

## **THE DOCTRINE OF SEMIOSIS: NEW TASKS AND CHALLENGES**

**Andreichuk N. I.**

### **INTRODUCTION**

*There are three kinds of interest we may take in a thing.  
First, we may have a primary interest in it for itself.  
Second, we may have a secondary interest in it,  
on account of its reactions with other things  
Third, we may have a mediatory interest in it,  
in so far as it conveys to a mind an idea about a thing  
(Charles Pierce)*

Semiotics today is quite a broad field with much variety in it. A lot of existing definitions of semiotics only complement one another, and in general, the shortest version – the science of signs – is considered to be sufficient. This laconism, on the one hand, speaks of the methodological clarity of semiotics, and on the other hand, the complexity of the object has transformed semiotics into “the science of sciences”. Already in St. Augustine’s doctrine one can find the assertion that “All instruction is either about things or about signs; but things are learnt by means of signs”<sup>1</sup>. Today Umberto Eco writes that the study of the limits and laws of semiotics must begin by determining whether (a) one means by the term ‘semiotics’ a specific discipline with its own method and precise object; or whether (b) semiotics is a field of studies and thus a repertoire of interests that is not as yet completely unified. In the first case, the researcher ought to propose a semiotic model deductively which would serve as a parameter on which to base the inclusion or exclusion of the various studies from the field of semiotics. If semiotics is a field, then various semiotic studies would be justified by their very existence: it should be possible to

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<sup>1</sup> Augustine St. On Christian Doctrine. URL: <http://www.ntslibrary.com/PDF%20Books/Augustine%20doctrine.pdf> P. 9

define semiotics inductively by extrapolating from the field of studies a series of constant tendencies and therefore a unified model<sup>2</sup>.

According to Roman Jakobson semiotics “is called to study the diverse systems of signs and to bring out the problems which result from a methodical comparison of these varied systems, that is to say, the general problem of the SIGN: sign as a generic notion with respect to the particular classes of signs”<sup>3</sup>. In the opinion of Borys Uspenskyi the situation in semiotics is very bad because there is no progress: basic concepts have not been defined and there is no unity of methods<sup>4</sup>. Thus, semioticians need the patience and dedication necessary for working on foundational aspects, starting with defining the specific domain of knowledge and the appropriate methodology. And they need to delimit a research agenda for semiotics above and beyond the speculative<sup>5</sup>.

In this paper semiotics is defined as **the doctrine of semiosis**, that is, of all those processes in which something functions as a sign. Interpretation of semiotics as a semiotic doctrine implies that the latter provides theoretical foundations and conceptual instruments to integrate different approaches to understanding ‘the action of sign’ regardless of the nature of the latter. So, this doctrine puts together a wide range of scientific researches in the natural sciences and the humanities and provides insights into the solution of various problems.

The major part of semiotic research encompasses all means of signification that are used for the communication of people, animals and machines. Still there are other conceptualizations of its limits: (a) semiotics concerns informational systems and informational structures that represent knowledge, including relationships between language and other data processing means; (b) semiotic studies are downsized to the consideration of interpretational and communicational processes through logical deductions; (c) semiotics should explore exclusively those objects that make up systems of interpersonal signalling and communication; (d) only arbitrary conventional system of signification, which are

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<sup>2</sup> Eco U. *A Theory of Semiotics*. Bloomington: Indiana University Press, 1979. P. 7.

<sup>3</sup> Jakobson R. The framework of language. *Michigan Studies in the Humanities*. № 1. 1980. P. 1.

<sup>4</sup> Kull K., Velmezova E. What is the main challenge for contemporary semiotics. *Sign System Studies*. 2014. Vol. 42(4). P. 532.

<sup>5</sup> Nadin M. Reassessing the foundations of semiotics: Preliminaries. *International Journal of Signs and Semiotic Systems*. 2012. Vol. 2(1). P. 28.

consciously and intentionally used by people for cognitive and communicative purposes are recognized as semiotic objects of examination, and others. Even this very short account demonstrates that the variety of interests of semioticians can generate a long list of research objects. The accepted definition of semiotics as the doctrine of semiosis leads to the idea that the subject of semiotics is not the content of the processes of communication, but ‘the action of signs’ in all the realms of natural and social life, where informational processes take place. Within the entire system of sciences, semiotics performs a meta-task of the scientific description, which includes: 1) the reference to the objects of sciences as signs; 2) the use of sign systems for the description of objects; 3) the application of semiotic analysis of objects. Thus, the list of primary tasks includes the following: 1) to study the nature of codes governing information transition; 1) to suggest a consolidated semiotic approach to the description of informational processes, both in nature and society, and to demonstrate the ontological unity of these processes induced by the use of codes; 2) to make judgements concerning the laws of semiosis governing the action of signs in each particular domain; 3) to develop methodological foundations of research taking into consideration dimensions of semiosis.

### **1. The Notion of Semiosis: Levels and Dimensions**

The idea that semiotic study actually consists in analyzing the sign’s action belongs to Charles Sanders Peirce who called this action ‘semiosis’ or ‘semeiosis.’ He uses both forms of the term in his article “Pragmatism” written in 1907 where he provides the following explanation: “It is important to understand what I mean by semiosis. All dynamical action, or action of brute force, physical or psychical, either takes place between two subjects [whether they react equally upon each other, or one is agent and the other patient, entirely or partially] or at any rate is a resultant of such actions between pairs. But by “semiosis” I mean, on the contrary, an action, or influence, which is, or involves, a cooperation of *three* subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs”<sup>6</sup>.

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<sup>6</sup> ‘Semiosis’. Term in The Commens Dictionary: Peirce's Terms in His Own Words / Bergman M., Paavola S. (Eds.). New Edition. URL: <http://www.commens.org/dictionary/term/semiosis>

In the same article Pierce introduces the term ‘semeiosy’ to speak about the ‘action of sign’ having a ‘triadic character’. Defining semiosis as the action of the three relata, Pierce emphasizes that signs acquire more meaning through their own activity and that dynamicity of semiosis is a crucial feature of this semiotic activity. The word ‘semiosis’ might have been borrowed by Pierce from the Epicurean philosopher Philodemus of Gadara (ca. 110 – ca. 30 BC) who studied in the Epicurean school at Athens led by Zeno of Sidon. Philodemus was involved in the Hellenistic debates over the nature and existence of the ‘criterion of truth’, which allows us to separate true from doubtful or false beliefs. This debate, conducted by philosophers and medical writers, also concerned methods of proof and sign-inference to extend knowledge beyond our immediate perceptions<sup>7</sup>. More details on Epicurean sign-inference in Philodemus can be found in James Allen’s book<sup>8</sup>.

According to Pierce, semiosis is an experience everyone has at any moment of life. To explain this experience we need a special theory which he calls semiotics, adding that it is another name for logic: “Logic, in its general sense, is, as I believe I have shown, only another name for *semiotic* (σημειωτική), the quasi-necessary, or formal, doctrine of signs”<sup>9</sup>. A few years later Pierce specified that: “...the one sole way to success in logic is to regard it as a science of signs; and I defined it in 1867 as the theory of the relation of symbols to their objects. Further experience has convinced me that the best plan is to consider logic as embracing more than that, and the general theory of signs of all kinds, not merely in their relation to their objects but in every way. This way of looking upon logic is the one salvation for the science”<sup>10</sup>.

No introduction to the Peircean science of signs, however brief, will fail to mention that the sign is a triadic relation and that it can be defined as something that stands for something else (its *object*) for something third (its *interpretant*), or alternatively as something that mediates

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<sup>7</sup> Blank D. Philodemus. URL: <https://plato.stanford.edu/entries/philodemus/>

<sup>8</sup> Allen J. *Inference from Signs. Ancient Debates about the Nature of Evidence*. Oxford: Clarendon Press, 2001. P. 194–241.

<sup>9</sup> ‘Logic’. Term in *The Commens Dictionary: Peirce’s Terms in His Own Words* / Bergman M., Paavola S. (Eds.), New Edition. URL: <http://www.commens.org/dictionary/term/Logic>

<sup>10</sup> *Ibid.*

between its object and its interpretant. Peirce adopted the term ‘object’ from the XIIIth century scholastic terminology, where ‘objectum’ meant “a creation of the mind in its reaction with a more or less real something [...] upon which cognition is directed”<sup>11</sup>. Pierce differentiates between sign-action (semiosis) and sign-representamen which is the point of departure of semiotic inference. This led him to use ‘sign’ when speaking of the sign in action and ‘representamen’ when analyzing the constituent elements of semiosis. These constituents are the representamen, the interpretant and the object, which he calls the ‘Immediate Object’ within semiosis in order to discriminate the object outside semiosis which he calls the ‘Dynamical Object’: “...every sign has *two* objects. It has that object which it represents itself to have, its Immediate Object, which has no other being than that of being represented to be, a mere Representative Being, or as the Kantian logicians used to say a merely Objective Being; and on the other hand there is the Real Object which has really determined the sign [,] which I usually call the Dynamical Object, and which alone strictly conforms to the definition of the Object”<sup>12</sup>. In letters to Lady Welby (1908) he uses another term explaining the difference between two objects: “As to the Object of a Sign, it is to be observed that the Sign not only really is determined by its Object, – that is, for example, the name Charlemagne is in correspondence with the historic Emperor who lived in the IXth century, or the name Othello is fitted to that Moorish general whom Shakespeare imagined, or the name “the Ghost in Hamlet” is fitted to that ghost of an ancient King of Denmark that Shakespeare imagined that Prince Hamlet either imagined or really saw, – but in addition, the Sign may be said to pose as a representative of its Object, that is, suggests an Idea of the Object which is distinguishable from the Object in its own Being. The former I term the *Dynamoid Object* (for I want the word “genuine” to express something different); the latter the *Immediate Object* (a well-established term of logic.) Each of these may have either of the three Modalities of Being, the former in itself, the latter in

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<sup>11</sup> Cit. from: Nöth W. Representation and Reference According to Peirce. *International Journal of Signs and Semiotic Systems*. 2011. Vol. 1(2) (July-December). P. 29–30.

<sup>12</sup> ‘Immediate object’. Term in *The Commens Dictionary: Peirce’s Terms in His Own Words* / Bergman M., Paavola S. (Eds.). New Edition. URL: <http://www.commens.org/dictionary/term/immediate-object>

representation”<sup>13</sup>. Thus, Peircean logic assumes that all knowledge is obtained from triadic sign action of pointing to an external world – however, not to real objects but to semiotic objects as they are represented by signs which point to our phenomenal world. The followers of Pierce’s ideas believe that “semiotic logic leads us to a new methodology, an integrated methodology for inquiry involving the unification of science and phenomenology”<sup>14</sup>.

Following Pierce’s ideas, Charles Morris foresaw the universal possibility and potential of semiosis for the science of semiotics. He defines semiosis as “the process in which something functions as a sign” and explains that it involves three (or four) factors: that which acts as a sign, that which the sign refers to, and that effect on some interpreter in virtue of which the thing in question is a sign to that interpreter. These three components in semiosis he calls, respectively, the ‘sign vehicle’, the ‘designatum’ and the ‘interpretant’; and mentions that the interpreter may be included as a fourth factor<sup>15</sup>.

To describe the process of semiosis, Morris uses a rather vague term ‘mediated-taking-account-of’<sup>16</sup>. An interpreter mediately takes account of something and interpretant which is evoked by something functioning as a sign is explained as ‘taking-account-of-something’. As the notion of interpretant is the key one for this research, it should be mentioned that Morris treats this notion differently in different parts of his work: a) “the effect on some interpreter in virtue of which the thing in question is a sign to that interpreter”<sup>17</sup>; b) “a-taking-account-of-something in so far as it is evoked by something functioning as a sign”<sup>18</sup>; c) “the habit in virtue of which sign vehicle can be said to designate certain kinds of objects or situations; as the method of determining the set of objects the sign in question designates, it is not itself a member of that set”<sup>19</sup>; d) “part of the conduct of the individual”<sup>20</sup>. One cannot but agree that the interpretation

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<sup>13</sup> Ibid.

<sup>14</sup> Pearson Ch. Theoretical Semiotics and Semiotic Theories. URL: <https://www.academia.edu/13674256/>

<sup>15</sup> Morris Ch. Foundations of the Theory of Signs. *International Encyclopedia of Unified Science*. Chicago: University of Chicago Press, 1938. Vol. 1. № 2. P. 3.

<sup>16</sup> Ibid. P. 4.

<sup>17</sup> Ibid. P. 3.

<sup>18</sup> Ibid. P. 4.

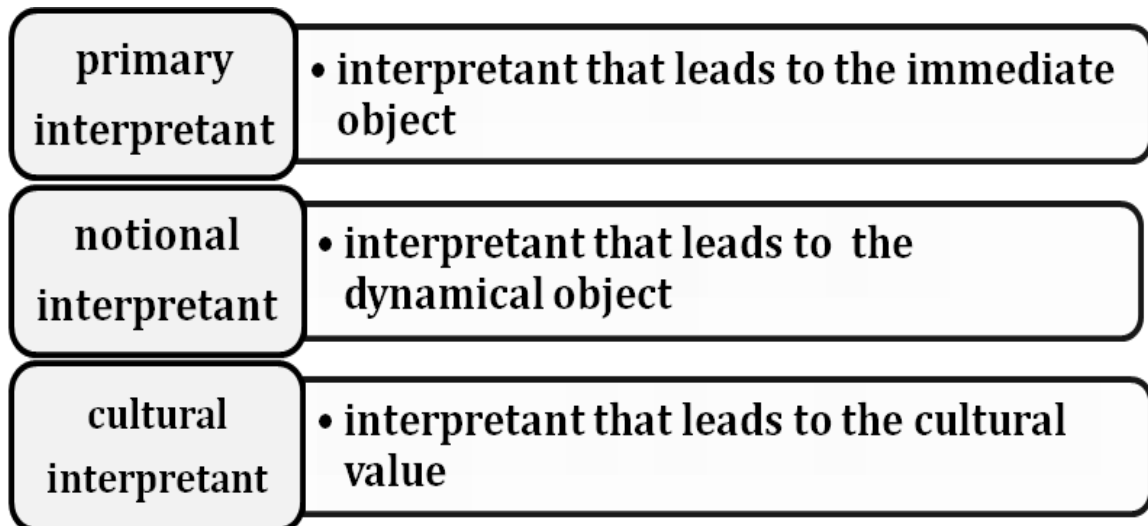
<sup>19</sup> Ibid. P. 34.

<sup>20</sup> Ibid. P. 39.

of the phrase ‘taking account of’ is behavioristic and not sufficient for a complete study of semiosis.

Suggesting the dimensions<sup>21</sup> of semiosis, which made his theory so famous, Morris describes **dyadic relations** between the three correlates: 1) the formal relation of signs to other signs (syntactic dimension); 2) relation of signs to objects that is to what they denote (semantic dimension); 3) the relation of signs to interpreters (pragmatic dimension)<sup>22</sup>. These dimensions may be viewed with certain reservation<sup>23</sup>.

The pertinent goal of this research is to substantiate the conviction that dimensions of semiosis (defined as the action of sign) should be based primarily on the interpretant which is triadic and presents an inseparable unity of primary, notional and cultural interpretants (Fig. 1).



**Fig. 1. The triadic nature of interpretant**

Proceeding from the suggested triadic nature of the interpretant, I will make an attempt to substantiate dimensions of semiosis. This

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<sup>21</sup> The term ‘dimension’ in this context is not used in its primary meaning of a measurable extent of a particular kind, such as length, breadth, depth, or height, but is a synonym of ‘coordinate’ or ‘parameter’. In this paper it is defined as a certain amount of significant parameters, which are crucial for the existence of an object and can provide its comprehensive description.

<sup>22</sup> Ibid. P. 6.

<sup>23</sup> For the detailed revision of Morris’ dimensions see: Андрейчук Н. Рівні та виміри дії знака. *Вісник Львівського університету. Серія філологічна*. 2019. Вип. 70. С. 309–322.

substantiation is based on the following convictions: (a) semiosis generates the interpretant; (b) it is the agency of the sign itself rather than the agency of an interpreter. The interpretation of the latter can be regarded as the perception of the meaning exhibited by the sign itself through the interpretants it generates. Joseph Ransdell argues that meaning creation and change “is never due solely or primarily to what *we* do: man proposes but the sign disposes”<sup>24</sup>. Thus, the process of semiosis is self-governing: the sign has a power of generating interpretants.

The dimension of the relation of the interpretant and sign vehicle is the **code dimension of semiosis**, since primarily the interpreter perceives the sign vehicle as a unit of code. Semioticians state that all the intelligibility depends upon codes, and code in this context is used to designate a set of systemically organized signs and rules of their combining. Code dimension does not correspond to syntactic dimension as defined by Morris. He views syntactics as “the consideration of signs and sign combinations in so far as they are subject to syntactical rules”<sup>25</sup>. His syntactics does not treat qualities of sign vehicles but only their syntactical relations. This statement was criticized by Curt Ducasse still in 1942, when he wrote that subordination to the rules of signs formation and transformation were crucial for Morris’ syntactics and whether the objects formed and transformed were signs beyond those rules was of no importance<sup>26</sup>. Code dimension, as suggested in this paper, refers to the study of the nature of sign vehicles and codes which they belong to.

The second dimension of semiosis is shaped through the relation of sign vehicle and notional interpretant. The sign vehicle determines notional interpretant and represents designatum. Terms ‘determination’ and ‘representation’ are used as advanced by Richard Parmentier who, commenting on Pierce’s ideas on the nature of sign, writes that vector of representation is directed from the sign and interpretant to the object and vector of determination – from the object to sign and interpretant, and these are “two opposed yet interlocking vectors involved in semiosis”<sup>27</sup>.

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<sup>24</sup> Ransdell J. Teleology and the Autonomy of the Semiosis Process. URL: <http://www.iupui.edu/~arisbe/menu/library/aboutcsp/ransdell/AUTONOMY.HTM>

<sup>25</sup> Morris Ch. Foundations of the Theory of Signs. *International Encyclopedia of Unified Science*. Chicago: University of Chicago Press, 1938. Vol. 1. № 2. P. 14.

<sup>26</sup> Ducasse C.J. Some Comments on C.W. Morris’s “Foundations on the Theory of Signs”. *Philosophy and Phenomenological Research*. 1942. Vol. 3. № 1. P. 50.

<sup>27</sup> Parmentier R. J. Signs in Society. *Studies in Semiotic Anthropology*. Bloomington and Indianapolis: Indiana University Press, 1994. P. 4.



Knowledge of objects through signs is possible only if these vectors are brought into proper relations.

Notional interpretant provides the reference of the identified object to the dynamical object. The suggested definition makes this interpretant close to ‘concept’ as used in those modern lingual-and-cultural studies which are directed at the elucidation of the lingual picture of the world. The researchers in the field proceed from the idea that human consciousness is unfolded in the meanings of lingual units constructed through the interaction of mental and sensual components<sup>28</sup>. In the semiotic framework, the concept is defined as a synthesizing lingual-and-mental entity, as a “unit of thought, which is fixed by a language sign for the purpose of communication”<sup>29</sup>.

It is claimed in this paper that concept is a component of sign and correlates with the notional interpretant for the dynamical object. This makes possible to single out two basic characteristics of the latter: 1) mental nature (is localized in the consciousness and is a mental projection of an object); 2) affiliation to knowledge as a set of relatively stable, objective and collective notional interpretants. Since knowledge turns into information in the process of transference, it is suggested to call the second dimension of the action of sign the **informational dimension of semiosis**.

The third dimension of semiosis is associated with cultural interpretant reflecting ‘the evaluative ideas’ of interpreters. This dimension correlates with Morris’ pragmatic rules, but is interpreted in the broader context: the connection of mentality and culture as a “special way of organizing and developing life activities”<sup>30</sup> and the relationship with the system of evaluations and values in the mind of the interpreter. Thus, the triadic nature of the interpretant forms the basis for singling out three dimensions of semiosis (Fig. 2).

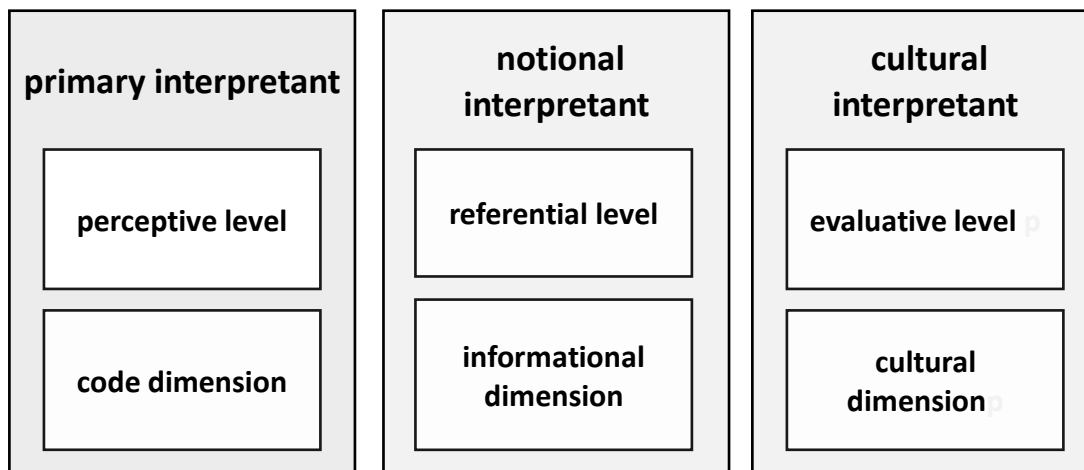
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<sup>28</sup> Зеленько А.С. Проблеми семасіології в різних лінгвістичних парадигмах. *Лінгвістика*. Луганськ: Луганський національний університет імені Тараса Шевченка. 2010. № 1 (19). С. 16–26.

<sup>29</sup> Попова З.Д., Стернин И.А. Основные черты семантико-когнитивного подхода к языку // *Антология концептов* / под. ред. В.И. Карасика, И.А. Стернина. М.: Гнозис, 2007. С. 7–9.

<sup>30</sup> *Философский энциклопедический словарь* / гл. редакция: Л.Ф. Ильичев и др. М.: Сов. энциклопедия, 1983. Ст. 292.

Thus, semiotics is the study of semiosis, the latter being any process involving a particular relation between a sign-vehicle, an object, and an interpretant and possessing code, informational and cultural dimensions.



**Fig. 2. The potential of interpretant for defining dimensions of semiosis**

## **2. Dimensions of Semiosis: Guidelines for Research Tasks in Contemporary Semiotics**

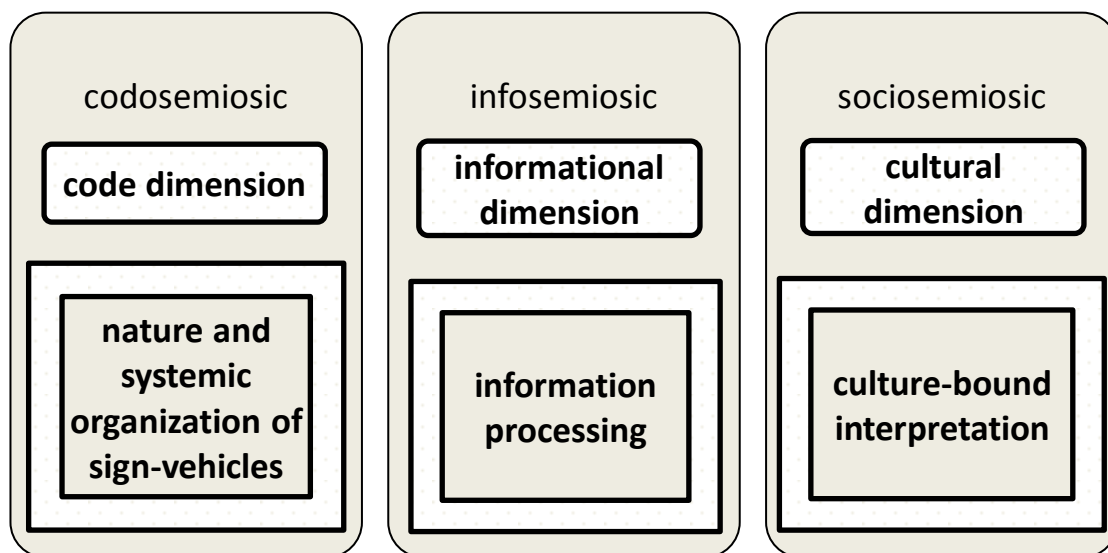
**Studying the code dimension of semiosis** has a great potential for the development of the meta-theory so far as all sciences have to use sign systems to represent research results. These systems most commonly are structurally complex and contain subsystems representing different levels of analysis.

Semiotics provides a complex web of methodologies suggesting general principles of sign systems cognizance. Most commonly the point of departure in a semiotic research is the singling out of a sign system type and function, the next step being the analysis of the units of this system. The code is predetermined, on the one hand, by the nature of signs, and, on the other hand, – the function of the system.

Proceeding from the suggested dimensions of semiosis it seems logical to suggest three methodological approaches to semiotic research based on code, informational and cultural dimensions: 1) formal or **codosemiotic** approach; 2) cognitive or **infosemiotic** approach; 3) communicative or **sociosemiotic** approach (Fig. 3).

The most challenging task of studying the code dimension of semiosis is to suggest the general typology of signs and sign systems. The

latter remains a rather controversial issue of semiotics. Nina Mechkovskaia rightly affirms that the world of signs and sign systems is infinitely diverse, and its unity has the nature of the continuum. In order to present the boundaries, properties and patterns of the existence of this continuum, it is necessary to consider the different classes of sign systems and signs in a single system of signs, classify them and establish the relationship between classes<sup>31</sup>.



**Fig. 3. Approaches to semiotic research**

Proceeding from the nature of sign vehicles we suggest the following subdivisions:

1) **logical-mathematical semiotics** which studies artificial languages of science, especially mathematics and logic, and the languages of human-machine communication. The latter include programming languages, operating system languages and database management. One of the sign systems of this type is the musical notation with its long history<sup>32</sup>. Other examples are the language of differential

<sup>31</sup> Мечковская Н.Б. Семиотика: Язык. Природа. Культура: курс лекций: учеб. пособие для студ. филол., лингв. и переводовед. фак. вузов. 2-е изд., испр. М: Издательский центр «Академия», 2007. С. 95–96.

<sup>32</sup> Throughout the entire history of music (from the first attempts of its sign fixation in ancient Egypt, Mesopotamia and ancient Greece), the search for accurate representation of musical sound in writing has been conducted. The modern five-line notation (the so-called Kyiv) appeared in Ukraine at the end of the 16th century. It should be noted that the history of musical notation is not a development from less important to more meaningful, but the deployment of a number of innovations, the evolutionary process of creation and modification.

and integral calculus created in mathematics (XVII – XVIII cen.), and the language of mathematical logic (XIX – XX cen.). Languages for human – machine communication emerged in the forties of the XXth century and the first languages of this type were sign systems for the description of computational processes. In 1957 FORTRAN was developed in the USA and in 1960 ALGOL 60 appeared in Europe. By the end of the XXth century there were over 500 programming languages;

2) **biosemiotics** that studies biological semiotic systems. The basic one of this type is a genetic code – a system for recording hereditary information in nucleic acid molecules<sup>33</sup>. In the field of biosemiotics scholars usually distinguish: endosemiotics – the study of sign systems inside the body, and zoosemiotics – the study of sign systems in the animal world;

3) **ethnosemiotics** deals with sign systems related to the life and culture of peoples, such as clothes, dances, ceremonies;

4) **semiotics of art** which studies sign systems that are characteristic of different types of art: theater, ballet, cinema, painting, architecture, etc. The peculiarity of diverse forms of the reflection of reality and the aesthetic principles that are characteristic of different types of art determine the codes of each art;

5) **linguosemiotics**, which studies language as a special universal system of linguistic signs;

6) systems of non-lingual signs which complement or substitute lingual signs are studied in **kinesics (body language)** – body motions such as gestures (including those made by hands, feet, head movements), shrugs, foot tapping; **mimicry** – facial expressions and eye movements such as smiling, squinting, frowning, winking, etc. Eye movements and eye contact may be treated separately from other facial expressions, in this case, they are referred to as *oculesics*; **proxemics** – use of space to signal privacy or attraction; **haptics** – touch; **chronemics** – use of time, waiting, pausing; **olfactics** – smell; **paralanguage**: a) *vocalics* – tone of voice, timbre, volume, speed; b) *sound symbols* – grunting, mumbling (e.g. mmm, er, ah, uh-huh); c) *silence* – pausing, waiting, secrecy;

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<sup>33</sup> In 1968 Marshall Warren Nirenberg, along with his colleagues, Robert Golly and Gobind Horan, received the Nobel Prize for deciphering the genetic code and establishing the mechanism of protein synthesis. This discovery provided fundamentally new opportunities in the field of the study of hereditary diseases and methods of their treatment.

**posture** – position of the body, stance; **adornment** – clothing, jewellery, hairstyle; **locomotion** – walking, running, staggering, limping<sup>34</sup>;

7) **signalling**, which studies road signs, sea flags, military signs, coats of arms, flags, etc.;

8) **medical semiotics** that studies symptoms and syndromes (characteristic combination of symptoms) that are considered as signs of a disease in medical diagnosis.

This list differs in different textbooks in semiotics and can be modified or expanded. For instance, we can add cartosemiotics which deals with codes used to create maps<sup>35</sup> and others.

Thus codosemiotic approach provides a well-grounded methodology for studying the types of sign systems and the processes in which signs are handled as well as the contexts in which signs and sign processes are embedded. As the object of semiotic study is highly complex, different facets of complexity should be considered and two aspects are relevant for codosemiotic approach: (1) the expression material, i.e., the stock of perceivable items from which expressions are selected; (2) sets of rules which govern the selection of expressions and their assignment to contents.

The **infosemiotic approach** (see Fig.3) deals with the second dimension of semiosis shaped by the relation of sign vehicle and notional interpretant. The approach is based on the fundamental idea of the unity of sign components in the process of semiosis, consequently, the notion of code is inseparable from the notion of information. Sign vehicles are carriers of information which is determined by their assortment and arrangement. Maureen McCreadie and Ronald Rice<sup>36</sup> review concepts of information proposed over the last fifty years and the summary of the concepts they consider allows to indicate that information is defined as: (1) a stored knowledge; (2) data in the environment; (3) information as part of the communication process; (4) information as a resource or commodity. Infosemiotic approach is based on the second definition

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<sup>34</sup> Detailed description of this system can be found in: Leathers D.G., Eaves M.H. *Successful Nonverbal Communication: Principles and Applications*. New York: Routledge, 2017. 436 p.

<sup>35</sup> Semiotic Encyclopedia Online. URL: <https://semioticon.com/seo/C/cartosemiotics.html>

<sup>36</sup> McCreadie M., Rice R.E. Trends in analyzing access to information. Part I: cross-disciplinary conceptualizations of access. *Information Processing and Management*. 1999. Vol. 35 (1). P. 45–76.

which states that information can be obtained from a range of environmental stimuli and phenomena, not all of which are intended to ‘convey’ a message, but which can be informative when appropriately interpreted. Actually, the action of sign ‘becoming informative’ is the core of semiosis. According to Peirce “every cognition involves something represented, or that of which we are conscious, and some action or passion of the self whereby it becomes represented. The former shall be termed the objective, the latter – the subjective element of cognition. The cognition itself is an intuition of its objective element, which may therefore be called, also, the immediate object”<sup>37</sup>. Francesco Belucci claims that it is with notion of immediate object that Peirce succeeds in establishing, besides the trichotomy of icon, index and symbol obtained with the dynamic object, a new and different trichotomy of signs, which would remain a relatively constant item in all his subsequent taxonomic attempts (1904–1909). This new trichotomy is into vague signs, singular signs, and general signs, that is, into particular, singular, and universal propositions<sup>38</sup>. One of the challenges of infosemiotic approach is to make an attempt to establish correspondences between propositions and ‘objective elements of cognition’ and further develop the classification of signs based on propositions.

**Sociosemiotic approach** opens up a new orientation of semiotic studies related to cultural dimension of semiosis. In this paper it is viewed as a more general notion than *social semiotic* as suggested by Michael Halliday in his book “Language as Social Semiotic: The Social Interpretation of Language and Meaning”<sup>39</sup> in 1978. He works exclusively with lingual codes and treats them as social semiotic resource used to achieve goals expressing meaning in context. Halliday differentiates ‘context of situation’ and ‘context of culture’. Cultural interpretant as treated in this article provides the connection of sign-vehicles with the systems of evaluations and values irrespective of their nature and thus correlates with the impact of cultural context on signs.

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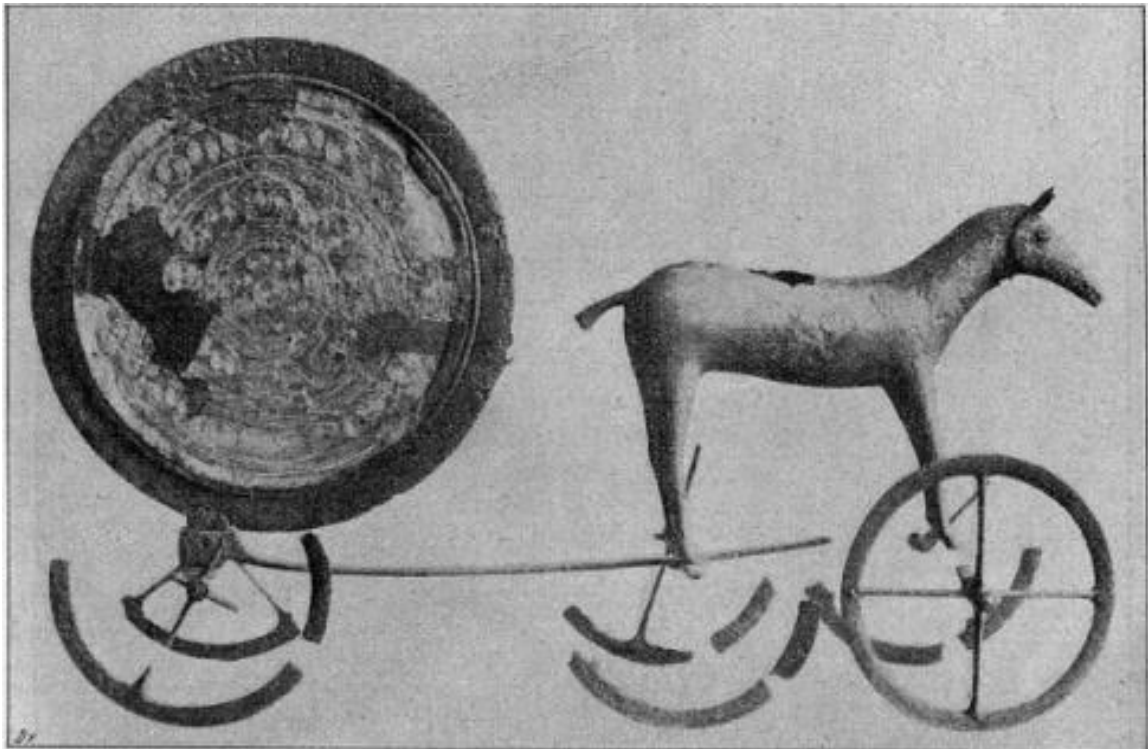
<sup>37</sup> ‘Immediate object’. Term in The Commens Dictionary: Peirce’s Terms in His Own Words / Bergman M., Paavola S. (Eds.). New Edition. URL: <http://www.commens.org/dictionary/term/immediate-object>

<http://www.commens.org/dictionary/term/immediate-object>

<sup>38</sup> Bellucci F. Exploring Peirce’s speculative grammar: The immediate object of a sign. *Sign Systems Studies*. 2015. Vol. 43(4). P. 399–400, 399–418.

<sup>39</sup> Halliday M. A. K. *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. Baltimore: University Park Press, 1978. 256 p.

The suggested ideas concerning the dimensions of semiosis can be illustrated describing the Trundholm sun chariot (Danish: *Solvognen*) – a Nordic Bronze Age artifact discovered in Denmark. It is a representation of the sun chariot, a bronze statue of a horse and a large bronze disk, which are placed on a device with spoked wheels. This artifact is now kept in the National Museum of Denmark in Copenhagen. (Fig.4). Semiotic description of the artefact was suggested by Tetiana Kozlova<sup>40</sup> but this article suggests an alternative analysis.



**Fig. 4. Trundholm sun chariot**

Firstly (at the perceptive level), the visitor of the museum establishes the physical nature of the exhibit: a bronze artifact in the form of a cart with a disc, gilded on the right side, and a mare that is pulling it. Codosemiosis allows to identify this artifact as belonging to an artistic code. The primary interpretant of the artistic sign is inseparable from what may be called the aesthetic dimension of semiosis. Barend van Heusden claims that an aesthetic experience springs from the pleasure of

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<sup>40</sup> Козлова Т.О. Іконічність у лексиці індоєвропейської прамови : монографія. Запоріжжя: Кругозір, 2015. 640 с.

solving a problem posed by reality in perception. The aesthetic dimension of semiosis is related to the overcoming of the contradictions posed in perception and to the emergence of form through semiosis. Heusden believes that the form is beautiful only in relation to the semiotic problem solved by it or through it<sup>41</sup>. It seems that the aesthetic dimension is a challenging issue to be discussed in the framework of codosemiosis approach as the latter deals with our ideas concerning the possible solution of the form problem including its adequacy and completeness. In our example, we are interpreting an artistic object, therefore, the task of fixing the myth of a sunny deity riding through the sky on a chariot can be considered subordinated to the problem of the sign form.

Secondly (at the reference level), the chariot gets “magic power” by establishing the connection with the mythical reality. Barend van Heusden introduces the notion of mythical semiosis, noting that “in *magic semiosis* a concrete situation IS recognized, not as the token of a more general type, but as the reenactment of a concrete being or event. Reality is not understood as referring to general knowledge, but to a particular situation which IS happening again and again”. He believes that recognition is ensured when the reality of perception is separated from the reality of consciousness (remembered reality) and is as specific as the reality that we perceive. Thus semiosis is born<sup>42</sup>. The informational dimension of semiosis provides the interpretation of the separate components of the artifact as icons and indexes establishing reference to the dynamical objects.

Thirdly (at the evaluative level), the interpretation of the sign as an artistic solar symbol in the space of culture is provided. Cultural interpretant results in establishing: (a) cultural value of the figure as a museum exhibit; (b) its value in the context of belonging to Danish cultural canon; (c) its value from the point of view of symbolic representation of reality in Bronze Age.

## CONCLUSIONS

The doctrine of semiosis promises to be revolutionary because it concentrates on a new way of thinking about inquiry and problem

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<sup>41</sup> A Dialogue between Barend van Heusden and Arjo Klamer // The Value of Culture. On the Relationship between Economics and Arts / Arjo Klamer (ed.). Amsterdam: Amsterdam University Press, 1996. P. 50.

<sup>42</sup> Ibid. P. 48.



solving. It was Peirce who concentrated on developing the new methodology that made him famous as the founder of the “Inquiry School” of American philosophy. Semiotic study, following Peirce, actually consists in analysing the sign’s action. Semiosis, Peirce said, is the name for the action of signs that follows upon their distinctive being, so “doctrine of semiosis” is the name for the knowledge that results from the identification and study of that distinctive way of acting (semiosis), wherever it is to be found.

The interpretation of semiotics as a semiotic doctrine implies that the latter provides theoretical foundations for studying ‘the action of sign’. Proceeding from the ideas that: (a) the nature of sign interpretant is triadic: primary, notional and cultural; and (b) dimensions of semiosis are to be singled out taking into consideration these three types of interpretant – it seems possible to suggest three dimensions of semiosis: code, informational and cultural. Though in the process of semiosis these dimensions are inseparable, still for research purposes semioticians can apply three different approaches to the analysis of each: codosemiotic, infosemiotic and sociosemiotic. These approaches can provide the basis for solving multiple tasks within the framework of contemporary semiotics.

Codosemiotic approach serves to establish types of sign systems and to discover their features, patterns and functions irrespective of the nature of signs. Infosemiotic approach studies signs as carriers of information and thus provides the inherently interdisciplinary perspective for creating a more systemic image of semiotic instruments for conceptualizing boundaries of research objects. Sociosemiotic approach can provide more elaborate analysis in the context of a larger whole – culture research. The three suggested approaches can shape the general doctrine of semiosis and enhance methodological and practical value of semiotics.

## **SUMMARY**

This paper attempts to explore the potential of some ideas on semiosis for the development of semiotic theory. Proceeding from the conviction that semiotic study, following Peirce, actually consists in analyzing the sign’s action, i.e. semiosis, the author claims that the starting point for determining dimensions of semiosis is the interpretant – the integral element of sign and the outset of semiotic inference. The triadic nature of interpretant is substantiated and three types of

interpretants – primary, notional and cultural – are singled out. It is brought to light that each type of the interpretant “works” on a different level of semiosis: perceptive, informational and evaluative, correspondingly. The correlation of interpretants and levels of semiosis is extended to establishing relations between interpretants and objects. The analysis of these relations on different levels leads to the substantiation of three dimensions of semiosis: code, informational, and cultural that can be studied applying codosemiosis, infosemiosis and sociosemiosis approaches.

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**Information about the author:**

**Andreichuk N. I.**

Doctor of Philology,

Professor at the Hryhoriy Kochur Department  
of Translation Studies and Contrastive Linguistics,

Ivan Franko National University of Lviv

1, Universytetska str., Lviv, 79000, Ukraine