Basic Principles of Analysis of the Inner Determinant in Linguistic Systemology

Olga I. Valentinova and Mikhail A. Rybakov
Peoples’ Friendship University of Russia
(RUDN University)
Moscow, Russian Federation

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Abstract. The paper discusses the concept of the inner determinant of a language proposed by the founder of systemic linguistics G.P. Mel’nikov in continuation of W. von Humboldt’s idea of the inner form of language. The purpose of the research is to actualize one of the methods of systemic linguistics in the light of modern scientific paradigms. We examine the method of determinantal analysis of language systems and the notions which are closely related to it: morphological type of language, nominative and communicative angles of presenting a situation in a typical utterance, ways of organizing grammatical semantics in languages of various types.

The research shows that G.P. Mel’nikov’s concept of inner determinants of languages allows to interpret the traditional morphological classification of languages as a system of types opposed according to their inner determinants in historically formed specific communicative conditions acting as external determinants of languages.

Keywords: determinant, linguistic typology, general linguistics, system, systemology.

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Research area: philology.

Introduction

Prof. G.P. Mel'nikov’s linguistic theory which appeared in the 60-90s of the twentieth century and was referred to as system linguistics in his writings, is little known to modern researchers. G.P. Mel'nikov’s creative heritage was turned to by his students and followers, such as V.N. Belozerov, G.M. Bogomazov, A.F. Dremov, T.V. Lipatova, S.A. Lutin, O.I. Maksimenko, A.A. Polikarpov, M.Iu. Fedosiuk (Russia), A. Danylenko (USA), Sundaram Sai Kalpana, J. Prabhakara Rao (India), however, the number of publications that reveal the basic methodological principles of system linguistics and the prospects for its use in linguistic typology and other areas of linguistics is extremely small.

Among the research centers that use some ideas and methods of system linguistics are the Department of General and Russian Linguistics of the RUDN University and the Laboratory of Computer Lexicography of Moscow State University.

Theoretical Framework

The idea of universal connectedness of elements and properties of language as the central idea of system linguistics (the developed by G.P. Mel'nikov scientific field based on the general theory of systems in synthesis with fundamental ideas of such prominent linguists as W. von Humboldt, I.A. Baudouin de Courtenay and A.A. Potebnia) required a system of concepts suitable for the search for an answer to the questions “why?” and “what for?” at all levels of the language system, as well as of any self-regulating adaptive system: a biological organism (human, animal...), individual mind, society or nature, at each of its points. The general theory of systems, widely used in such sciences and interdisciplinary subjects as biology, ecology, mathematical and technical modeling, automata theory, urban studies, etc., is, unfortunately, little known to linguists, despite the widespread (meaningful and meaningless) use of the term “system” in linguistic publications since the time of F. de Saussure.

The connectedness of concepts in system linguistics reflects the causal systemicity of language, being its derivative. According to G.P. Mel’nikov, exhaustive causality as the main internal generative principle of a system of concepts determines the ability of any concept, while disclosing its content, to initiate a chain reaction in the explanation, continuing until the entire system of concepts is actualized and the circle is closed.

Aimed at revealing universal causality in language, system linguistics needed not a list, but a system of concepts. Therefore, G.P. Mel’nikov does not adapt himself to “alien” terms and does not adapt “alien” terms to himself, but creates a “hermetic”, according to the precise expression of S. Iu. Preobrazhenskii (Preobrazhenskii, 2016: 309), system of concepts necessary for a comprehensive understanding of interconnectedness in language.

The notions worked out by G.P. Me'l'nikov categorically lack functional synonyms. Their content is insofar beyond the competence of the existing professional (conceptual) dictionaries, and is not included in the apperceptive background of a linguist who is not substantively familiar with the scientific heritage of G.P. Mel'nikov. But even in the writings of the founder of modern systems linguistics, these concepts are not given in the complete formulation. Such a highly complex object of study as the incessant reconfiguration of the language system as a whole requires an uninterrupted development of thought.

Progressively deepening understanding makes the uninterrupted enrichment of a concept natural. Therefore, only the resumption of the entire corpus of texts written by G.P. Mel'nikov including the unpublished lecture notes, which has been undertaken by the authors of this work, will allow to develop a relatively integral view of an evolving concept. Disclosing the content of the nuclear concept of system linguistics, that of the determinant, makes it possible to objectify the principle of generation and, as a consequence, the principle of reproduction of the concept system in G.P. Mel'nikov’s teaching.

Statement of the problem

The objective of the present study is to actualize one of the methods of system lin-
linguistics, namely, the method of determinantal analysis of language systems, in the light of modern scientific paradigms. To achieve this goal, it is necessary to consider the theoretical foundations, methodological techniques and the potential use of G.P. Melnikov’s method of analysis of inner determinants of language as an integral part of the method of determinantal analysis of language systems.

**Methods**

The main method used by the authors of the research is the method of conceptual field reconstruction.

**The determinant as a universal characteristic of any self-regulating adaptive system**

The determinant as a universal characteristic of any system, not only of a language system, becomes the most general generic notion in the hierarchy of determinants. At the same time, the determinant of “a system in general” is treated also as a characteristic of a system, i.e. the most important synthetic characteristic of a system which allows to express the nature of the system in question in the “whole-system” way, i.e. “through the only hierarchically leading feature which implicitly contains other features substantial for different tiers and stages of development” (Melnikov, 2003: 73), and as the singularity of conditions in which the individuality of a system is formed. Thus, the determinant as a specific substantial property of a system is a direct consequence of the determinant as particular conditions (Melnikov, 1978: 86).

To distinguish the determinant-cause (conditions in which the individuality of a system is formed) from the determinant which is the consequence of this cause (appearance of a specific substantial property of the entire system) G.P. Mel’nikov introduces qualifiers: outer determinant and inner determinant.

The contents of the notions of outer and inner determinants are specified through the fixation of significant change which has taken place in the correlation of the categories of dialectical triads: matter-form-content and substrate-structure-substance.

**Inner determinant of language** is the general configuration of the nominative sense of a typical utterance which is being formed in the listener’s mind under the impact of the commands upon the tactics of guessing the intention of the speaker which are represented by the signs of the speech flow; as to diachrony of language, it is the most stable trait of the grammatical structure of a language (see Mel’nikov, 2000: 30); and as to synchrony, it is the specific inner form of the language structure (see Mel’nikov, 2000: 45).

G.P. Mel’nikov returns to this concept more than once, and elucidates it in the context of intra-system relations in the following way: “the most stable property of a system which has been acquired as the result of its formation, manifests itself at the highest tier and is supported by the singularity of all the deeper tiers” (Mel’nikov, 2003: 91), “the abstraction which contains and which entails the entire completeness of the specific” (Mel’nikov, 2003: 359). In the context of relations with the suprasystem, it is explained as “the consequence of a cause which can be located only outside the system, i.e. the consequence of the outer determinant” (Mel’nikov, 2003: 360).

The inner determinant can be formulated only when the whole system is “drawn” into the field of vision of the researcher who is forced to cross the boundaries of the initial subsystem in order to overcome the evident inner contradictions in some data (Mel’nikov, 2003: 145-146).

The inner determinant of a language of a certain type is revealed as the consequence of its outer determinant within the following logical chain:

Typical communicative task → typical semantic pattern of the utterance construction (inner form) → typical syntactic relations → typical morphological formalization.

This is why the formulation of the inner determinant of a system is a concentrated formulation of the peculiarity of its system organization (Mel’nikov, 2003: 146).

Investigation of such a chain inevitably involves all the language levels, from the utterance to the morpheme and even the phoneme, because the outer determinant makes demands
not only to the structure, but also to the sub-
stance of language.

Besides, the analysis of the language structure in the aspect of synchrony becomes complete only in case diachrony is turned to, because synchrony is constantly erasing inner forms in the language and establishing direct reference to denotates. Turning to diachro-
ny involves methods which are necessary for studying the dynamics of the language, thus allowing to implement a wider circle of tools of analysis, to explain the surface discrepancies of forms and functions typical for synchronic states and in this way to complete the system research along this axis as well.

The inner determinant of a system, being the most stable property of a system, sets the principal permissions and the principal prohi-

bitions on the ways of realization of specific functions, i.e. functions of separate elements and tiers of the system (Mel’nikov, 2003: 359).

The inner determinant of a language type “is most fully characterized by the fact that it remains the most stable trait in the inner form of messages in the given language, i.e. in the senses of utterances, notwithstanding their practically endless variety” (Mel’nikov, 2003: 105), and, being the sense of utterances, “serves only as a hint at the stages of an occasion being transformed into a plot” (Mel’nikov, 2003: 104).

Thus, the inner determinant should be understood as “the list of preferable means of hinting [to which preferable class of images the nominative sense belongs, what substantive and compositional means are preferable to “portray” this sense with the help of the utter-
ance, what the well-tested devices of “tying” the “portrayed” sense of the utterance to the components of the occasion and the plot are], providing the most effective communication at the set outer determinant of the language” (Mel’nikov, 2003: 106).

The inner determinant of a language as a system is derived from the first (inductive) stage of language study from the standpoint of the determinant approach.

The derivation of the inner determinant of a language (the internal determinant of a language is, actually, derived, but not found) allows to explain the interdependence of all levels of a language: the composition of vowels and consonants, the syllable structure, morpheme and word form, the means of syntactic connection of words in a sentence, features of the inner form of the language (Mel’nikov, 2003: 92), as well as the direction of this inter-
dependence, that is, the vector of cause-effect relationships within the language system – be-
tween the subsystems of different levels of lan-
guage and within the subsystems:

“...the features of the inner determinant entail the identity of composition and semantics of material morphemes, transnominative (derivational) and cognominative (syntactic) morphemes, which fact allows also to determine the most optimal, preferred acoustic and articulatory characteristics of speech flow units at the accepted composition of meaningful language units and their syntactic relations” (Mel’nikov, 2003: 107).

For example, G.P. Mel’nikov found that the agglutinative structure of language was a response to the request of the suprasystem characteristic of large homogeneous groups of nomadic pastoralists, who were separated for most of the year, and during certain periods of the annual cycle almost all of them came together and intensively exchanged socially important information. After a long break in communication, they would talk about well-
known persons and objects and the main ques-
tion of the listeners’ interest in the speaker’s message would be: what are the properties of a well-known subject or object now as compared to those well-known properties that they had before the break in communication. Therefore, the angle of presentation (communication angle) in such a language will be attributive (Mel’nikov, 2003: 121–122) (qualitative-at-
tributive (Melnikov, 2003: 349)).

Derivation of the inner determinant of agglutinative languages as a principle of collectivity and a principle of economy of auxiliary means, allows to substantiate the vector of causal relationships within the language sys-

tem: between subsystems of different levels of language and within subsystems.

Synharmonism began to be considered as a consequence (and, therefore, a means) of
agglutination, i.e. as a consequence of such a method of combining morphemes into a word, in which the boundaries between morphemes are not blurred. And the composition and phonetic-phonemic properties of vowels began to be considered as a consequence and a means of ensuring harmonic vocalization.

Phonological features of vowels ceased to be enumerative, and lined up in a hierarchy.

Differential features of vowels in agglutinative languages (for instance, Turkic, as classical agglutinative languages) perform both sense-distinguishing and word-delineating functions.

As far as the distinctive function is the principal one, the features capable of providing the most substantial, materially expressed difference of vowels, will be used as distinctive. Such a feature will first of all be height, because it is along the height axis that the acoustic distance between the vowels can be quite large, which means that they can be freely distinguished by hearing.

On the contrary, vowels providing synharmonic variants of one morpheme in terms of meaning, should be characterized by a common acoustic feature which is clearly perceived by hearing, and differ by a feature that is much less perceived materially. Such a feature is primarily the feature of backness (and in Turkic languages also roundedness).

Synharmonism as a means of adaptation of the characteristics of affixal morpheme vowels to the vowel of the first syllable, the root vowel, and features of vowels supporting this property, act as a means of word delineation in the flow of speech just because a weakly distinguished acoustic sign acts as a means of combining morphemes in one word.

Word forms are not chosen from the system of possibilities represented in a ready paradigm, as it occurs in inflectional languages, but each time they are compiled of morphemes, composed according to the requirements of the actual communicative situation. The more auxiliary information made obvious by the context, the less the need for auxiliary elements. Since, according to G.P. Mel’nikov, agglutination occurs where there is no need to transmit the same news linearly via a multi-link communication channel and where the speaker transmits information simultaneously to all those interested or to each person in turn, which means that the situation of communication is quite obvious to everyone who is communicating. In this case, a number of auxiliary service affixes is omitted: Uzb. Toshkent bardi – ‘Tashkent went’ implies ‘he went to Tashkent’ (Kononov, 1960).

In an extremely obvious communication situation, each root will be able to perform the functions of an independent word.

Since the speech chain may consist of roots only, the roots must consist of vowels and consonants, so that the speech remains articulate. In addition, to ensure that the boundaries between morphemes are well captured by hearing, morphemes do not begin with consonant junctions.

To make it possible to easily extract a “redundant” affix in a well-known situation, fusion is not formed at the junction of morphemes, and the function of tying morphemes into a whole word is assigned to vowels: the link between a given affix and a given root is expressed by vowel harmony, i.e. assimilation of affix vowels to the root vowels. Since it is the root that does not change, only affixes attached to the root change.

To change the meaning of the root without auxiliary elements, it is necessary to introduce other lexemes, expanding the context. And the lack of expressing relationships between words in a sentence with the help of morphemes can be compensated by a rigid word order.

The number of relational connections is minimal, and they are expressed by placing an attribute that replaces determinative, objective, and adverbial relations after the defined word: Bashk. Ol bistunge hunnun kelir chuve – “he is a to-us coming thing” (‘he comes to us daily’) (Kononov, 1960).

When even the most complicated relations are expressed in such a way, compound sentences are practically unnecessary.

Since the new image differs from the previous one only by additional features expressed by attributes, a sentence in languages of this type implements the “he is a driver he” scheme in which the theme stands first, and the follow-
ing rheme consists of the repeated theme and attributes to the repeated theme.

**Inner determinants of morphological types**

G.P. Mel’nikov research has objectivated four types of inner determinants inherent in the four morphological types of languages, and, accordingly, four inner forms of languages and four communicative angles:

- background inner determinant is typical for incorporating languages,
- attributive inner determinant – for agglutinative languages,
- event inner determinant – for inflectional languages,
- occasional inner determinant – for isolating languages.

The inner determinant of agglutinative (affixal-agglutinative) languages is the currently necessary auxiliary information. That is why, as Baudouin de Courtenay showed in his “Detailed program of lectures for the academic year 1877-78” (Baudouin de Courtenay, 1963: 103–106), creation of an agglutinative word (as compared to creation of an inflectional word) requires a lesser formal differentiation of grammatical classes of word forms, a greater degree of variability of the array of morphemes in a lexeme, a greater significance of word order in a sentence, more prohibitions on fusion when morphemes are united into word forms (Mel’nikov, 2003: 92).

The inner determinant of incorporating languages (established by GP Melnikov) is the tendency to dispense with the minimum of (specific) morphemes and construct utterances mainly from very abstract morphemes, but with material meaning, using these morphemes to denote both the actants of the situation expressed and the relations between the actants, thereby reflecting the network of relationships in a situation.

The inner determinant of root-isolating languages is the tendency to express not only lexical, but also grammatical information using morphemes – carriers of lexical meaning (Mel’nikov, 2003: 92).

The inner determinant of inflectional languages in correlation with the inner determinant of agglutinative languages is the noted by W. von Humboldt usage of ready-made word forms which are reproduced (not produced) in the act of communication. I.A. Baudouin de Courtenay (Baudouin de Courtenay 1963: 103–106) derived consequences from the inner determinant of inflectional languages: the appearance of a tendency toward the development of fusion on the morpheme merge and toward a clear differentiation of formal grammatical classes of words, as these classes are designed for use in certain positions of a sentence. So, for instance, a verb is a typical predicate, an adjective is a typical attribute, a noun is a subject and an object and an adverb is a typical modifier.

Thus, in relation to the language system, the outer and inner determinants are distinguished, and in relation to the dynamics of the language, the initial, current and extreme de-

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### Table. Concept field of the language determinant

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<th>Determinant</th>
<th>Outer</th>
<th>Inner</th>
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| Initial     | 1) community type  
               2) type of knowledge  
               3) type of characteristic plots | condition  
               matter  
               substrate (general initial inner form of a language family) |
| Current     | cause  
               form  
               structure | consequence  
               content  
               substance (close current inner forms of languages) |
| Extreme     | – | Formal types of the structural classification of languages |
terminants are distinguished. Correlating these two classifications with each other allows to see the general plane of the conceptual field of determinant (Table).

Discussion

The basis of G.P. Mel’nikov’s system typology of languages is the determinant study of languages (determinant approach in linguistic studies).

The determinant study of languages lifts the contradiction between synchronic and diachronic approaches to linguistic research, because it “allows to unveil the system interdependence of all the tiers and components of a language in its synchronic state through the reconstruction of the picture of dynamics of its adaptation” (Mel’nikov, 2003: 358). The determinant approach in linguistic studies consists of three stages:

the first stage is inductive: it involves analyzing the system in order to identify the inner determinants of the language.

The inductive stage of research is based on the principle of functional significance of the phenomenon under study accepted by I.A. Baudouin de Courtenay. The principle of functional significance of the phenomenon under study involves the necessity of finding out, with which objects of the same level it interacts, an element of which suprasystem it is and, hence, what its function in the suprasystem is (Mel’nikov, 2003: 358).

the second stage is the stage of dialectical deduction (determinant synthesis): it involves the determinant synthesis of the system and the explanation of the system interdependence of all its components and tiers in synchrony and diachrony, as well as theoretical identification of those characteristics of the system which could not be identified inductively, at the first stage of the research;

After the inner determinant is identified (the identification takes place at the first stage of the determinant study of a language) it is easy to establish the hierarchy of the specific functions of the elements and tiers of the system according to their significance for the main function, i.e. the function of the language as an integrity. The knowledge of the environment in which the system is functioning, of the substantive potentials of the system’s components and of principal laws of a system’s adaptation to changing conditions allows to reconstruct the history of consecutive stages of the formation of the system which is observed at any given time at any synchronic cut. The knowledge of the history of consecutive stages of the system’s formation gives an understanding of the cause-effect connections both in the system’s evolution, and in its present-day state. That is why deduction helps to discover the properties of the system that were not identified at the first (inductive) stage of the research (Mel’nikov, 2003: 359).

The third stage is “explaining the inner determinant by the outer determinant, i.e. by the singularity of the typical conditions of the language functioning under which the presence of this very inner determining property makes the language system a perfect tool of social communication” (Mel’nikov, 2003: 358).

The inner determinant of a language type is “most fully characterized by the feature that remains the most stable in the inner form of messages despite their practically infinite variety” (Mel’nikov, 2003: 105) and, being the sense of utterances, “serves only as a hint at the stages of transformation of an occasion into a plot” (Mel’nikov, 2003: 104).

Conclusion

Thus, the inner determinant should be understood as “the list of preferable means of hinting [to which preferable class of images the nominative sense belongs, what substantive and compositional means are preferable to “portray” this sense with the help of the utterance, what the well-tested devices of “tying” the “portrayed” sense of the utterance to the components of the occasion and the plot are], providing the most effective communication at the set outer determinant of the language” (Mel’nikov 2003: 106).

The prognostic potential of the determinant approach in linguistic research allows to calculate with a certain degree of probability the further changes of the language system, on the basis of understanding which links of the system have already been formed, and which
links of the system have not yet been formed and are able to lead to the next chain of changes.

Such understanding is entailed by the knowledge of

– the inner determinant of the language, which means the hierarchy of specific functions of the system as to the main function,

– the environment in which the system is functioning,

– the substantive potential of the system’s components,

– the principal laws of the system’s adaptation to the changing conditions (Mel’nikov, 2003: 358).

The progressive explaining of the content of the determinant makes it possible to understand that, according to G.P. Mel’nikov’s conception, the determinant is a system of notions, which is complete and interdependent, possesses clear contours and principles of singling out, unlike, for instance, W. von Humboldt’s idea of the “inner form” or A.F. Losev’s “symbol”, the boundaries of which notions are not always obvious and their content enters an endless chain of meanings.

At the same time, it is obvious that the notion of the determinant is explained through various types of correlations with other notions of system linguistics: “communicative angle (angle of portraying information) of a language”, “inner form of a language”, “inner form of messages”, “structure”, “substance”, “material”, “sense of an utterance”, “nominative sense”, “hint”, “occasion”, “plot”, “connection (linear or network) of plots”, “aspects of mismatch between the occasion and the plot”, “current images”, “individual images”, “generic-species images (images of world understanding), “principle of the functional value of the phenomenon (object under study)”, – the content of which is far from being self-evident and requires further penetration into the closed system until the system of notion is completely exhausted. It should be noted that the complexity of penetration is increased by the fact that many notions have no name, but have a description, and vice versa: some notions, albeit named, were not characterized by G.P. Mel’nikov separately, and require an explanation of their content (“initial determinant”, “current determinant, “extreme determinant”). Besides, the seeming obviousness of the meanings of some words prevents them from being seen as scientific notions, while reference to the work (often difficult to access) in which the content of a notion is unveiled, disesteems the scientific potential of a term which is erroneously taken for a word of general use. For instance, the notion of adaptation is treated in system linguistics as “any change of a system’s properties directed at the functionality of its determinant, i.e. the increase of the system’s ability to help maintain the stability of certain properties of the suprasystem by means of its elder, most stable maintained properties” (Mel’nikov, 1980: 21). The ability of adaptation in system linguistics is understood as the key feature of system objects: the higher the degree of adaptability, the more stable the determinant, the higher the degree of the object’s system character (Mel’nikov, 1980: 22).

The adaptation process begins with the initial outer determinant, the change of which makes it necessary that the language system adapts itself to the new life conditions of the language community; it ends in the extreme inner determinant fixing the results of the language structure transformation regarding the change of functions, and manifests itself in the morphological structure of the language determining the ways of nominative organization of utterances transmitting information in typical communicative situations, as well as the possible transformation of typical (neutral, frequent) surface structures in case communicative content is to be formalized and transmitted in atypical situations.

Thus, the content of the notion “adaptation” leads to the content of the notions of “initial, current and extreme determinants”. Noe it is clearly seen that interpretation of each notion introduced by G.P. Mel’nikov, will lead to the consistent forming and actualization of the whole system of notions until the cause-effect circle is closed.
References


Основные принципы анализа внутренней детерминанты в лингвистической системологии

О.И. Валентинова, М.А. Рыбаков
Российский университет дружбы народов
Российская Федерация, Москва

Аннотация. Темой статьи является понятие внутренней детерминанты языка, предложенное основателем системной лингвистики Г.П. Мельниковым в развитие идеи В. фон Гумбольдта о внутренней форме языка. Цель исследования – актуализировать в свете современных научных парадигм один из методов системной лингвистики – метод детерминантного анализа языковых систем и тесно связанные с ним представления о морфологическом типе языка, номинативном и коммуникативном ракурсах представления ситуации в типичном высказывании, способах организации грамматической семантики в языках различных типов. Проведенное исследование показывает, что разработанное Г.П. Мельниковым понятие внутренней детерминанты языка позволяет трактовать традиционную морфологическую классификацию языков как систему типов, противопоставленных по своей внутренней детерминанте в исторически сложившихся специфических коммуникативных условиях, которые выступают в роли внешней детерминанты языков.

Ключевые слова: детерминанта, лингвистическая типология, общее языкознание, система, системология.

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