The Paradoxes of Reference in Descriptive, Causal and Structural Theories

Diana Gasparyan[*]
anaid6@yandex.ru

In this paper, the author wants to compare two well-known approaches to determining the nature of meaning: 'descriptive' and 'causal', pointing out their principal difficulties and after that offer an option of establishing the meaning adopted in structural linguistics. On the author's opinion, the structural approach would allow us, first of all, to better clarify the causes of the difficulties arising in descriptive and causal theories, namely, how it is possible to fix the meaning of an object, and second, to show why these difficulties are fundamentally unattainable. It is precisely the last point that author would like to try to defend.

Key words: *Meaning, Descriptivist theory of meaning, Causal Theory, Structural Linguistics.*

1. The Problem of Meaning in Descriptive and Causal Theories

The object of discussion in descriptive and causal theories is a traditional question of philosophy: *how are meanings established, and namely, is the meaning a set of specific attributes or is it only a reference to a specific object?* In other words, what is the correlation between concepts and objects? Why water is identified with the word »water«? The first approach is traditionally called *descriptivist theory of meaning* (G. Frege, B. Russell, J. Searle), and the second one is *causal* (S. Kripke, H. Putnam, K. Donnellan). In terms of descriptivist theory of meaning, under the name 'water' we mean a set of specific features, based on the knowledge of which we can recognize other objects in reality,

---

[*] Dr. sc. Diana Gasparyan, docentica na Odsjeku za ontologiju, logiku i epistemologiju Filozofskoga fakulteta u Moskvi (Higher School of Economics, National Research University).

and which are endowed with a given set of attributes, (Russel 1905, 1927). The particular liquid in the glass is identified by the word 'water' because it has the features that are provided under the concept of 'water'. In a sense, this position is best consistent with common sense. Causal theory, in turn, resolves the problem of establishing the meaning in another way: the concept is connected to the object absolutely arbitrary, in the process of initial 'acquaintance'. (Kripke 2011). In this case, no attributes of the object are taken into account. In order to better understand the difference between the first and the second approaches, we can compare how we give an object its determination in the descriptive and causal theories. According to the logic of the first approach we should say that "water is a liquid having a specific chemical composition and physical properties." According to the logic of the second, it would be enough to say that "water is water." It is clear, then, that for the descriptivist theory of meaning the definition would appear in the subject-predicate form, where the description is to be a predicate, while for the causal theory definition is a tautology. Or in another words, in the descriptivist theory of meaning the content plan has a logical priority over the expression plan, while in the causal theory it is the opposite. At first glance, it might seem that, since the causal theory seems rather counterintuitive, preference should be given to the descriptivist theory of meaning.

However, we shall immediately see the problems of descriptive approach, as soon as we ask the following question. Let's assume that in the course of a global literary examination it was revealed that Shakespeare did not write any of the works attributed to him, but they were all created by his sister. Will this mean that the name 'Shakespeare' from now on does not mean Shakespeare, an Englishman, since the real Shakespeare is the author of, at least, *Hamlet*? Our linguistic instincts tell us that we shall continue to call Shakespeare Shakespeare, although experiencing some disappointment. Obviously, saving the name is possible, perhaps, only because in reality we never defined Shakespeare as Hamlet's author, but we defined it through a tautology "Shakespeare is Shakespeare." Now imagine that the same 'revelation' comes with an object that is not denoted with a single name (Shakespeare), but with a common name, for example, with the object of 'water'. Say, in the course of further scientific discoveries it was revealed that the composition of water has a slightly different formula, and its effect on organisms has a different nature than it was previously thought (Linsky 1977). What happens in this case – will the 'water' now mean something else and not the object with which we quench our thirst? Here the answer is not so obvious: on the one hand, we can insist that we should keep the name 'water' for a specific object, while on the other hand, and in this case it is a more natural solution, that the name should be changed.

The difficulty of the present situation, however, is that establishing general concepts, as opposed to individual, involves an explicit definition (description),

otherwise, we put our name on the list admitting that we do not know what we are dealing with when naming objects and every time we have to deal with something like a 'black box'. This situation can be easily accepted in case of proper names (Saul Kripke is called 'Saul Kripke' just because everyone calls him so, I might know nothing about him as a person, but continue calling him by that name), but it is much more complicated in case of such names like 'man', 'animal', 'cat', 'gold', 'water', 'warmth', etc., since it is assumed that we understand the content of these objects every time we give them a name.

In the history of this issue there were some attempts to establish different rules for nominating different object classes. In case of individual names it was suggested to use the technique of causal theories (the names do not change, even if the whole set of their distinctive features is changed), and in case of common names – the descriptive theories technique (a change in the content of the meaning should lead to a change of name) (Salmon 2005). However, this solution somehow simplifies the situation. The fact is that the positions of both descriptive and causal approaches can be applied to the whole range of meanings, no matter whether they are individual or general concepts. Thus, within the frame of descriptive analysis proper names can be explained as hidden descriptions. For example, the name 'Paris' has a meaning for us only if we understand that it is a capital of France. In turn, the causal theory can always appeal to the fact that even if we are talking about general concepts, it would be absurd to claim to know all about an object in order to call it somehow. For example, we do not know all about water *from the start,* but still find it possible to call it somehow in the act of 'preliminary acquaintance'.

Kripke also believes that it is not the difference between the rules or the fact that individual names function in the language differently in comparison with common names (Kripke 2011). It seems Kripke's position consists in developing a general theory of nomination and showing how the problem of 'floating' meanings can be eliminated. His solution implies verifying the existence of such names, 'rigid designators', that denote the same object in all possible worlds. Obviously, all singular names will be rigid designators; for example, the concept of 'the smallest natural number' can signify only one object and it *should be* so in all possible worlds. The situation is not so easy in case of general concepts, within which Kripke distinguishes the so-called 'natural kinds'. He shows that rigid designation also acts in relation to them regardless of whether we know that water is H_2O, and heat is a movement of molecules; if these statements are true, water will always (in all possible worlds) mean H_2O, and heat will mean the movement of molecules (Kripke 2011).

The central problem of the causal theory is to determine *what specifies the identity of the point of interest,* regardless of any change in its distinctive features, *what* makes an object identical to itself, even if all of its properties are changed. In a sense, causal approach attempts to find an objective correlative

to the 'rigid designator' – a name that denotes the same object in any of possible worlds. This formulation of the task, in fact, coincides with a traditional philosophical problem of detecting *essential* qualities of objects known from the classical metaphysics. Kripke, however, positions his method not as *metaphysical essentialism,* but as *scientific essentialism,* indicating that detection of rigid designation is possible only for natural species (besides names), i.e. precisely for the objects of scientific knowledge (Kripke 2011). It seems to us that clarification of such a position of his lies in the fact that an essential attribute of an object will by only the feature (truly) established in the course of a scientific investigation.

I, however, believe that it would be more correct to characterize Kripke's 'scientific essentialism' as *'linguistic essentialism'* because his essentialism becomes possible only thanks to the very *fact of naming. The name itself, with its meaning, gives the object its identity.* In turn, Kripke seems to proceed from the fact that the identity of an object is defined not by its name, but rather by the true state of affairs, and the presence of rigid designator only reflects this fact. Below I will try to provide rationale for the direct role the name plays in ensuring the identity of the object, referring to the definition of meaning in structural linguistics; along the way I will also explain why 1) the consistent essentialism of meaning is unattainable, and 2) the problem that descriptivism and anti-descriptivism are trying to solve may have no solution.

2. Meaning in Structural Linguistics

In order to do this I will need to deploy an anti-essential subtext of meaning in structural linguistics, which I will call *the principle of desubstantiation of meaning.* It lies in the fact that, contrary to the classical view of the object as a certain thing, physical or ideal, the object is not a thing – something that you can point at. Objects are not entities or substances in the classical sense. In order to understand this principle, we must ask: what determines the meaning of an object? If someone asks "what is a table?" we have two ways of answering this question. The first is to point our finger at a nearby table with the words "This is a table." The second is to define the 'table'; moreover, it should be done in such a way that the person who asked the question would be able to correctly identify the 'table' in any other corresponding object. The first method cannot be considered satisfactory, since pointing at a specific 'table' does not mean pointing at the *essence of the* 'table'. When we ask about the meaning of a certain object, we are interested in such a definition that may be used collectively to identify all other *instances of the same entity.* In this case, what does 'defining the table' mean? If we cannot simply point at it, then we have to describe or characterize it. Both can be done only by means of language, in other words, we

must talk about the table as a *concept.* Now, asking about the meaning of the table, we have to ask about the *meaning* of the concept of 'table'. And then we have to figure out how meanings are formed and distributed in the language.

In turn, in order to answer this question, let us try to fix the process of signification in the language at its most elementary levels, i.e. let us find out what constitutes the meaning of the minimal element of the language – the phoneme (letter). For example, we are interested in the meaning of the letter "R". Equally, we can ask: what is the essence of the "R"? The simplicity of this object should not confuse us – if the object exists, it should have essence. So, what does it mean to be such an object as an "R"? We are well aware that "R" can be written in ink on paper or in chalk on the blackboard, it can be displayed in blue color, or in red, it may have a different typeface, such as "*R*" or "R", but in all these cases, we recognize it as the same "R", and not a lot of different objects. For example, the well-known and widely used Turing test designed to distinguish computer robots from humans is built on the very effect of various typeface of characters (letters or numbers): a human copes with the task of identifying the object, while computer does not (Duch et al. 2008). That said, the human ability to recognize the signs in his everyday speech practice, regardless of the way of their execution seems almost a miracle, and, in many respects, the structural theory of meaning is intended to give a rational explanation of this 'miracle'. What is the essence of the letter "A" if neither form, nor color, nor its recording conditions, nor pronunciation (as an acoustic object the "A" can also be pronounced briefly or as a singsong, quietly or loudly, by a male or female voice, etc.) are involved in this? Structural linguistics gives us the following answer: *the meaning of a phoneme is determined by its place in the system* (Saussure 1983). This place is the same as function, method of usage[1], or the ability of being substituted (replaced) with another phoneme from the given system of phonemes. The "A" is nothing more than the ability to be any other letter from the totality of the letters of the Russian alphabet. The fact that the "A" *is-not* either "B" or "M" is its very essence. In the words of the founder of structural linguistics Ferdinand de Saussure in this regard, "*the difference of one sign from the others is all that it is.*" (Saussure 1985). Let us note once again that a sign has nothing essential (ontological, substantial) that distinguishes it from the 'essence' of another sign. The difference is not *substantial* but *formal* – the sign

---

[1] Saussure's concept of meaning is consistent with Wittgenstein's concept of meaning as a "language-related method of usage." For example, the word 'running' does not have a substantial meaning. If we say, "running means moving in space with the help of legs," then such expressions as "ships run at sea," "trains do not run regularly," would be meaningless. Meanwhile, they make sense. If we refine our definition and say "running means moving in space," then we save the two expressions mentioned above from being meaningless but again encounter difficulties with the expression "the clock runs as new." These examples are meant to clarify the idea of Wittgenstein – the meanings of a notion are nothing more than a set of specific instances of its use in the language (Wittgenstein 2001).

"A" is a sign "A" because it is not a sign "B" ("C".... "Z") Thus, the 'essence' of the sign is its difference from the others, which in fact creates this sign as separate. In general, the linguistic model offers such a view at the essence of a thing (its meaning) when it is determined not by its positive content, but through the negative (differential) – in relation to the essences of other things (their meanings) (*Benveniste* 1971).

Thus, "being a certain thing" is equivalent to "having a certain meaning" (because the essence of the thing first of all answers the question "what is it?"), and the meaning, in its turn, is not a quality, but a reference procedure, it is not a label of the thing but it opposes some signs against others. We are talking about the effect of mutual substitution (replacement) – meaning is something that replaces the absence of other meanings, and that is why each specific object is endowed with meaning exactly to the extent it can be replaced with another.

This statement can be explained by an example from linguistic analysis. In the sentence "A man is able to speak" each word could be substituted with some alternative. For example, "A man (bird/fish) is able (can/wants) to read (sing/swim)." It is thanks to this phenomenon that each word has a specific meaning. In turn, the '*to*' of the infinitive verb cannot be replaced in this sentence, because it would lead to a distortion in the grammatical construction of the sentence, and in this sense it has no meaning (Jakobson 1978).

Let us consider a few more examples to illustrate the above. Chess was a favorite illustration of Saussure, because its nature is similar to the nature of the language – it is a closed system consisting of a finite number of elements and a limited number of rules for their use. Let's try to find out what is the essence of a certain chess piece. Suppose we have to find the essence of the 'rook'. What could it be? Clearly, every chess piece can be made of the most diverse *materials* – wood, glass, ice, wax or chocolate. Therefore, the substrate is not the essence of the piece. Then, perhaps, a specific *form of* the piece serves as such? However, is this form of the rook so important? There is a huge variety of chess pieces execution, not to mention the fact that we could easily make ourselves busy with playing chess just by signing small pieces of paper and arranging them in the correct order on the chess board. Consequently, the form does not specify the nature of the pieces either. Then what does it mean 'being a rook'? Neither more nor less than a certain location in the system of chess pieces, i.e. the difference from all the others, each of which, in turn, is also opposed to all the rest. This method "first, refuses to treat the members of the relationship as independent entities and, by contrast, takes as a basis of its analysis the relationships among them; and, second, it introduces the concept of system, taking as a basis the demand of its self-closedness" (Saussure 1985).

Thus, the principle of desubstantiation refuses to treat objects as independent entities, but takes as a basis the relationships among them. In this sense,

there is no substance, if you mean by it a fixed and self-sufficient content taken by itself, but there are meanings – the values that are differentiated in relation to each other.

Now let's return to the original example with the table. In the desubstantiative logic of Saussure we should say about the meaning of the concept of the 'table': this concept has a meaning not because of some quality characteristics that are inherent to it, but due to the fact that 'table' as a concept is opposed to all the other units of the vocabulary of concepts in this specific language. Thus, concepts are also "purely differential and defined not by their positive content, but negatively by their relationship to other parts of the system" (Saussure 1985).

Thus, according to the principle of desubstantiation we should totally opt out of the rhetoric of substantiation in relation to meanings. Meanings are not the same entities as the objects of the physical world. Their existence is not substantial, but '*differential*' as they say in structural linguistics.

3. Conclusion: Can the Problem of Meaning be Solved?

How is the aforesaid related to the questions we asked above? I can imagine that, taking into account the differential and beyond-essential character of the meaning (if we accept the statements formulated by structural linguistics), it can be said that the identity of an object in all possible worlds is only ensured by the fact that this object does have a name. The main focus here is that *the name does not appear after the appearance of the object, but the object itself appears after the name (naming) has appeared.* Names create things; they are not attached to things as a secondary procedure of denoting. Then it is only natural that one and the same name will denote one and the same object in all possible worlds – because the name itself does not change, and as soon as it appears, it 'pulls' behind it the object formed by this very name. This move resembles a lot Kant's questioning of "how possible" is our belief in the necessity of some synthetic judgments (Kant 1902). Kant's answer is that it is possible because we ourselves originally set the form of experience (synthetic knowledge) that gives us the desired apodicticity. Structural approach uses the same analogy – the apodictic identity of the object and the name is connected with the fact that we originally specified the object by the very name. This fact ensures us that in all possible worlds a certain name denotes one and the same object (has one and the same meaning). It will happen so because despite some counterintuitiveness any word does not have some substantial, independent meaning, but depends on the other words that could be taking its place. In order to render the meaning of a sign, it is enough to interpret it with a second sign, which, in turn, refers to the third sign. Native speakers learn the meanings of words

because they use the same linguistic mechanism – the language, which is a closed system differentiated on the basis of mutual references. Based on these considerations, we can try to make a clean break from the fetish interpretations of meaning. Then the meaning will be what is established by the system of the language (its internal order and distribution of elements), and not by an external relation of the sign to the real thing or internal description. The concepts of the language acquire their meaning not thanks to the 'world', whether internal or external, but thanks to the vocabulary.

From this argument we can also conclude that the problem, which is being solved by descriptive and causal theories, is truly "a hard problem of reference." Both the former and the latter approaches seek to discover that *something* giving the identity to the object. This can be a particular intentional content, i.e. a set of permanent predications (in case of descriptivism) or an extensional causal connection leading us to the initial baptism that associated the name with the object (in case of causal theory). However, if we take into account the structural theory of meaning in which the meaning is not something substantial and positively objective, but only a *place* in the system of signification, that is, in fact, a purely *structural effect,* the difficulty of finding an unambiguous solution to the problem of identity both in descriptive and anti-descriptive strategies becomes more transparent. Perhaps the absence of a solution that would satisfy everybody is connected precisely with the *objective* approach of both schools. They seek either *a quality* (essential description) or a *name* (rigid designator). However it may well be that it does not make any sense to look for something substantive in a structurally given meaning, and therefore, the task set by the general theory of nomination may not have a solution. On the contrary, if we agree that meaning is not a positive entity, we can add some more clarity to the problem of nomination. The final answer to the question "what ensures the identity of the meaning?" from the point of view of structural linguistics is the following statement: the 'identity' is not specified by a bundle of descriptions or a specific name, but by the totality of the language system forming the meaning through the process of mutual differentiation and replacement of its elements. The paradox of this answer lies in the fact that 'identity' here can be only placed in inverted commas, because it is traditionally introduced as something of substance (essential), while in case of structural approach, we can have 'identity' ('table' means a table for all Russian speakers), but we would not find any substantial quality of the table. This happens due to the fact that "the language itself is not a substance, but a form" (Saussure 1985). In the language, like in any other semiotic system, something that differentiates one sign from the other exhausts all its contents and, therefore, it is the difference that creates meaning and retains it exactly to the extent in which the language itself retains its form.

References

Benveniste, E. (1971), *Problems in General Linguistics*, University of Miami Press.

Duch, W. et al. (2008), *Cognitive Architectures: Where Do We Go from Here*, Frontiers in Artificial Intelligence and Applications (Proc. 1st AGI Conference), vol. 171, 122-136.

Jakobson, R. (1978), *Six Lectures on Sound and Meaning*, Harvester Press.

Kant, I. (1902), *Prolegomena*, trans. Paul Carus, Chicago.

Kripke, S. (2011), *Collected Papers*, vol. I, New York: Oxford University Press.

Linsky, L. (1977), *Names and Descriptions*, Chicago.

Russel, B. (1905), On Denoting, *Mind*, vol. 14.

Russel, B. (1927), *Selected Papers of Bertrand Russell*, New York: Modern Library.

Salmon, N. (2005), *Reference an Essence*, NY.

Saussure, F. (1983), *Course in General Linguistics*, eds. Charles Bally and Albert Sechehaye, trans. Roy Harris, La Salle, Illinois: Open Court.

Wittgenstein, L. (2001), *Philosophical Investigations*, Blackwell Publishing.

Diana Gasparyan

Paradoksi značenja u deskriptivnim, kauzalnim i strukturalističkim teorijama

Summary

U ovom radu autorica uspoređuje dva poznata pristupa određenju prirode značenja: opisni (deskriptivni) i uzročni (kauzalni). Autorica ističe važne poteškoće tih pristupa i nudi opciju utvrđivanja značenja koja je usvojena u strukturalističkoj lingvistici. Autorica smatra da će nam strukturalistički pristup omogućiti, prvo, da bolje pojasnimo uzroke poteškoća koje se javljaju kod deskriptivnih i kauzalnih teorija, tj. kako je moguće odrediti značenje objekta, i drugo, da pokažemo zašto su ove poteškoće u temelju neodržive. Autorica napose brani ovu drugu točku.

Ključne riječi: značenje, deskriptivna teorija značenja, kauzalna teorija značenja, strukturalistička lingvistika.

(*na hrv. preveo Dalibor Renić*)