

# Language Antinomies and Language Operations of the Mind

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*This paper presents new inference techniques about language based on my theory of linguistic antinomies—pairs of apparently contradictory statements that complement each other. Since the cells, that is, the basic units of language are signs, the antinomies of language are the antinomies of signs and sign combinations.*

**Key words:** antinomy, difference, sign, meaning, information, transfer.

## 1. Antinomy of the existence of language as part of the mind

I take the concept of the sign as an explication of the every-day notion of the sign. A sign is sound (or an operation on sounds, like their ordering or alternation) functioning as a surrogate of a thing. What is called the meaning of a sign is the thing of which the sign is a surrogate. The thing taken as the meaning of a sign is not something like a table or a house, but it may also be the sky, rotation, or love. Linguistic signs are morphemes and words.

In current linguistic literature the function of a surrogate is not mentioned in connection with the concept of the sign. But I claim that the intrinsic nature of the sign is in its function of being the surrogate of a thing. It is due to this function of the sign that people are able to communicate. This is shown by an imaginative passage in Swift's *Gulliver's Travels*, which can be taken as a mental experiment. The funny "Voyage to Balnibarbi" [1] describes the grand academy of Lagado. The academy proposed to entirely abolish all words whatsoever and replace them by things. This scheme was designed to improve communication and promote the health of lungs. The only inconvenience was that communicating with things rather than words required carrying things, and for this the academicians hired strong servants.

What are the antinomies of language, or linguistic antinomies? Let us start with the antinomy of the psychological and the social aspects of language. Any language exists in the minds of individuals using it. Language involves psychological processes characterizing language as a psychological phenomenon. The knowledge of language is the intuitive or explicit knowledge of signs and their meanings and of the rules of sign combinations. On the other hand, we may notice that an individual is not free to choose the meanings of signs and the rules of their combinations. Unless the meanings of signs and the rules of their combination are the same for all individuals using the same language, communication between individuals is impossible.

The signs and their meanings and the rules of sign combinations have no relation to the psychological processes in the minds of the users of the language. Let us view language as a game. Generalizing the concept of the game, we can regard language as a game of communication. The signs of language are the pieces of the communication game, and the rules of sign combinations are rules for the moves of the communication game. Language differs from chess and other games only by the huge number of its pieces and the complexity of the rules for the moves of its pieces. Neither the meanings of pieces nor the

rules for their moves have any relation to psychological processes in the minds of the players. Nor does any theory of a game have any relation to psychology. This does not mean that we cannot or should not study psychological processes in the mind of players. There is the theory of chess and the psychology of chess. The theory of chess describes the strategies of chess and evaluates their merits independently of psychological processes in the minds of players. On the contrary, the psychology of chess is based on the theory of chess. The psychology of chess investigates how players chose strategies in accordance with the characters of their minds. Thus, people with aggressive minds tend to choose aggressive strategies while people of more conservative disposition choose conservative strategies. Or consider memory: if a chess player does not have a strong memory, he may tend to choose simple strategies that do not involve complicated and long series of moves. The learning of chess belongs to the psychology of chess, as well.

It is important to see that the psychology of chess is not even an auxiliary science for the theory of chess. There is the theory of language and the psychology of language; the study of the psychological processes in the minds of speakers and listeners is interesting and desirable, but the theory of language is totally independent from the psychology of language. The psychology of language is not even an auxiliary science of linguistics.

We face an antinomy: on the one hand, language exists only in the minds of individuals and is part of psychological processes in the minds of individuals, and, on the other hand, language is totally independent of the psychological processes. Language has a dual character: on the one hand, language is a psychological phenomenon, and, on the other hand, language is not a psychological phenomenon.

The antinomy calls for an explanation. To explain the antinomy, I introduce explicitly two new techniques of inference into linguistics as a means of solving language antinomies: *the radical splitting of concepts* and *radical stratification*. I split the concept of mind into two radically distinct concepts: *the individual mind* and *the social mind*. Both the individual mind and the social mind exist in the head of an individual, but the individual mind is a complex of psychological processes while the social mind is a complex of social coercions imposed on all the individuals that belong to a given community. Having split the concept of mind into the individual mind and the social mind, I stratify mental processes into two radically distinct levels: the level of the individual mind and the level of the social mind. The phenomena of the individual mind underlie but cannot explain the phenomena of the social mind. By analogy, the physical phenomena underlie but cannot explain the chemical phenomena. The theory of the social mind is distinct from the theory of the individual mind like chemistry is distinct from physics.

Language is part of the social mind, and therefore the theory of language is independent of the study of the psychological processes and further from neurological and biological processes. It is a methodological error of generative grammar and other trends in contemporary linguistics to seek to explain language through psychology, neurology or biology.

## 2. Antinomy of sound

Let us now turn to the two fundamental antinomies of language: the antinomy of sound and the antinomy of meaning.

What is the antinomy of sound? As a matter of fact, speakers of a language classify sounds as the same or different unconsciously. One could assume that this classification is based on the physical properties of sounds. But this assumption conflicts with the phenomenon that speakers of different languages classify same sets of sounds in different ways. Consider the following set of sounds:

p <sup>h</sup>	p <sup>-</sup>
t <sup>h</sup>	t <sup>-</sup>
k <sup>h</sup>	k <sup>-</sup>

The superscripts <sup>h</sup> and <sup>-</sup> designate aspirated and non-aspirated character of the sounds, respectively. The speakers of English classify these sounds as three sound types *p*, *t*, *k* while the speakers of Armenian classify them as six different sounds. We can multiply such examples. We discover that the same sets of sounds may be classified differently by the speakers of different languages. We face an antinomy: on the

one hand, the identical sound sets are classified identically with respect to physical identities and differences between sounds, and, on the other hand, the classification of the sounds of the identical sound sets is independent of the physical properties of sounds and is relative to differences between languages. To explain the antinomy, we establish that the sounds of languages operate as diacritics that distinguish one word from another and that the diacritical operation is completely independent from the physical properties of the sounds. Hence, we come up with the radical splitting of the concept of the sound of language into two completely independent concepts: *the sound proper* and *the diacritic*.

Note that our distinction of the sound and the diacritic reminds of the traditional distinction of the sound and the phoneme in the classical linguistics. And so I use the term “phoneme” interchangeably with the term “diacritic”. But my distinction of the sound and the phoneme is radically different from the distinction of these concepts in classical linguistics. Although the sound serves as the substratum of the phoneme, I consider the sound and the phoneme as operationally independent concepts while classical linguistics seeks to justify differences and identities between phonemes by their physical properties. I establish the level of phonemes as operationally completely distinct from the level of sounds underlying it.

The operational differences and identities of the sounds of a language are controlled by the Principle of Phonological Differences:

#### PRINCIPLE OF PHONOLOGICAL DIFFERENCES

*In language differences and identities between sounds are subject to the following conditions: 1) Only those sounds are different which can correlate with different signs as the only minimal segments that distinguish one sign from another, 2) If two different sounds correspond to one and the same sign and their differences are solely due to the contexts in which they occur, they are variants of one and the same sound; 3) If two different sounds correlate with one sign, but freely alternate in identical contexts, they are free alternants of one and the same sign.*

To see the difference between my theory of phonemes and classical phonology, consider the problem of defining the variants of a phoneme. To solve this problem, Trubetzkoy proposes four rules. And his Rule III reads: “If two sounds of a given language related acoustically or articulatorily never occur in the same environment, they are to be considered combinatory variants of the same phoneme” [2]. The notion of articulatory and acoustic relation between the variants of a phoneme runs contrary the Principle of Phonological Differences, which supports only the diacritic relation of phonemes to signs. Classical phonology views a phoneme as a class of sounds. It views relation between the phoneme and sounds as relation between a class concept and individual concepts. In contrast, my operational theory of phonemes views both the phoneme and the sound as individual concepts. The phoneme and the sound differ not in that the phoneme is a class concept, while the sound is an individual concept. In fact, both are individual concepts. But they belong to different levels of language — the sound belongs to the physical level of language and the phoneme, to the level of distinctive oppositions; the phoneme is a member of distinctive oppositions while the sound is not.

### 3. Antinomy of meaning

Let us now turn to the antinomy of meaning. After establishing the antinomy of meaning we will discover that it is the counterpart of the antinomy of sound.

One could assume that the differences and the identities of the meanings of the signs of a language reflects the differences and the identities of the facts of reality. But we discover that this assumption is wrong. Consider colors. If by comparing the signs for colors in different languages we seek to discover what colors of the real world are represented by the signs of a language, we end up facing an amorphous continuum—the amorphous color spectrum where every language defines its own arbitrary distinctions. In Russian “blue” is *sinij* and *goluboj*, that is to say, the part of the spectrum covered by the English “blue” is divided into two parts in Russian. In Welsh “green” is *gwyrdd* or *glas*, “blue” is *glas*, “gray” is

*glas* or *llwyd*, “brown” is *llwyd*. We see that the boundary between the English *green* and *blue* is not found in Welsh, while the part of the spectrum covered by the English word *green* is bisected in Welsh by a line that assigns part of it to the same area as the English word *blue*. The progression from “light” to “dark”, divided in English into three zones (“white”, “gray”, “black”), is divided in other languages into two or many zones. Or consider the tense zone; it is common knowledge that the tense zone is analyzed differently in different languages.

We face an antinomy. On the one hand, the meanings of the signs are facts of reality because, if they were not, language could not be an instrument of communication. And, on the other hand, distinctions between meanings is independent of the real world. To explain the antinomy, we split the concept of the meaning into *the meaning proper* and *information*. Information is a fact of reality insofar as it is represented by a language. And meanings proper are the product of an arbitrary analysis of the world by a language. Meanings proper are an operational concept controlled by the Principle of Differences:

#### PRINCIPLE OF DIFFERENCES

*In language differences and identities between meanings and between signs are subject to the following conditions: 1) Only those meanings are different which correspond to different signs; and conversely, only those signs are different which correspond to different meanings. 2) If two different meanings correspond to one and the same sign and their differences are solely due to the contexts in which they occur, they are variants of one and the same meaning. And conversely, if two signs correspond to one and the same meaning, and their differences are solely due to the contexts in which they occur, they are variants of one and the same sign. 3) If two meanings correspond to one sign, but freely alternate in identical contexts, they are different meanings.*

In accordance with the distinction of meaning and information we stratify language into two levels: the level of meaning, which is the operational level of language, and the level of information.

The distinction of the concepts of meaning and information entails the splitting of the concept of the context into two concepts: the *information-changing context* and the *meaning-changing context*. Consider *spill water* and *spill powder*. No one doubts that the meaning of *spill* is identical in both expressions although the action described is different: these are information-changing contexts. However, these two different informations constitute two different meanings in Russian because they are expressed by two different signs: *prolivat'* and *rassypat'*.

When is a context a meaning-changing context? The change of the meaning of a sign happens when it superposes with the meaning of another word. Consider *John is a lion*. In this context the meaning of *lion* superposes with the meanings of *courageous* or *famous*. This is the phenomenon of the *superposition of signs* produced by meaning-changing contexts.

Meaning-changing contexts and the superposition of signs are the cornerstone of the operations of language.

## 4. Antinomy of expressive function

Let us now turn to what I call the antinomy of the expressive function of a language. Consider English and Eskimo. These languages differ by what I call their expressive functions. Eskimo has a limited lexicon in comparison with English. Therefore what can be expressed in English cannot be expressed in Eskimo. Hegel has been translated into English but cannot be translated into Eskimo because the lexicon of Eskimo is limited. We say that the expressive function of Eskimo is limited in comparison with the expressive functions of English or German. We state that different languages have different expressive functions. But upon a closer inspection we discover that difference in the expressive functions of languages is due to their lexicons, and lexicons depend on the level of culture of the communities of speakers using a language. We come up with a strict distinction between grammatical and lexical signs. From the cultural point of view, the lexicon of a language is very important: one cannot use a language without mastering its lexicon. But from the structural point of view the expressive function of language is

independent from its lexicon. The grammar of Eskimo is as flexible or possibly even more flexible than the grammar of English or German for expressing philosophical or any thoughts. The grammar of a language is independent of the culture of the community of its users, and it constitutes the essence of language. Hence the cornerstone of the analysis of a language is strict distinction between its grammatical and lexical signs.

## 5. Methodological error of contemporary linguistics and Transfer Principle

Let me sum up what has been presented above. Due to the analysis of antinomies we have come up with a set of dualities: *individual mind / social mind*, *sound / diacritic*, *meaning / information*, *lexicon / grammar*. Language is like glasses through which we see the world. To investigate language correctly we must: 1) distinguish strictly between the terms of a duality, and 2) study the interplay of the terms of a duality. The prevailing trend in contemporary linguistics is to pursue the methodological error of confounding the individual mind with the social mind, sound with diacritic, meaning with information, grammar with lexicon. To cite an example of the confusion of the lexical with the grammatical meaning, take Comrie's analysis of ergativity. Defining the meaning of ergative constructions, Comrie writes: "I explicitly reject the identification of ergativity and agentivity" [4]. To support his view, Comrie quotes examples from Basque where the lexical part of nouns in the ergative case does not mean "agent" and so contradicts the agent meaning of the ergative suffix. Comrie is unaware of or does not consider it important that the contradiction between the meanings of the lexical and grammatical parts of words is a regular phenomenon in the languages of the world.

Consider, for example the nouns *redness* or *rotation*. The lexical part of the first noun means a property, and that of the second noun means an action. But both these nouns mean a thing because of their grammatical part. Or consider the verb *blacken*. Its lexical part means a property, but its grammatical part means action. Under the meanings of their grammatical parts, all nouns mean a thing and all verbs mean action no matter what their lexical parts mean.

In my books *A Semiotic Theory of Language* and *Signs, Mind, and Reality* I present many more examples of the methodological error of confusion of grammatical and lexical meanings. One may ask: What is the cause of the pursuit of this methodological error in contemporary linguistics? The cause is in thinking that barriers between linguistics, on the one hand, and psychology, logic or experimental phonetics, on the other hand, are illegitimate, whereby one feels that by studying what is common between the laws of language and the general laws of the mind one would achieve a balanced and many-sided understanding of language. But what really happens is that the more one pursues the ill-conceived goal of the many-sided understanding of language, the farther one is from the real understanding of the operations of language as an instrument of communication, an instrument of the expression of thought, and a folk model of the world. The laws of language as part of the mind must be studied not as to their similarities with the general laws of the mind, but, on the contrary, as to their specificity and uniqueness.

An important principle controlling the relation of meanings to signs is the Transfer Principle:

### PRINCIPLE OF TRANSFER

*Although differences and identities between meanings correlate with differences and identities between signs representing them, one and the same system of meanings can be transferred without changes from one system of signs into another, for example, from a vocal into a linear one.*

Under the Principle of Transfer, we stratify the theory of grammar into two levels: 1) the theory of the types and the laws of grammatical meanings — *genotype grammar*; 2) the theory of the types and the laws of the form of grammatical signs — *phenotype grammar*. On top of phenotype grammar I establish *operational phonology*. Operational phonology is a new phonology, whose basis is a consistent pursuit of the operational aspects of sounds. As I noted above, the classic phonology confounded the operational and physical aspects of sounds.

The distinction of genotype grammar and phenotype grammar is opposed to what is done in contemporary linguistics, which, ignorant of the Transfer Principle and its implications, is unaware of the need to distinguish between genotype grammar and phenotype grammar.

## 6. Typology of signs

Any adequate theory of language must be able to characterize the grammatical system in terms independent of sign forms.

I propose the following typology of signs viewed exclusively from the standpoint of their meanings independently of their vocal shapes:

- (I) *lexical signs* — an unlimited inventory of lexical signs for things such as objects, qualities, actions no matter how concrete or abstract.
- (II) *derivators* — a limited inventory of structural signs that derive lexical signs from lexical signs either as affixes applied to single signs, or as connecting vowels or other sign devices used for the composition of two signs into one, such as *-er* in *worker*, *-ish* in *bluish*; *-o-* in *lexicogrammatical*.
- (III) *modifiers* — a limited inventory of structural signs, such as tense affixes, that establish paradigmatic relations between lexical signs inside combinations of lexical signs.
- (IV) *relators* — a limited inventory of structural signs that establish syntactic relations between lexical signs inside combinations of lexical signs.

As we see, derivators, modifiers, and relators form a limited inventory of structural signs that contrasts with the unlimited inventory of lexical signs.

Lexical signs and relators are essential to all languages. We must know which meanings expressed by lexical signs are related to each other and how. If we wish to speak of things and actions, we must indicate which thing is the starting point of the action and which is the end point. It is impossible to speak of things without using signs indicating the relation between them. The fundamental syntactic relations must be unambiguously expressed. We can omit the time and place of action or a host of other features, but we cannot avoid mentioning the basic syntactic relations between the participants of the action. Derivators and modifiers, on the other hand, are common but not essential. In this respect, it is particularly significant that single-morpheme words belong in most cases to groups I and IV and less commonly to groups II or III.

We come up with a rigorous sign-based typology of meanings that radically differs from Sapir's based on the psychological scale of degree of abstraction. The important thing to note is that although our system is concerned with the meanings of signs, it still takes into account how meanings correlate with relations signs. Only the typology of signs in abstraction from their vocal shapes is sufficiently general because it is based on the universal principles of the arrangement of signs into combinations and classes. As for the typology of meanings, the distinction between structural and lexical meanings is both absolute and relative. It is absolute because in every language there are lexical and structural signs that represent lexical and structural meanings; it is relative because what in one language is represented by structural signs is represented by lexical ones in another, and vice versa. necessarily have lexical signs and relators. This is the minimum no language can exist without. Of the other two groups of linguistic signs — derivators (group II) and modifiers (group III) — may both be absent or present, or only one may be present. Hence, all languages of the world can be classified as follows:

- A. Languages that have signs of groups I and IV only. These languages have only lexical signs and relators, that is, signs expressing syntactic relations. These languages can be called *simple relator languages*.
- B. Languages that have signs of groups I, II, and IV, that is, lexical signs, syntactic relators, and derivators. These are languages that in addition to relators also have derivators — the means of modifying their lexical signs. These languages may be called *complex relator languages*.

- C. Languages that have signs of groups I, III, and IV. That is, in addition to lexical signs and relators, these languages also have modifiers. These languages may be called *simple modifier-relator languages*.
- D. Languages that have signs of groups I, II, III, and IV. That is, in addition to lexical and syntactic relators, these languages also have paradigmatic relators and derivators. These languages may be called *complex modifier-relator languages*.

We come up with the following scheme of language classification:

- I. Relator languages                      { A. Simple  
  { B. Complex
- II. Modifier-relator languages        { A. Simple  
  { B. Complex

The contrast between the two groups of languages — relator languages and modifier-relator languages — is a semantic contrast that affords a deeper picture of the essential differences between languages than the contrast of the traditional typology between isolating, agglutinative and fusional (inflectional) languages.

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