; it is not immutable and develops gradually, passing through different stages. The peculiarity of each example in a semiotic system signifies the peculiar expansion of meaning and the production of surplus-meaning in each single case; that the surplus-meaning contributes to the expansion of the theory, and the meaning that is determined by theory, despite these peculiarities, is a sign of the material nature of meaning production. This also shows that the expansion of stabilized meaning is possible only through individual use or the production of sense. Meaning functions similar to abstract labour, which is materialized as value in commodities; similarly, the sense corresponds to the concrete, individual labour that is needed in order to produce material wealth. However, as concrete labour is but a moment of abstract labour, sense is but a moment of the expansion of the meaning.

Concepts are the major tool of the production and stabilization of meaning. Concepts originate at the conjunction of speech and thinking; thus, they are not private but public entities from the outset. Concepts pick out essential aspects of the phenomena they denote. A concept identifies determinate aspects of reality at different levels of abstraction. In this way, a concept turns the objects it denotes into extensions of the tools of activity, *i.e.* concepts identify and determine the social significance of the phenomena they denote. This explains why, for instance, once the meaning of the word “green” is fixed, it picks out only green and not blue. This necessary relation is not a “linguistic convention”. Rather, the convention itself is a function of the mode of activity of the society in question. In a community where, for instance, colors are not categorized with reference to the concept of a spectrum but with reference to some other logic (say, the significance colors have

in farming or hunting activity), the word “green” will not communicate the same meaning because the social significance of colour words would be different. As the members of these two different societies follow different logics of activity and use different logical tools, they will not convey the same meaning.

Traditionally, at best, the content of thinking has been considered in historical-developmental terms, whereas the form of thinking (psychological functions) has been considered in biological-evolutionary terms. A genetic-historical understanding and analysis of the development of thinking, however, considers the form and content of thinking in dialectical unity and aims to show how new forms (functions) of thinking develop alongside new contents due to the historical development of humanity. This is possible only on the basis of a genetic-historical explanation of the development of the higher mental functions. New contents of thinking require new forms (functions) in order to be actualized.

Two aspects of the concept are, first, the material on the basis of which the concept develops and, second, the word which helps the concept to come to existence (Vygotsky, 1994 a: 201). These signify the most essential feature of the concept, that is, its relation to reality. The process of concept formation is productive rather than reproductive (Vygotsky, 1994 a: 203); it is a creative process. The “determining tendency” is the central feature without which no concept can arise; it originates in a problem and in the goal of solving the problem; it regulates conception and action towards the resolution of the goal (Vygotsky, 1994 a: 204). Although a goal-directed tendency is necessary for concept formation, it is not sufficient. Children prior to adolescence also face problems and intend to solve them, yet, they are not capable of forming true concepts: “it is not the problem itself, the goal or the determining tendencies which result from it, that condition the essential genetic differences between thinking in images and other forms of thinking in the adult as opposed to the young child” (Vygotsky, 1994 a: 205). Communication, *i.e.* relaying information to other individuals, is also a condition for concept formation. Without this communicative aspect, which presumes the existence of a set of socially significant

meanings (that is, a set of socially produced communicable information that makes mutual understanding possible), concepts cannot be formed.

Concept formation has three major steps. First is the syncretic stage, where elements are chosen that have superficial resemblances, yet there is no intrinsic relation between the elements. Second is the complex stage where objective associations between objects are established in form of complexes.

Thinking in complexes is by its nature associative thinking and, at the same time, objective thinking. These are the two essential features which raise it high above the previous stage, but at the same time this connectedness in its turn and this objectivity are still not the connectedness and objectivity which characterize thinking in concepts achieved finally by the adolescent. (Vygotsky, 1994 a: 219)

Complexes are different from full concepts due to the different laws of thinking underlying their formation. Complexes resemble family names (Vygotsky, 1994 a: 216). The last stage is the production of full concepts, which reveal the logical-abstract relations between the elements of a whole.

Proper names and species names, at the ordinary level, are not concepts but complexes. The latter signify a concrete, factual connection between different members of a species, while the former signify a concrete distinguishing aspect of the person or thing they pick out. Words are names of concepts, just as they can also function as the names of complexes and syncretic images. This explains why, for instance, an ordinary person and a biologist can talk about the “whale” and refer to the same object while their definitions of “whale” may be different.

Different contents of thought need different forms of thinking, which, in the final analysis, refers to the way words (signs) as instruments are used to produce meaning. In the case of “whale”, for instance, the layman uses the word/sign as the name of the complex *whale*, whereas the marine biologist uses the word/sign “whale” to identify logical-abstract relations between the members of the species, further differentiating them into sub-species and genus. Since both the layman and the biologist use the same symbol

to signify whales, they both know to what they refer. Moreover, since the biologist is also a social entity and since the instrumentation in general and instrumentation of thinking via language in particular is a social phenomenon that requires communication of social significance of objects and tools, the biologist is also aware of the complex *whale*. This is similar to the case of the conversation between children and adults: although children use symbols for naming syncretic images or complexes, while adults use them in order to name concepts, thanks to the social context, they understand each other to a great extent.

This can also explain why terms such as “phlogiston” did not remain in circulation with the advent of modern chemistry while terms such as “whale” (which was thought to signify a species of fish rather than a mammal) or “atom” are still in circulation: « Phlogiston » from the outset was intended as a concept that would identify logical-abstract relations between elements to explain combustion. It is a candidate for a pure “scientific” concept that follows the path from the abstract to the concrete. Failing to explain the abstract-logical relations in the phenomena it aimed at, it loses its entire meaning. “Whale”, on the other hand, is a “spontaneous” concept that moves from the empirical to the abstract, following the phylogenetic-historical path through syncretic, complex, and conceptual stages. Thus in its ordinary use it refers to the cluster of associative connections between the members of the species whale. As Vygotsky (1994 a: 219) states:

For the formation of a complex, the most essential underlying feature is a concrete and factual connection between the separate elements which are part of its composition, rather than an abstract and logical one. And so we can never decide whether a certain person has anything to do with the family name Petrov, and whether he can be called by that name, based simply on the logical relationship with the other carriers of the same family name. This question can only be resolved on the basis of a factual affiliation or a factual kinship between people.

Empiricist-based theories of meaning and reference, despite their differences, share the view that ostensive reference is constitutive in the formation of meaning: they fail to provide any explanation of how referring becomes possible; moreover, they take all types of

referring as identical. But meaning differs from concepts, as the complex differs from the syncretic image. At each stage, meaning is produced with the use of different mental functions: at the syncretic age, it is a function of the syncretic image, at the complex stage, it depends on associative-objective generalizations, and at the conceptual level it is a function of logical-abstract bonds between the elements of the phenomena at hand. Similarly, ostension or indexical reference is also a function of these different mental functions and structures of thinking. Moreover, the indexical reference at the conceptual age is not fixed once and for all. Vygotsky (1987: 167-241), for instance, differentiates between two basic types of concepts: spontaneous or everyday concepts and “scientific” or academic concepts. Conceptual scientific systems can be thought to form a next stage in the development of the higher mental functions; the meaning produced at each stage refers to some objective, universal-concrete, therefore abstract relation within the phenomena to be studied. Meaning is related to reference but reference cannot be reduced to indexical reference or ostension; reference (object-relatedness) is possible with meaning, which in turn is the product of different functions in use at each stage of thinking. Meaning is also actualized in use; therefore use in this picture loses its pragmatic, one-sided grammatical, formal logical sense and assumes a practical function. Meaning is not only used but produced. This explains why, while there is a fixed aspect of meaning, meaning is subject to expansion and produces a surplus. Defining meaning simply as “use” ignores the functional differences between productions of meaning at different stages; it fallaciously equates the meaning (which is a product) with the concept (which is the real tool of production of meaning).

Meaning, therefore, is not an association or a function of ostensive references. What makes ostension possible, that is, what makes the communication of the meaning of the pointing activity possible, is the social significance of the tools of activity that are available to society. A member of a pre-Modern Turkic society, for instance, when asked what the word “yeşil” means, may point to a green leaf or the grass. Although we have grounds to assume that “yeşil”

denotes what “green” does, we cannot claim that we have understood the meaning of the word unless we understand the logic that determines the system of generalizations of which this particular notion is a part. This logic is not inaccessible to us because it is not a function of some sort of linguistic convention or consensus; rather, it is a function of the mode of activity of the society. We face no problem of untranslatability, not because there is a referential-ostensive common base to languages, but because of the common characteristic of human language: its conceptual structure. What makes ostensive reference communicable is this conceptuality that manifests itself in the transformation of the contingency of the relation between the word and the phenomenon it denotes into the historical necessity of their relation.

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