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Materiality and meaning: ontological relations
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Introduction

In the second chapter of his "Creative Evolution", Henri Bergson, reflecting on intelligence and instinct as two forms of interaction between living things and the world, expresses his sincere surprise at how all flies know (for a fact) the anatomical details of caterpillars (Bergson 2005:189). It is out of this sense of astonishment — from these very questions of “how” and “why” — that any reflection concerning the wonderful way of being of living organisms begins, regardless of whether such reflection takes the form of the empirical examination of a biologist, the speculative musings of a philosopher, or the simple bewilderment of a child. In its purest form, this sense of surprise resulted in the projects of both ethology and biosemiotics. Biosemiotics, however, does not recognize a qualitative difference between instinct and intellect deemed fundamental by Bergson. Instead, biosemiotics combines both the "instinctive" and "intellectual" interaction of the organism with its environment into a single form: the semiotic interaction.

Jakob von Uexküll and Charles Sanders Peirce are the most important authors for biosemiotics and approach its theoretical foundations from two different angles. Uexküll gives the symbolic sphere a primary role in the living space and behavioral model of a representative of a certain species. Peirce, on the other hand, describes signs as certain events of “determination of something by something else”, that is, the encounter of the interpreter with the object of the sign through the mediation of the representamen and as a result of the carrier impact on the interpreter. Thus, we have two descriptions of the same phenomena from two different angles. The analysis of Uexküll is conducted from within the inner world of a single individual of one of the species of animals. Peirce, on the other hand, conducts his analysis in an abstract meta-species space. Such a view attempts to objectify the sign space, going beyond the boundaries of the subjective-specific Umwelt.

I would dare to suggest that a synthesis conceptual framework of Peirce and Uexküll is fundamentally important for biosemiotics (as well as for any subsequent ecosemiotic project). The Uexküllian paradigm asserts that the biosemiotic configurations inherent in different species create complete autonomous worlds on which the entire existential structure of these species depends. This provides biosemiotics with ontological depth and a non-anthropocentric vision. Peirce's model, on the other hand, takes signs beyond the boundaries of subjective worlds, avoiding significant subordination to the Kantian paradigm. This model accomplishes the externalization of subjective worlds and limits them to the role of an interpreter in the event of the formation of a

sign. If Uexküll's model provides biosemiotics with contact with the ontological depths of the subjective world, then Peirce's model, on the contrary, opens up an interspecies space for biosemiotics, which can be called "nature" itself, and as such, this approach saves biosemiotics from the rigid boundaries of the correlational paradigm that prevails in modern philosophy (Meillassoux 2014: 3).

Why does the question of the materiality of meaning seem extremely important to me? Firstly, it seems to me that it is relevant both for the Peircean and for the Uexküllian paradigms. In both cases, meaning is something that arises at the intersection of material (or, predominantly, material) components. In Peirce's case, meaning is the result of the encounter of interpretant, object, and representamen — a processual "matter of form-becoming emerging from sign to object and from sign to interpretamen through mediation" (Queiroz-Merrell 2006: 59). In the case of Uexküll, it is the result of the encounter of the material elements of the functional cycle, the relationship between perception and action. Both authors whose works lay the foundations of biosemiotics have similar roles for meaning in their models, despite the fact that they come from different perspectives and intellectual traditions. In both cases, however, the materiality of meaning remains in doubt, because, on the one hand, it arises precisely at the junction of several material phenomena; we have no way to fix its immediate materiality. The emergence of meaning as a result of semiosis resembles emergent becoming, since, proceeding from its material foundations, semiosis develops meaning as a phenomenon of a different order, the material status of which is not obvious at all.

Biosemiotics offers a comfortable context for thinking about the problem of the materiality of meanings, since it has a non-anthropocentric perspective that is not limited by the meanings of human language, nor by the mysterious status of meanings in instinctive behavior. By embracing both human and non-human meanings, biosemiotics opens up space for philosophical reflection that is not limited by linguistic or ethological boundaries.

Nowadays although scientific knowledge proclaims its own epistemological hegemony on a global scale, it is still difficult to speak of the strict systematicity of this knowledge. There are at least two reasons for this. First, the relativistic consequences of critical readings and interpretations of the history of science, performed both in the American (Kuhn, Lakatos, Feyerabend) and continental (Foucault, Canguilhem) philosophical traditions. Second, there is a strong complication in the deepening of certain sciences, which often develops faster than interdisciplinary ties. Nevertheless, there is obviously a set of key theories that not only shape contemporary science in

the form in which we know it, but also significantly influence the broader phenomenon of the actual episteme, which also includes the phenomena of common sense and so-called "folk science".

Let's think about what the contemporary episteme offers us regarding the question of materiality of meanings regarding materiality of their interpreters. We can find two, partly contradictory ideas.

First, it is the idea that the materiality of the living organisms' bodies is inextricably linked with all aspects of their life. This claim is based on a wide range of life sciences findings, from biochemistry to ethology. At the level of everyday life, this idea manifests itself in various areas: the practice of psychiatric medication, ideas about the generic similarity of characters, catchphrases like "Mens sana in corpore sano" or "We are what we eat" etc. Direct expression of this idea finds itself in the conceptual dictionaries of philosophy and adjacent spheres. First of all, this concerns embodiment theories in English-language discourse and the "incorporated turn" that took place in continental thought in the 20th century.

Another idea is related to our idea that although corporeality is clearly the most important aspect of human life, the mental still retains some kind of autonomy. This idea is also realized in everyday phenomena: non-drug psychotherapy, ideas about the physiology's non-determinism of moral dilemmas, creative impulses, and much more. This idea underlies most areas of psychology, sociology, and other humanities.

Moreover, it seems that biosemiotics itself presupposes a certain ambiguity in the relation of the materiality of an organism to both signs and meanings. On the one hand, the exact formulation "biosemiotics" implies a fundamental connection between biological materiality and semiotic biological phenomena, in contrast to "just" semiotics, which does not focus on the connection with them and can talk about signs as autonomic phenomena. At the same time, biosemiotics, primarily due to the Peirce influence, is not wholly integrated into the context of biological physicalism and still presuppose a certain autonomy of signs.

Thus, I would like to set the vector of problems in my work by considering the implications of two, very different, philosophical attitudes to the question of the materiality of the phenomenon of interpretant and meaning. For the convenience of this discussion, I suggest narrowing these ideas down to specific concepts and authors. The criterion for my selection of authors was the

requirement of their connection with a broader philosophical or scientific context, on the one hand, and their connection with biosemiotics, on the other. The first installation in its concentrated form, as already mentioned, can be called differently: embodiment theories, incorporated turn. Probably the most appropriate (and one of the most significant) incarnation of this idea was realized in French philosophy of the 20th century due to the work of Maurice Merleau-Ponty, who, after all, made the category of corporeality one of the central for phenomenological questioning, and then, around it, built an outline his own, and never completed, ontology. To express the opposite attitude, namely the opposition to strict physicalism of the contemporary science's large part, I chose Terrence Deacon's concept of "ententionality", which is defined as "*a generic adjective to describe all phenomena that are intrinsically incomplete in the sense of being in relationship to, constituted by, or organized to achieve something non-intrinsic*" (Deacon 2011: 27).

The selection of these particular ideas seems to me to be justified for at least two reasons. First, they come from sufficiently different contexts and spheres of knowledge to suggest that such a dialogue has not been reconstructed before, thus this text becomes a space for an unusual conversation between a continental philosopher of the last century and a contemporary biological anthropologist from America. At the same time, these authors still have enough in common for their dialogue to be possible. First, this is the relation to biosemiotics (even if it is very indirect in the case of Merleau-Ponty). Secondly, it is that for both of them the issue of materiality of meaning is associated with the theme of active (acting) immateriality, which in the case of Merleau-Ponty is associated with the concept of "invisible", and in the case of Deacon with "incompleteness" and "non-intrinsic". Also, this selection of authors is characterized by some cross-cutting relation to trends. As mentioned earlier, the idea of embodiment is more inherent in the natural sciences, and the opposition to physicalism is more inherent in the humanities. I propose, however, to reverse this tendency a little and borrow the idea of corporeality from the continental philosophical tradition (besides, the late Merleau-Ponty is very speculative in his ontological reflections), and the idea of opposition to physicalism from an author closer to the mainstream of modern life sciences. This gesture is a deliberate attempt to avoid turning this discussion into another discussion of a physicalist-oriented natural science and an opposing, more speculative, philosophy. Instead, what interests me is precisely the dialogue of two ideas, both of which are inherent to one degree or another in both natural sciences and (continental) philosophy, and of course, biosemiotics.

So, my research questions are:

a) is semiotic meaning a material phenomenon?

b) if we assume immateriality of meanings, what is the structure of this immateriality?

c) how does the "new materialism" claim the materiality of meanings, and what is the intersection of this attempt and biosemiotic discourse?

Thus, the research objective is to describe the structure of the immateriality of biosemiotic meanings.

Chapter 1

Maurice Merleau-Ponty: corporeality and meaning

1.1. Introductory note on role of the body

As in the case of many other authors, it is rather difficult to speak “in general” about Merleau-Ponty, because even though he never finished his ontology project, his early and late thoughts are quite dissimilar. But since we are interested in a very specific question of how, based on his philosophy, we can formulate the ontological relationship between meaning and materiality, the task is slightly easier.

As Waldenfels notes, “body” for Merleau-Ponty is not just one of the categories, but an “operational concept” that is central to his various philosophical studies, just as for Heidegger such a concept is “time”, and for Descartes “cogito” (Waldenfels 2008: 77). The main point of contact of Merleau-Ponty’s phenomenology with corporeality is in the inextricable connection between the perception of something external and the perception of one’s own body. This connection, like most of the connections that Merleau-Ponty makes, is mutual. Thus, the perception of external objects is synonymous with the perceptual perception of one’s own body, and the perception of one’s own body cannot be expressed otherwise than in the language of external perception (Merleau-Ponty 2001: 236). This thesis is characterized by a certain paradox, because one’s own body, as it were, is not something that can be simply indicated, since it is the indication itself, however, the discovery of oneself embodied in one way or another has the motive of externalizing one’s own corporeality. Merleau-Ponty expands the role of his own corporeality from participation in direct perceptions of the external to perception even at the level of representation because building a visual representation, we still construct a certain perspective. Only in some individual cases, like in case of a geometer, cognizing a figure not as an object accessible for perception, but as a consequence of a certain formula, can speak of its non-perceptual, and, consequently, non-bodily perception (Merleau-Ponty 2001: 237). Thus, separate external objects, and the world as a whole is given to the knower together with his corporeality, and their connection is postulated not due to “natural geometry”, but due to the inseparable living connection between them (Merleau-Ponty 2001: 237).

Thus, Merleau-Ponty comes up with an important assertion for biosemiotics that the theory of the corporeal schema is at the same time, implicitly, a theory of perception (Merleau-Ponty 2001: 235). This idea also follows from Uexküll’s functional cycle, the difference is really very

insignificant. Merleau-Ponty emphasizes the connection between bodily configuration and perception, so they not only coexist, but it is their connection that comes to the fore. Both Uexküll and Merleau-Ponty postulate a call-and-response system in the interaction of the body with the world, but in the case of Merleau-Ponty, external phenomena are endowed with meaning precisely as correlates of the body.

Thus, we have a question that we want to address to the philosophy of Merleau-Ponty, and that the history of his thought is built around the operational concept of “body.” On this basis, we can narrow down our question by formulating it as “what is the role of the corporeality of the interpreting organism in the discussion about the materiality of meaning itself?” I propose to start the answer to this question by considering not the most complete source, the late lectures of Merleau-Ponty at the College de France, published in English under the title *Nature* (Merleau-Ponty 2003). This choice is explained by the fact that here the problems of Merleau-Ponty’s philosophy are very close to the problems of biosemiotics. The immediate point of connection here is Merleau-Ponty’s interest in the developments of Jakob von Uexküll, first of all, of course, in the concepts of “Umwelt” and in the diagram of the functional cycle.

1.2 Lectures at the College de France and biosemiotics

The first most important question for us, to which we find the answer in the lectures, is the question of what exactly Merleau-Ponty understands by “meaning.” Referring to the Uexküllian context, he writes “between the situation and movement there is a relation of meaning” (Merleau-Ponty 2003: 175). Here we see that Merleau-Ponty defines meaning precisely as a relation, and not as a substantial unit. Also, the word “movement” again indicates the importance of the bodily aspect in his understanding of the model. It is noteworthy that Merleau-Ponty finds it possible to interpret the body itself as a relational phenomenon, or rather he claims that: “animal body - relation to an Umwelt circumscribed by it” (Merleau-Ponty 2003: 209).

In addition, the model of the functional circle, due to the proclamation of the inseparability of perception and response, has a semantic intersection with the idea of reversibility, which is important for the later philosophy of Merleau-Ponty. Reversibility means that at the perceptual level, any perception is two-sided, simultaneously visible and one that can see, felt and one that can feel. But as Anya Daly notes, this concept should not be understood simply as a statement of the external connections of organisms with the world and with each other, but as an internal and ontological connection, which is not preceded by the relationship of elements as external to each

other (Daly 2016: 3). Also, the mechanism of reversion, according to the author, should not be taken in a literal empirical sense: “reversibility needs to be appreciated as dialectical or aesthetic, rather than as a literal or ‘mechanistic’ reversal” (Daly 2016: 3). The body, being the center of reversibility, is a place of “kind of reflexivity”, which in turn allows the body to relate itself to something other than its own corporeality, to the sensible exterior. If the functional circle is primarily an ethological concept, then reversibility is an ontological variation of the same (but maybe a little radicalized) model. In addition, “reversibility” exists not only at the level of visible nature, but also at the level of “invisible”, reversibility is a predetermined, pre-reflective carrier of existential meaning, which manifests itself in its central function in the depths of being as an interweaving of the invisibility of being.

“Invisible” is another, very problematic, but the key concept for the later philosophy of Merleau-Ponty, which is also closely related to the concept of “flesh”, and in this case, perhaps, it is not possible to explain one without involving the other. On the one hand, “the flesh of the world” is the openness of the being of the sensed existed for the one seeing. Between the diversity of the visible, one can find a fabric that duplicates and nourishes it - the flesh of things, which itself is not a thing. But at the same time, the visible is not all that the flesh has at its disposal, since it “sublimates itself into the dimension of the invisible”, “rarefied” or “exalted” flesh of ideas” (Toadvine 2019). As Martin Nitsche makes it clear, Merleau-Ponty did not form a clear and final understanding of the “invisible”:

In the Introduction to Signs, he compares invisibility with immobility, which can be understood as a form of movement, claiming that “[t]he invisible is the limit or degree zero of visibility, the opening of a dimension of the visible.” In the Visible and Invisible, he approximates the invisible to a “latency” of the visible, or to a “blind spot” of our consciousness. (Nitsche 2020: 554)

But in any case, Nitsche points out, for Merleau-Ponty, the “invisible” as a form of negativity is inseparable from the “visible”, and can also manifest itself only through it (ibid).

The Logos of the natural world, which, according to Merleau-Ponty, is the basis for both animal and human semiotic activity, is also part of the structure of the invisible: “Communication in the visible is continued by a communication in the backside inverse of our gestures and our words. Language as a resumption of the logos of the sensible world in another architectonic” (Merleau-Ponty 2003: 219).

Thus, semiotic activity, from the point of view of a non-subject-oriented perspective, arises as a manifestation of the invisible Logos in the visible flesh. This manifestation operates with the interweaving of bodily perceptions and reactions, which is also expressed in the ethological

scheme of the functional circle, and as it was said earlier, it is in the relation of the elements of this scheme that meaning arises. This configuration in the visible is associated with the intertwined structure of the invisible, which is pre-reflexive, existential reversibility.

In this context, the concept of “onto-ethology” proposed by Brett Buchanan in his analysis of the influence of Uexküll on continental philosophers, including Maurice Merleau-Ponty, may be useful (Buchanan 2008: 135). By the synthesizing ontological depth and ethological approach to the behavior Buchanan synthesizes the motive of continental philosophy and sciences about life within the framework of one concept. On the one hand, this concept still seeks to understand, or at least feel as far as possible ontological structures, that is, the crux and form of existential experience of interaction with the world. On the other hand, this concept takes us away from anthropocentrism (even if the last one exists formally without a concept of human) in the spirit of Heidegger, and from the idea of unequivocal discontinuity between human beings and animals. Thus, this concept helps to look at such phenomena as animal behavior not just as facts that can be described using the dictionary of science, but tries to look into the ontological background of these phenomena. A similar operation is performed by Merleau-Ponty, proclaiming the complete corporeality of cognition and semiotic activity, but at the same time, without limiting this corporeality to the visible, supplementing it with an unperceived layer.

Further, Merleau-Ponty’s reflections on “natural and linguistic symbolism” are important in the context of thinking about biosemiotics. Since Merleau-Ponty uses the concept of “linguistic” rather broadly, understanding also gestural phenomena by it, we can (a bit speculatively) assume that, as in the case of Peirce, the criterion for this distinction can be the conventional way of their formation. Accordingly, such signs are available (most likely) exclusively to representatives of the human species, and discussion about them will also be a discussion about human exclusivity.

Merleau-Ponty refuses to make a qualitative distinction between pre-linguistic and linguistic semiotic activities. In his opinion, organs of mobile senses can already be called “tacit language”, and linguistic symbolism is simply “reproduce perceptual structures on another level” (Merleau-Ponty 2003: 212). “Logos”, in the sense of the active force of language, is “resumption of the logos of the sensible world in other architectonic”, that is, it relies on a much more general logos of the natural aesthetic world (Merleau-Ponty 2003: 219).

The distinction that is drawn between natural and linguistic symbolism is associated primarily with the growth of the invisible component, thus the role of the “invisible mind” in the transition from simpler animal symbolic systems to human systems grows being realized in the

visible as communication through “gestures and words”, but its “continuation” (or, on the contrary, the basis?) in communication in the inverse invisible.

Although for Merleau-Ponty the distinction between living and non-living is not the key and paramount, especially in the context of a discussion about the concept of flesh, we can still assume that invisibility arises in conjunction with the emergent event of the occurrence of the living. Here, the complexity can be represented by the relationship between the early and late philosophy of Merleau-Ponty, because if at an early stage his thought was close to emergentism, as regards issues of occurrence of life, then at later stages he introduces much more universalizing categories like “flesh”, “visible”, “reversibility”. Thus, we can assume that all living beings have a certain volume of the invisible component of their bodies, and the transition from natural forms of symbolism to a more plastic and free system of linguistic symbolism is associated with the quantitative growth of the invisible component. As he writes in the notes to one of the lectures, “language is sedimentation, naturalization of invisible surplus” (Merleau-Ponty 2003: 227).

1.3 Meaning in the “The Intertwining—The Chiasm”

Thus, the lectures show that the biosemiotic meaning isn’t some material entity in the philosophical system of Merleau-Ponty, but rather a relational phenomenon. However, despite its simplicity, this thesis becomes more complicated in the context of the philosophical system of Merleau-Ponty. The chapter “Intertwining - Chiasma” stands as a stand-alone last chapter of the work *The Visible and the Invisible* and is mostly focused on the ontology of the visible, the invisible and the flesh, as well as the primary role of reversibility. Since we start from the assumption that meaning is a relation which emerges from the invisible, an analysis of its ontological foundations is necessary to clarify our key question.

The relationship between the visible and the invisible cannot be clearly divided into primary and secondary elements. After all, on the one hand, the “invisible” is a consequence of the visible’s sublimation of the outside, but on the other hand: “the invisible of this world, that which inhabits this world, sustains it, and renders it visible, its own and interior possibility, the Being of this being” (Merleau-Ponty 1968: 151). Thus, we observe a dialectical model of the interdependence of these phenomena. The invisible has no abstract existence independent of flesh or appearance. Merleau-Ponty uses the terms “latent” and “sublimated” which allude to concealment and evaporation, in process of which something is removing from the zone of possible visibility, but nevertheless do not deprive the role of the invisible in the life of the visible, just like

evaporation continues to affect what is in sight by interacting with organisms and other visible objects.

A certain part of the physical world becomes visible due to invisibility, and I propose to understand this statement in a rather vitalistic way. Since any biological life already carries in itself something invisible, which is the source of its dynamics, any part of the objective physical world can become visible only after bringing into this world the ability to observe, that is, the seer and the visible. One of the logical counter-arguments that could be put forward against this ambiguity is that if an observer is obviously necessary for the transformation of the physical world into the visible, then is visibility just as necessary in order for the invisibility to be sublimated from it?

I mean, if we accept (and we certainly do) the truth about the origin of organic life from the inorganic, and at the same time follow the vitalistic interpretation that is proposed here, then at least once the invisible was not sublimated by the visible, but appeared in an unknown way in objective physical reality at a time when the concepts of “visible” and “invisible” were not applicable to it. To this I would answer that it is really worth recognizing that this is so, the vitalistic interpretation of the “invisible” forces us to admit that at least once upon a time it appeared not by sublimation from ontological flesh, but by an emergent path from ontic matter. However, this very paradoxical statement might not have been approved by Maurice Merleau-Ponty (although we can only speculate), but it is quite familiar to emergent theories, and even to the view of modern science on the emergence of life in general. The proposal to talk about the appearance of the “invisible” from physical objects, and not from the “visible” would violate the entire structure of Merleau-Ponty’s thought and would no longer be an interpretation, but rather an opposition. But my interest now is to understand the implications that his conceptual apparatus has for the (im)materiality of the interpreting organism and meaning.

The body (and for us, first of all, the body of the interpreter) and its properties we have already discussed above, based on the lectures of Merleau-Ponty and his earlier work *The Phenomenology of Perception*. However, this chapter introduces a few clarifications. According to Merleau-Ponty, the body combines in itself “the sensible mass it is and the mass of the sensible wherein it is born by segregation and upon which, as seer, it remains open” (Merleau-Ponty 1968: 136), thus the semiotic involvement of the interpreter in semiosis is preceded by an ontological unity with the thing which he can perceive. Perceptibility and the ability to feel are intertwined in the body of the interpreter in such a way that being perceptible becomes a way of participating in the being of external things that are perceived (Merleau-Ponty 1968: 147). However, being the interpreter’s body tangible is not just being a materiality that can be perceived. In the same place,

in “Intertwining and Chiasma”, Merleau-Ponty states that the perceiving body is neither a mere material thing nor an idea. As mentioned earlier, the body is part of the flesh of the world, however, it differs from the rest of the diversity of the flesh in that it is also the “scale of things”, which is a direct consequence of the involvement of corporeality in perception, and which is also associated with an invisible component, which, according to the author is “an ideality that is not alien to the flesh, that gives it its axes, its depth, its dimensions” (Merleau-Ponty 1968: 152).

Merleau-Ponty calls many times not to equate “flesh” with matter, in this case it is rather not the materiality of the interpreter itself, but the ontological material commonality of the interpreter with the world, which is generated by the phenomenon of reversibility, and which becomes the environment for further formation of subject and object (Merleau-Ponty 1968: 146). Thus, the flesh can be understood as an environment in which, from the total commonality of the interpreter with the surrounding world, the possibility of their difference is born. This difference is an event that takes place all at the same point of intersection of the reversibility of the seer and the visible in the form of sublimation of the visible flesh into the sphere of the invisible.

It should be specially noted that in the “Intertwining - Chiasma” Merleau-Ponty, in contrast to the lectures, does not mention the concept of “Logos of the natural world”. But speaking about the emergence of meaning in linguistic systems, he describes what is between the sign and the signified (that is, the meaning itself) as the result of the acting language (Merleau-Ponty 1968: 154). It is the same in speech, meaning is not simply a product of an objective linguistic system, but is associated with “acting speech” - “obscure region whence comes the instituted light” (Merleau-Ponty 1968: 154). In this case, as in the case of the “Logos of the natural world”, Merleau-Ponty does not establish a qualitative break with pre-linguistic phenomena, linking acting speech with the “muted reflection of the body” (ibid). So, it can be assumed that the acting speech is a linguistic variation of the same phenomenon that bore the name of the “Logos of the natural world” in the lecture materials.

Attempts to explain biosemiotic phenomena using the conceptual apparatus of Merleau-Ponty creates the impression of a vicious circle of references of these concepts to each other’s meanings. Therefore, we will try to briefly summarize the key points for us:

- interpreter and it’s role

Speaking of the interpreter and his corporeality, it is important to emphasize his non-dualistic ambivalence, and its role in the event of interpretation. The visible (which includes materiality) of

the interpreter is necessary for its ability to perceive something external according to the principle of reversibility. At the same time, the invisible becomes the place where the interpretation takes place, it creates the ontological depth of the body, in which the interpretation is performed by the Logos of the natural world. For Merleau-Ponty, the non-dualism of such an ambivalence of the body is important, because the invisible, in his opinion, is not something outside the visible, but its reverse side. Thus, the interpreter is an inseparable unity of visible and invisible elements, both of which play an important role in the process of semiosis and interpretation.

- the role of reversibility

A crucial aspect of how Merleau-Ponty builds an ontological scheme around interpreter and meaning is the importance which he attaches to the role of the phenomenon of reversibility. This reversibility of the relation of “being perceived” and “being perceiver” is not a statement of the mutual external connections, but internal ontological rule of the phenomenon of perception itself. It is this principle i.e. the ability of being perceived that gives the interpreter access to the external world. We can assume that this ontological principle is reflected in ontic reality in the form of a “functional cycle” as the basis of Umwelt’s structure.

- Logos and degree of invisibility

The concept of the “Logos of the natural world” is very important for us, since it erases the qualitative difference between linguistic and pre-linguistic semiotic activity, placing them in a single naturalistic continuity, thereby proclaiming the inseparability of the human and the rest of the animal world. This natural Logos is a part of the invisible, which is the reverse ontological side of the visible semiotic activity. The apparent difference in the complexity of semiotic systems among different species (and above all the difference between non-linguistic and linguistic systems) is explained by the growth of the invisible component.

- meaning

After discovering the parallelism between the structure of ontological reversibility and the functional cycle, we find that the meaning in both cases is a relational phenomenon. In the functional cycle, it is located as a relation between “situation and movement”, in the structure of

reversibility it arises simultaneously with perception at the point of intersection of the reversibility of the seer and the seen. Proceeding from this, the meaning appears in conditions of continuity of the visible and the invisible in the interpreter. The visible component allows the interpreter to cognize the external through the being a part of the same flesh as the external, the unity with which revolves around the reversibility. The invisible is the space for interpretation in which interpretation is driven by its (invisible's) component, the Logos of the natural world. If we look closely, here we can find another level of weaving. Reversibility, which has been designated as an ontological phenomenon, deals with the visible and felt mass of flesh. At the same time, as the extensive functional cycle becomes the space and environment for the emergence of meaning, just as the "invisible" is the environment for the emergence of interpretation. Two crucial conclusions follow from this. The first is that interpretation arises in the inextricable interweaving of the visible and invisible sides of the body, while each of them plays its necessary role. Meaning, on the other hand, is an external consequence of interpretation, the formation of which occurs not only on the basis of the interweaving of the visible and invisible in the body, but as a relationship between the body and the environment. Meaning thus arises as a consequence of two interweavings. The first is the interweaving of the visible and invisible sides of the body. The second is the interweaving of the body with the environment, the relations of which generate meaning. Remarkably, this second weave is already included in the first, or rather in the very concept of "visible". Thus, Merleau-Ponty takes the concept of interweaving and makes it a fundamental ontological principle. Meaning, in this case, is not just a relationship between the organism and the environment, but a relationship based on the ontological intertwining of the visible and invisible aspects of the interpreter's body, as well as the materiality of the body with the materiality of the environment. Only the presence of materiality, the ideality of the invisible, and the dynamics of two levels of interweaving allow meaning to arise.

Chapter 2.

Semiosis between “absence”, “invisibility” and “virtuality”

2.1. Meanings in the incomplete nature

The American author Terrence Deacon, working at the interdisciplinary intersection of theoretical biology, biosemiotics, and anthropology, made an ambitious attempt to redefine the theoretical foundations of the life sciences in his work *Incomplete Nature*. The main aspect of this revision is an attempt to explain and thereby defuse the conceptual gap between material life and phenomena that “may not be something there in any typical sense of being materially or energetically embodied, and yet may still be materially causally relevant” (Deacon 2011: 7). Such phenomena that cannot be fixed as material entities, but which have their influence on material reality, include: purposes, consciousness, any mental phenomena (Deacon 2011: 9). What is important for us is that he considers semiotic meanings as the same absent phenomena, while not making a qualitative difference between the meanings of human language and the meanings from the everyday life of other animals. Thus, the task that Deacon sets for himself is, among other things, a biosemiotic task. For the topic of my work, it is paramount that in general, in his work, Deacon affirms the need to recognize the conceptual gap between the materialistic view of contemporary science and the phenomenon of meaning, thus being one of the few who purposefully wonders about the materiality of meaning.

The basis for Deacon’s reflections is the thesis that knowledge of the exclusively physical and material factors of a certain environment are insufficient for a full understanding of the causal relationships in this environment. With the emergence of biological life, we observe the emergence of causalities that are not possible in the pre-biological physical systems. It is this thesis that takes us into a biosemiotic context, since “meanings” are an ideal example of a bundle of material consequences and non-material causes that give rise to them. The view of meanings as something that generates material effects in the world correlates well with Peirce’s pragmatic understanding of semiosis as an influence exerted on the interpreter (Queiroz & Merrell 2006: 42). Thus, for both Peirce and Deacon, the materiality of the interpreting organism and its interactions with the environment is a way for something non-material to influence the material world.

Therefore, being a negative phenomenon, meaning has the efficacy of absence, that is, the ability to influence the material world in spite of its own non-materiality. The existence of meaning as an absent but efficient phenomenon results from the teleological attitude towards it, which is produced by the ententional (and material) interpreter. Here it is important to avoid a sophist

contradiction regarding the priority of the formation of the absent meaning or the ententional interpreter directed at it. Such a contradiction would be a biosemiotic formulation of the old intractable problem of primacy in organism-environment relations. Therefore, it can be assumed that an ententional interpreter, whose dynamics is possible due to the missing meaning to which it is directed, and the missing meaning, which gains efficacy only due to the direction of the interpreter, become simultaneously in reciprocal dialectical connection. Thus, rejecting the priority of any of the elements in favor of simultaneous dialectic, we find two simultaneous relations of the interpreter's materiality and the absent meaning.

In the first case, we observe how meaning, being a negative category, contributes to the material world by influencing the materiality of the interpreter, enlivening it with the dynamics of teleological movement. This ententional dynamics organizes the material organism as an incomplete phenomenon, imposing it to interact with what is not materially present.

In the second case, we meet a material role in the formation of a particular meaning. This process - becoming significant for a certain area of absence - depends, among other things, on the specific material configuration of the interpreter, which creates a specific need for further teleological searches.

In Peirce's case, although meaning emerges as a relation in a rather material triangle in a certain spatiotemporal context, we still cannot claim it is material. Being a form-becoming, an event of relations between the elements of the sign, the value necessarily produces a material effect. Deacon sees the crucial contradiction of modern science in precisely the fact that the absent phenomena, through their influence on the phenomena of the ententional (first of all, organisms), influence the material reality as a whole. He designates this phenomenon as "efficacy of absence", and one of the variants of this "absence" for him is also a meaning (Deacon 2011: 45).

It should be also noticed that Deacon, even when he speaks about semiotic phenomena, he brings to the fore the concepts of "purposiveness" and "teleological" rather than some customary semiotic concepts (Deacon 2011: 26). In his opinion, while absent elements can be different (consciousness, value, meaning), purposiveness is what unites them, which creates the very "efficacy of absence", connecting an absent phenomenon and incomplete one by the establishing relation of the ententionality. Deacon writes: "In an important sense, purpose is more complex than other absent relationships because we find all other forms of absent relationship implicit in the concept of purpose" (ibid).

Returning to our theme of the materiality of meanings, despite the obvious similarity between the models of Peirce and Deacon, there is a slight difference in the angles from which they look at the sign event. In Peirce's case, we are dealing with a triadic model in which the object influences the interpreter through the representamen. That is, although it is logical to assume that the place of meeting of the three elements of the sign and the way of influencing the material reality is the figure of the interpretant, the process of formation of meaning involves the object of the sign as an active element. In the case of Deacon, teleological ententionality presupposes, first of all, the ententionality of the interpreter in relation to the formation of virtual meaning, although the meaning itself, as already mentioned, has an influence on the material world through the interpreter. Thus, although in both cases we observe the material consequences of virtual meanings - the difference is that the very emergence of a virtual meaning in the Peircean case is based on the actorhood of the object and the receptivity of the interpretant, in Deacon's case, placing ententionality at the center, the actor's activity falls on an interpreter.

Proceeding from Deacon's proposal about the primary agency of the interpreter, we can assume that the formation of the particular meaning is closely and inextricably linked with in interpreter's specific physiological configuration. At the same time, Deacon means that all ententional phenomena (and, therefore, meanings) are multiply realizable (Deacon 2011: 26). That is, here we are confronted with several possibilities of treating multiple realizability with respect to the interpreter. First, we can assume that "meanings" as biosemiotic phenomena are available simultaneously to representatives of different species, and the physiological characteristics of interpreters do not change the ontological essence of the phenomenon of meaning. We are led to this by the words of Deacon that: "All of them [ententional phenomena - D.S.] can be embodied in a wide variety of physical and chemical processes and substrates" (Deacon 2011: 26). On the other hand, we can assume that nevertheless species differences play a significant role, and in this case the interchangeability of meanings exists within a certain species and is associated with its specific material configuration. However, there is also space for combining these two positions, which is quite obvious for biosemiotics as a discipline. It can be assumed that the meanings really depend on the interpreter's specific corporality, but at the same time, we can also talk about the meta-species concept of meaning, which combines all the common features of the meanings that we find in various incarnations in different species. At the same time, the view of meanings as interchangeable phenomena has a weak point, to which Henri Bergson directed his criticism at the turn of the 19th and 20th centuries, arguing that the temporal, durational nature of living organisms gives rise to unique events of experience each time. Thus, the question of the multiple realizability of meaning acquires three possible answers: the Bergsonian assumption about the uniqueness of

any experience; multiplicity, depending on species characteristics; multiplicity that is universal for any biosemiotic phenomenon.

What is important for us now is that Deacon answers this question precisely by emphasizing the multiplicity of realizability, thereby, again, reducing the role of corporeal materiality. Thus, the semiotic meaning for Deacon is characterized by multiple repetition (and therefore universality independent of corporality) and negativity.

2.2 Deacon and Merleau-Ponty

Both Maurice Merleau-Ponty and Terrence Deacon make quite a sharp revision, in relation to the discourses prevailing in their time, of the relationship of corporeality and meaning. However, they carry out their revisionist missions in completely different ways. Merleau-Ponty decisively interrupts the disregard for corporeality that prevailed in the philosophical discussions of his contemporaries. He thinks of phenomena primarily through the prism of its relationship with the body, and later, with the ontological category of “flesh”. The same applies the phenomenon of “meaning”, the object of question of our interest. By contrast, Deacon opposing the gross materialism of modern science and the hegemonic influence of physics on the life sciences, proposes a theory according to which the materiality of the body is not enough to explain a series of phenomena, among which is also “meaning”.

At first glance, it may seem that these authors have opposite tasks regarding the question of the materiality of meanings. While the French philosopher seeks to introduce the body and its materiality into phenomenological and semiotic discourses, the American anthropologist is in search of a place for something beyond this materiality, even if it is negativity itself, something absent but efficient. However, of course, we cannot perceive the authors’ aspirations outside the intellectual context to which they were directed. Both the aspiration to introduce the materiality of corporeality into the discourse of Franco-German philosophy, and the aspiration to limit the power of this very materiality of corporeality in the discourse of modern life sciences have something in common. Namely, the willingness to equip the materiality of bodies with an invisible layer and proclaim a dynamic relationship between the materiality of the body and this invisible or missing component. In both cases, we are dealing with a specific return to dualism that offers an anti-Parmenidean perspective that does not just suggest speaking about negative phenomena, but also to recognize its direct impact on the positive world of matter. However, both authors deny the dualism of their positions, demonstrating, among other things, their anti-Cartesian positions.

Terrence Deacon labels his position as emergentist, proclaiming the dynamics of an organism arising from its ententional focus on missing things (Deacon 2011: 154). Merleau-Ponty in “Intertwining - Chiasma” also denies the dualism of the visible and the invisible, arguing that they are not two separate entities, nor the same phenomenon, but the front and back side of the flesh (Merleau-Ponty 1968: 138).

When it comes to the status of meaning in Deacon’s system, various concepts were used: “negative”, then “virtual”, then “absent”. In chapter 1.1. meaning has also been described as relation between parts of functional circle following Merleau-Ponty. All these terms allude to non-materiality, the material non-presence of meaning. However, even in non-materiality we can find a number of nuances. Deacon, however, did not analyze these conceptual nuances of forms of absence, focusing primarily on the mechanisms of ententionality of incomplete phenomena and the mechanisms of their development.

Separate aspects of the formation of meaning in Deacon and Merleau-Ponty may be parallel to each other, however, obviously, they have important differences. Thus, Deacon’s ententionality of organisms performs the same function as the Logos of the natural world, being the dynamics that directs the organism to the formation of meaning. At the same time, ententionality demonstrates only a teleological striving towards meaning, while the Logos of the natural world is both a dynamic striving towards meaning and a mode of structuring it. At the same time, Deacon’s concept of the effect of multiple dynamic constraints is a more plausible explanation (from contemporary scientific point of view, at least) for the emergence of negativity from matter than the concept of “sublimation” suggested by Merleau-Ponty.

We also observe the relative similarity of the models of relations between the interpreter and the meaning proposed by these two authors. In Merleau-Ponty, the interpreter is the unity of the visible and invisible components, both of which play their part in the interpretation. Meaning arises as a relationship between the organism and the environment in the structure of the functional circle due to the Logos of the natural world, which drives the interpreter. For Deacon, the interpreter is materiality, which, due to the effect of many levels of constraints, has acquired teleological intentionality towards the absent phenomenon of meaning. Here we can see how both of these models do not follow Peirce’s attribution of agency to the object of meaning and focus primarily on the agency of the interpreter. This statement may seem controversial with regards to Merleau-Ponty, since subjectivity is not a primary phenomenon for him, but arises just in the flesh of the world. However, even when we speak about interpreter in a biosemiotic context, we do not speak about the same human subjectivity that has been proclaimed in European philosophy since

the time of Descartes and which has become the object of diverse criticism, including among Merleau-Ponty's contemporaries. Rather, we speak about the fact that invisibility (and, above all, its part named Logos of the natural world) inherent to the interpretant provides him the primacy of agency in the semiotic triad.

However, there is a difference in how the two authors bind the interpreter to its environment. For Merleau-Ponty, this connection is an ontological and immanent interweaving of ability to perceive and being perceived. At the same time, in the case of Merleau-Ponty, "negativity", namely the invisible side of the visible, is part of the interpreter itself. In Deacon, we observe a very opposite situation, the interpreter is connected with the environment by the fact that it is always ententional, directed outward, towards the missing element. That is, although the interpreter's ententionality itself can be considered as a form of connection with the environment, this connection still has a much more external localization than in the case of Merleau-Ponty. Similarly, negativity, for Deacon, is not a component of the organism, but characteristic of something what is absent and external, in relation to what the teleological entention is built.

Apparently, these two differences are connected and the localization of negativity is connected with the point of interaction between the body of the interpreter and the environment. Hence, for both authors "negativity" is a form of connection between the organism and the environment. For Merleau-Ponty, the negative is the place of production of the organism's outward behavioral dynamics, as well as the structures of perception (the Logos of the natural world), and its emergence occurs simultaneously with the interweaving of vision and being visible discussed above. For Deacon, any arbitrary dynamics of the organism is directed to the missing elements, so interaction with the environment will have negativity at its core. Thus, it is also clear that in the case of both authors, negativity will play a role in semiosis. However, this role will still be different. In the case of Merleau-Ponty, the role of negativity in semiosis is to provide the materiality of the interpreter with depth, which produces the dynamics of semiotic relations and is (however paradoxical this "is" can be) actually the location of interpretation. In Deacon's case, the negativity of semiosis, on the contrary, lies outside the interpreter, stimulating him to dynamic semiotic activity towards the absent meaning.

The result of this comparison is that in both cases we observe models of semiosis in which agency is held first of all by interpreter and in which meaning is either way connected with negativity. However, the models of communication between the interpreter and the environment differ. Merleau-Ponty assumes this connection as a primordial ontological unity immanent to the interpreter and embodied in the phenomenon of intertwining the ability to perceive and be

perceived. Deacon, on the other hand, suggests an ententional teleological connection by targeting materially absent states or meanings. The roles given by the authors to negativity in semiosis also differ: in the case of the French philosopher, negativity is a component of the interpreter, while in the case of the American anthropologist, it is the meaning in relation to which the teleological structure is built.

2.3. Negativity as a challenge

It may seem that when we, following Deacon, encounter a situation in which a materially non-existent meaning influences the interpreting organism striving for it, then we come to a thought that is more or less obvious for biosemiotics. However, since we are primarily interested in the question of the ontological status of “meaning”, its materiality or immateriality, the scheme proposed by Deacon still cannot fully satisfy our concern, since it raises one problematic issue. This question: how does negativity (or “absence”), being a category that does not lend itself to internal differentiation, act as an object for an always particular teleological impulse?

Of course, this question is not intended to challenge Deacon’s position on the non-materiality of meanings, but the problem is that Deacon in his opposition to the gross materialists still follows them to a certain extent, building a model in which everything that is non-material does not really exist or remain only as biological variation of mathematical zero. If we assume that semiosis is necessarily associated with choice, differentiation, and even semiotic freedom of varying degrees, then it is not obvious how that specific fragment necessary for the interpreter is differentiated from the sphere of absence. It can be assumed that this role of differentiation of the absent is given to the teleological aspect, but this would clarify the only necessity of this differentiation and not its mechanisms.

It can be assumed that teleology includes not only the dynamics of the interpreter, but also the object of the sign itself, which, however, in this case should be reduced to the need of organism. What I mean is that we could assume that the objects of signs are only the needs of organisms, which would make the teleology more obvious, and the meaning that appears as an absent phenomenon would always be clearly related to one of the categories of needs of the organism. However, such a step would have its problematic moments. First, this model is again a return to a very mechanistic view of animal behavior, where any perception is necessarily associated with one of the categories of needs. Secondly, such a model would recreate the qualitative gap between the human and the rest of the animal world, because we obviously meet in human culture and

especially in language plenty of semiotic events the meanings of which cannot be clearly and indisputably attributed to one of the biological needs. Therefore, the mere teleological nature of the organism's intentionality does not help answer the question of how differentiation of meaning is possible among the absence.

For Maurice Merleau-Ponty, for several reasons, this issue is not a critical one. First, as noted above, for Merleau-Ponty, the negativity involved in semiosis is primarily associated with the invisible part of the interpreter's flesh, which means that the meaning does not lie in the space of indistinguishability of the absent. Secondly, even if we assume that for the French phenomenologist the space of negativity would extend to the phenomenon of meaning, his understanding of negativity still allows us to evade the difficulty with possibility of differences. Although Merleau-Ponty argues that the invisible is the negative side of the visible, and not a separate positive entity, he still does not directly declare its absent nature in the way Deacon does. Besides, the invisible appears as a sublimation of the visible, that is, there is a process by which the invisible begins to exist despite its negativity. This means that the ontological status of the "invisible" is not at all obvious and it cannot be unambiguously attributed to one of the sides of the opposition between existing and non-existing. However, it is obvious that in order to solve the problem of the indifferenciability of the absent - a simple blurring of its ontological status is not enough. It follows from this that we still need to clarify which conceptual apparatus can help us in comprehending the immateriality of meaning.

Here, another French philosopher, Gilles Deleuze, might be an unexpected ally for Deacon, notably his idea of replacing the existing classic opposition "real - possible" with the pair "actual - virtual". But before discussing how the concept of "virtual" can help differentiate the immaterial, it is worth clarifying that there is a significant difference between the role of "materiality" in the ontological schemes of Deacon, Merleau-Ponty, and Deleuze. This distinction should protect us from inadvertent confusion between the concepts of "absent", "invisible" and "virtual". As mentioned above, both Deacon's "absent" and "invisible" of Merleau-Ponty are concepts that demonstrate the negativity of the phenomena to which they refer. However, in addition to the negativity they share, both of them are also connected with the discourse of materiality. For Deacon, in fact, both the absent and the teleological nature of the intentional striving for it are phenomena that cannot be fixed as material substances.

In the case of Merleau-Ponty, the question of materiality is a little more complicated due to his specific concept of "flesh", which is not matter, at least not in the strict sense of the word. However, it is difficult to deny that the conceptual pair of "visible" and "invisible" is at least partly

connected with materiality. At a bare minimum, the fact - that crucial feature of the visible is the ability to perceive, and for the invisible, on the contrary - suggests the connection with materiality. Let it not be that passive matter of the times of classical philosophy, but, as Richard Simanke suggests, to consider matter as a dynamic system of qualitative self-differentiation; matter as activity and production (including the possibility of meaning-production); matter as a historical-temporal milieu (Simanke 2016: 119). According to Semanke, if we refuse to understand matter as a passive element set in motion by the spirit, the need for a strict distinction between matter and flesh will also disappear. Semanke makes such a refusal, recognizing the inseparability of organic matter with its vital dynamics, on the one hand, and the potentiality of the transition to an organic, and therefore a dynamic mode of existence of inorganic matter. Thus, although compared to Deacon, Merleau-Ponty does not directly speak of materiality, we can still perceive “flesh” and “visible” as variations of the material.

2.4. Meaning and the actualization of the virtual

Deleuze’s concept of the virtual is very different, both in its structure and in its role for the discussion on meaning. There are several important differences between Deleuze’s model and Deacon’s and Merleau-Ponty’s models that should be initially taken into account in order not to distort Deleuze’s paradigm for the sake of embedding it in the contexts of the two already analyzed authors.

Firstly, the opposition between the virtual and the actual is not directly related to the issue of materiality. As will be shown below, actualization can still be a materially non-fixable process (and therefore immaterial), as the actual phenomenon itself. Although this, of course, does not exclude the fact that individual phenomena, along with actualization acquire materiality. Thus, following Deleuze’s concepts, we still think of meaning as something immaterial. However, the transitions between the immateriality of meaning and its material conditions and consequences are not necessarily synchronous with the actualization of the virtual.

Secondly, in contrast to the complete negativity of Deacon’s “absent” and the partial negativity of Merleau-Ponty’s “invisible”, Deleuze’s virtual is a positive phenomenon, a non-actualized section of the real. Thus, if in the cases of Deacon and Merleau-Ponty semiosis is associated, albeit in different ways, with negativity, in the case of Deleuze it is associated with a non-actualized, but real, virtuality.

Thirdly, the localization of the virtual differs from the localizations of the negative proposed by the authors discussed earlier. In Deleuze's case, virtuality is not localized in the interpreter as "invisible" in Merleau-Ponty, nor in the meaning like the "absence" in Deacon. Deleuze's virtual is rather an ontological background for any actualizations to be possible. In the case of the question that interests us, this means that any event of meaning is an actualization (including psychological in the Umwelt of the interpreter), which is possible only in the context of the general ontological Element of meaning, the virtuality of meaning as a whole (Deleuze 1991: 57).

However, in Deleuze's reflections on the virtuality of meanings, there is some inconsistency regarding the dynamic boundaries of the virtual and the actual. First of all, this inconsistency concerns what exactly we can recognize as actualization in the case of semiotic meaning. That is, is meaning a virtual component of a semiotic act, or is any particular meaning already an actualization of virtual significance overall? The point is that based on the different works of Deleuze, we can assume different answers to this question. Thus, in *Bergsonism*, Deleuze reflects on Bergson's virtuality of the psychological: "What Bergson calls "pure recollection" has no psychological existence. This is why it is called virtual, inactive, and unconscious" (Deleuze 1991: 55). And also a few paragraphs later:

It is only then, once the leap has been made, that recollection will gradually take on a psychological existence: "from the virtual it passes into the actual state..." We have had to search at the place where it is, in impassive Being, and gradually we give it an embodiment, a "psychologization." (Deleuze 1991: 57)

Thus, here we observe that both the actual and the virtual are positive categories, but with the only difference that the virtual is an ontological category, it might be called ontological background, which makes the emergence of any specific meanings possible. It is these individual meanings that are actualized when differentiating their separateness.

If we draw an analogy from the sphere of "psychological" to the sphere of "meaning", then virtual is not a separate semiotic meaning, but the ontological background of meaningfulness itself. And such an analogy is quite justified, because in the same *Bergsonism* Deleuze indirectly mentions the space of meaning, in fact, making it clear that he assumes similar virtual ontologies for the phenomena of memory and meaning.

At the same time, in a dissertation written two years later, published as *Difference and Repetition*, we encounter theoretical passages that offer a little different view of the virtual, in particular, suggesting that the virtual is not an ontological background, but a dimension of a real object, along with its actuality: "Indeed, the virtual must be defined as strictly a part of the real

object - as though the object had one part of itself in the virtual into which it plunged as though into an objective dimension” (Deleuze 1994: 209).

Such an approach to the virtual in its structure resembles the concept of the “invisible” by Merleau-Ponty, where the motif of an objective but not detectable dimension of objects was also present. However, as we have already noted, for Merleau-Ponty, “invisible” is not the meaning itself, but the element of corporeality of the interpreting organism, toward which the meaning is a produced relation. Thus, the Deleuzian concept of the virtual is broad enough to include both the invisible component of the interpreting organism’s corporeality and the relational meaning derived from the “invisible”.

Also, in the virtual we find the teleologicity, which is also proper to the negativity as it is presented by Deacon. This teleological aspect appears in Deleuze’s reasoning that the virtual poses a problem, relatively and expediently to which actualization happens through the differentiation process:

An organism is nothing if not the solution to a problem, as are each of its differentiated organs, such as the eye which solves a light ‘problem’; but nothing within the organism, no organ, would be differentiated without the internal milieu endowed with a general effectivity or integrating power of regulation. (Deleuze 1994: 209).

In a biosemiotic context, this may mean that a specific meaning is an actuality that arises in the ontological context of biological need, or, using Buchanan’s concept, in the space of onto-ethological need. In Deacon’s theory, the teleological scheme worked in such a way that the ententional organism was directed (driven by meaning) into negativity. With Deleuze, this teleology is spared from negativity and it can be said that it has a mirror structure regarding Deacon’s project. In the sense that Deacon’s material ententional organism (which, obviously, is actuality) acquires dynamics due to its direction towards absence. For Deleuze, on the contrary, the actualities themselves (be it the actuality of a meaning or an organism) are possible only as differentiations of the initial virtuality.

It is also important that Deleuze assumes the dissimilarity between the virtual form and the result of actualization. That is, the virtual and its actualization is not just a variation of the possible and the real, in the case of which the same phenomenon passes from one state to another. In the case of Deleuze, the virtual is the real ontological condition for the actualization of a phenomenon through its differentiation. Also we can assume that even after the actualization event, objects retain a virtual dimension. Thus, the actualization of a specific meaning occurs from a virtuality that does not have the same structure as the meaning itself, but is its dynamic ontological

conditions that are inextricably linked with the vital dynamics of the producing or perceiving organism.

Thus, we can single out at least two components of the virtuality of meanings. First, it is the space itself (the element, in Deleuze's words) of meaningfulness in which individual meanings are differentiated and actualized. Secondly, this is the space of vitality, that fragment of reality that biology is looking at. This component considers meaning as an instrument of life, just like the organs of the body. However, it is also worth noting that the sphere of the virtual definitely should not be differentiated into a biological and semiotic component, because differentiation is already a tool for actualization. Therefore, we cannot clearly separate biological and semiotic virtualities. This creates a situation that the Deleuzian virtuality, which generates the actualization of semiotic meanings, repeats the key thesis of biosemiotics, the deep ontological interweaving of semioticity and vitality. Thus, this biosemiotic interweaving occurs even at the level of the immateriality of the virtual.

Structural dissimilarity of virtual ontological conditions and actualization results also leads us to reflect on the nature of actualizing individuation, namely the correlation of virtual conditions and actual results. Bearing in mind that Deleuze as a thinker for whom crucial forms is becoming - not essence; and dynamic - not static. Thus, we can assume that not only the virtual ontological background is dynamic, but also particular differentiation into the actual.

This helps us get rid of the possible misconception of the virtual as just a context that mechanically determines the structure of actual meanings. Instead, I propose to think of the relationship between the virtual and the actual as dynamic and not directed by mechanical rules. Among biosemiotics, we find a similar thought in Yogi Hendlin, who also reflects on the points of contact between biosemiotics and Deleuzian philosophy. Hendlin writes:

The same stimuli will show up (be catalogued) differently for different organisms, and even the same organism at different points in time. All of this depends on the confluence of states which respond to the different signals received, within and out. (Hendlin 2016: 97).

Thus, although the organismic needs and behavioral models of the vast majority of animals can be categorized, there are the dynamic unpredictability of biosemiotic virtuality and the unpredictability of actualization trajectories. Hendlin writes:

That is, in reworking the Uexküllian notion of thresholds of perception, we must confess that declaring stable categorizations of phenomena into classes as an automatic or given process is indeed a simplification. Real organisms, as intimated above, may react variably to the same objects at different points in time or at

the same point in time dependent on other conditions mediating their classificatory capabilities. (Hendlin 2016: 100).

Thus, following Hendlin's understanding of Deleuze, biosemiotic meaning is an actual phenomenon, which, nevertheless, is not a static unit, but rather a "wave of becoming" (Hendlin 2016: 100).

However, despite the obvious importance of the repeatedly discussed issue of interpretation, Deleuzian intersection of Pierce and Uexküll is not limited to this. And if in the case of biosemiotics this synthesis is a way to simultaneously take into account the specific Umwelt for each species and the objective space of permanent semiosis, then in the case of Deleuze the situation is slightly different. From the few paragraphs he assigns to Uexküll in *Spinoza and Practical Philosophy*, the main conclusion we can draw is that Deleuze is trying to read Uexküll not as a Kantian (which he really was), but as a Spinozist. And at the same time, he seeks to read Spinoza's ethics not as ethics in the obvious sense of the word (although it is clear that Spinoza's ethics is very far from what we usually call by this word), but as a Uexküllian ethology. It is the Deleuzian definition of ethology that becomes the space for these two rather bold interpretations: "Ethology is first of all the study of the relations of speed and slowness, of the capacities for affecting and being affected that characterize each thing". (Deleuze 1988: 125)

Although Umwelt is centered around the organism, Deleuze relativizes it in networks of relationships, giving them an ontological priority. It would seem, what does Pierce have to do with it? The fact is that bringing to the fore "capacities for affecting and being affected", relations of influence instead of organismic entities can be called not only a Spinozist, but also a Peircean approach to Umwelt. After all, the central role of the concept of interpretant (and its dominance over the concept of interpreter) just testifies to the unambiguous predominance of the perspective of relations over organism-centric perspectives in Peirce's biosemiotics. Of course, should be noted the irony of the fact that for the anti-Kantian interpretation we turn, again, to an author who has experienced a strong Kantian influence.

An important question that arises here is that of the relation between the Deleuzian affect and the Peircean interpretant. The interpretant as a concept, pragmatically emphasizing the effect itself (mental or not) and not concerned whom it effects on.

The interpretant tracks the same dynamic variability of reality, provided by all-pervading relations, as Deleuze with his Spinozist attitude. Both authors tended to expand these concepts. Deleuze borrows the concept of affect from psychology, where it has a rather narrow meaning of

an intense psychological state, and expands it to the property of the body to interact: “We know nothing about a body until we know what it can do, in other words, what its affects are, how they can or cannot enter into composition with other affects, with the affects of another body”. (Deleuze 1988: 257).

So is the “interpretant”, which, as we mentioned above, at first played the role of a solely mental effect, and then expanded to a much more general and abstract level. So, in Peirce we find the following definition of an interpretant:

A representation is that character of a thing by virtue of which, for the production of a certain mental effect, it may stand in place of another thing. The thing having this character I term a representamen, the mental effect, or thought, its interpretant, the thing for which it stands, its object (Peirce 1895: CP 1.564).

But also, this one: “Any thing that the sign, *as such*, effects may be considered as the Interpretant” (Peirce 1910: MS 77).

Such an extension, however, can be quite problematic for biosemiotics, precisely because at the conceptual level it confuses material (often non-semiotic) interactions with the environment and semiotic interactions.

Thus, we can assume that Peirce and Uexküll are synthesized in the Deleuzian works in a relational model, where Umwelt is a network of affective relations, a set of intertwined events of interpretants. These affective interpretants do not emerge from a striving toward negativity, as Deacon assumed, but are differential actualizations of at least two virtual elements: biological life and meaning. Real virtuality, and not negativity, is the ontological source of meanings, which are differentiated as dynamic relations, from which entities are only then formed. Thus, based on this Deleuzian idea, our understanding of the organism that produces and perceives meanings is also transforming. Now the organism is not just its corporeality, but above all its efficiency and receptivity, networks of relationships that shape its unity in the space of the environment.

Chapter 3

Materiality strikes back: role of objects

3.1. Jane Bennett and the vibrant materiality of meaning

The influence of the materiality of the interpreter on the materiality of such phenomena as meaning is a quite obvious issue that worries, albeit in different ways, thinkers from a wide variety of fields. However, over the past years, the topic of the materiality of semiotic phenomena has been raised, among other things, in connection not with the materiality of the interpreting organism but with what it encounters in the world. It could be assumed that such a model is directly related to Peirce's semiotics, namely the materiality of representamens or objects of signs. However, the most notable authors who increased the role of materiality in semiosis are the "new materialists" popular in English-speaking continental philosophy. In this chapter, I invite you to consider the works of two key authors of this relatively new direction: Jane Bennett and Karen Barad. But their theories should be considered apart from each other because many of their positions are sufficiently different.

In her notorious work *Vibrant Matter*, Jane Bennett sets herself the ambitious task of relaunching the materialist philosophy. The key transformation here is the change in the idea of matter as a passive entity in favour of a dynamic and active phenomenon. According to Bennett, it is the activity and dynamism of matter that make it possible to speak of its inherent vitality. It is important to note that "vitality" for Bennett is not related to the specific properties of organic matter; instead, we discover the functional vitality of materiality by observing the effects it creates: "I move from the vitality of the discrete thing to vitality as a (Spinozist) function of the tendency of matter to conglomerate or form heterogeneous groupings" (Bennett 2010: xvii).

To explain the mechanisms of vitality's function, Bennett adopts several concepts from French philosophy. First of all, there is the notion of affect, which Bennett adopts from the philosophy of Spinoza and more precisely, from Deleuze and Guattari's interpretation of Spinozism:

Organic and inorganic bodies, natural and cultural objects (these distinctions are not particularly salient here) all are affective. I am here drawing on a Spinozist notion of affect, which refers broadly to the capacity of any body for activity and responsiveness (Bennett 2010: xii).

Bennett recognizes affect as fundamental to ethical and political discourse but, at the same time, seeks to get rid of the humanistic discourse's boundaries:

I want now to focus less on the enhancement to human relational capacities resulting from affective catalysts and more on the catalyst itself as it exists in nonhuman bodies. This power is not transpersonal or intersubjective but impersonal, an affect intrinsic to forms that cannot be imagined (even ideally) as persons (Bennett 2010: xii).

Moreover, this removal of "affect" beyond the boundaries of the human is quite radical; it goes right up to the equating of affect and materiality. To denote this equating, Bennett introduces the concept of "impersonal affect" (Bennett 2010: xiii). Impersonality consists in the fact that affectivity, according to Bennett, creates a field of forces which, nevertheless, does not have any subjectivity. That is, affect is inherent in matter, regardless of what this materiality refers to. Thus, by identifying materiality and affectivity, Bennett radicalizes Deleuze's understanding of affect, expanding its meaning and, even more, offering in fact the project of a vitalistic monism of matter-affect. If at the beginning of the work, we made a comparison between the Deleuzian understanding of affect and Peirce's interpretant, and in that case, the transformation of the "affect" concept into a monistic philosophical category does not allow us to continue this comparison, because we cannot suppose interpretant as the same universal monistic concept.

Another concept important to Bennett is the concept of "actant" adopted from Bruno Latour: "an actant is a source of action that can be either human or nonhuman; it is that which has efficacy, can do things, has sufficient coherence to make a difference, produce effects, alter the course of events" (Bennett 2010: xiii).

Following Latour, with the help of this concept, Bennett seeks to describe agency as something distributed over a variety of materialities. Here we see that the concept of actancy is to a large extent similar in its meaning to the concept of affectivity. But if Bennett needs the concept of affectivity to demonstrate that the property of affectivity is inherent in any materiality, then the concept "actant" fixes entities only when their efficiency is aimed at transforming another entity that has already been performed. That is, it has a different methodological role, namely, it is aimed not at reasoning the ontological nature of matter (as in the case of its affectivity) but at fixation of its efficiency.

Based on the affectivity and actantivity inherent in matter, Bennett introduces the concept of thing-power to demonstrate the importance of the interweaving of efficiency and materiality, even in cases where a particular artefact does not play a significant role in human culture (Bennett

2010: 6). Bennett defines thing-power as “the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle” (Bennett 2010: 6).

Returning to the semiotic context, Bennett’s radicalization of the role of objects in semiosis (and their materiality) could warn of naive tendencies that may arise in biosemiotic discourse.

Firstly, the Kantian heritage, which offers the totality of Umwelt’s species-based specificity and the strict rhetoric of representation, denies biosemiotics the opportunity to enter the interspecies space of objective nature. After all, if the very dynamics of matter produce meanings, then such semiotized and decentralized materiality is objective nature. However, as it was said in the preface, such species-specific representative narrowing can be opposed by Peirce’s paradigm of, let’s say, objective semiosis.

Second, and more importantly, Bennett re-actualizes the importance of the sign’s materiality. And here, we can observe a difference from the Peircean view. First of all, this difference concerns the fact that for Peirce, the significance of the object of semiosis is determined by its effects, that is, this significance is pragmatic. In the case of Bennett, what is noteworthy here is that she distinguishes between affect and actant, the ontological property of matter for action and the pragmatic perspective on reality and events in it. Thus, for Bennett, efficiency (and also affectivity) do not exist outside of materiality and are not exclusively pragmatic categories. While the pragmatic emphasis on the role of the object of the sign is retrospective, as something which influences, we can trace (fix) it only when it has already happened.

In addition, Bennett, in the preface to the work, has an interesting observation related to our reflections on the virtual roots of semiosis and meanings presented in the previous sections. Bennett writes:

Several years ago I mentioned to a friend that Thoreau’s notion of the Wild had interesting affinities with Deleuze’s idea of the virtual and with Foucault’s notion of the unthought. All three thinkers are trying to acknowledge a force that, though quite real and powerful, is intrinsically resistant to representation (Bennett 2010: xv).

Of course, Merleau-Ponty’s “invisible” could be added to this list, for which the effectiveness and resistance of representation are also crucial properties. This passage will be followed by Bennett’s reflection on the need to include such non-representable efficacy in the very concept of materiality. Based on this, we can assume that the Bennett project as a whole is also one more attempt to find a conceptual framework for the relationship between the material components of semiosis and its materially elusive components (primarily meaning itself).

Thus, if Deleuze's non-actualized virtuality, Merleau-Ponty's invisible, or Deacon's incompleteness do not have an explicit materiality, then Bennett seeks to justify such non-recordable efficiency of meaning not as non-materiality, but as material non-representativeness. Such an assumption is possible due to the theoretical premise that materiality can stay non-represented. This position is somewhat similar to the concept of "invisible", but with the important difference that in the case of Merleau-Ponty, the material can have a non-representational reverse side, whereas in the case of Bennett, such a distinction is not made, and matter in general is characterized by both representability and non-representation. Thus, we can assume that the semiotic meaning for Bennett is one of the examples of the dynamic efficiency of non-representable materiality.

However, the difference between the variant of new materialist's conceptual framework and those proposed by Merleau-Ponty, Deacon or even Deleuze is that it is impossible to integrate the distinction between living and non-living nature into this framework. Impossible because this is the difference Bennett, in fact, seeks to overcome. And obviously this difference is fundamental for biosemiotics.

Besides the importance of this distinction for biosemiotics as a discipline overall, biosemiotics also offers a critique of ignoring it. Highly remarkable in this regard is the article by Timo Maran, "Semiotization of Matter: A Hybrid Zone between Biosemiotics and Material Ecocriticism". First of all, Maran recognizes the existence of common ideas between biosemiotics and "material ecocriticism". It is worth noting that Maran does not discuss the theory of the new materialism directly. However, the "material turn" with whose followers Maran enters into discussion shares the same theoretical paradigm as new materialism scholars do:

The 'material turn' is the search for new conceptual models apt to theorize the connections between matter and agency on the one side, and the intertwining of bodies, natures, and meanings on the other side" ("Stories" 450). Material ecocriticism, he continues, "comes from the idea that it is possible to merge our interpretive practice into . . . material expressions" (Maran 2014: 141).

According to Maran, the key commonality between biosemiotics and the "material turn" "appears to be foremost in their attentiveness to the connections between the physical realm and meaning processes" (Maran 2014: 141). Indeed, biosemiotics, as mentioned earlier, shifts semiotics from the context of human culture and language to a biological context, which is not only wider, but also actualizes reflections on the materiality of representatives of various species.

However, in such a very comprehensive general position, the commonality of biosemiotics and material turn rather ends here. According to Maran, the main problem of the material turn is

that “if we are talking about an inanimate matter as having semiotic capacities or competencies, we are executing biomorphism or anthropomorphism” (Maran 2014: 148). So we have an interesting argument here. Namely, by ignoring the division of nature and phenomena into living and non-living phenomena and at the same time ignoring the unique specifics of how living organisms enter into semiotic relations, we are moving towards biomorphism. It means that in this case, while inclusively expanding the consideration of the semiotic nature of the material, at the same time, we refuse to separate the roles of organic and non-organic matter. Thus, we assign non-organic matter with organic properties; over again, we bring qualities of something to which we belong to something that we are not. Biomorphism thus fits into the lineage of anthropomorphism, terramorphism, and other models that include the almost baseless view of something external as being identical to itself.

Such a critique may seem obvious enough, but it is interesting in that it denounces the new materialism, primarily opposed to anthropocentrism, of not overcoming but rather overturning it. That is, the anthropocentrism that the new materialists criticize is that a person exaggerates their own agency, including as concerns semiosis. In general, both Maran and Bennett agree with this thesis to varying degrees, including that such a reassessment is made to the detriment of the role of materiality. By assigning non-organic matter with the capacity for full-fledged semiotic activity, the new materialists take the opposite move; namely, they assign non-organic matter with organic matter properties. Based on Maran’s critique, it can be assumed that this approach, which seems opposite to anthropocentric, leads to the same result. This similarity works in such a way that the new materialist’s model still focuses on the dynamic properties inherent in living organisms but separates them from these same organisms in a too broad context of matter in general.

Thus, returning to the semiotic context, the new materialists suggest that we move from the idea that the source of semiosis is solely in the dynamics of the human mind to the idea that this dynamics is distributed throughout matter, regardless of its organic nature. Biosemiotics, especially if it seeks to take into account the role of materiality, also distributes agency over matter. Still, the fundamental point for it remains the preservation of a qualitative difference between the interpreting organism and the roles that non-organic phenomena may have acting as objects or representamens of signs. However, this does not mean that only the interpreting organism is an active participant in semiosis, and only passivity is peculiar to materiality since, in the Peircean model itself, interpretation is a consequence of the efficiency which emerges from the relationship between the sign’s object and the representamen (Maran 2014: 146). That is, it is fundamentally important here that biosemiotics simultaneously emphasizes the fundamental difference between

the agency of living and non-living things and, at the same time, does not follow the conservative idea that matter can only have a passive role in semiosis.

In the same article in which Maran criticizes the “material turn”, he makes a fundamental difference between the role of organic and non-organic elements, referring to the concept of “modeling” (Maran 2014: 142). Paying tribute to the role of materiality, Maran suggests the ability to model as the main feature of the agency of living organisms in semiosis:

Matter might have history, it might save traces and even produce copies of objects – as mud reproduces the image of the foot, for example – but it does not model in the sense of using forms to produce a representation of specific aspects of the object (Maran 2014: 148).

It can be assumed that Maran thus makes the biosemiotic addition to Peirce’s position, specifically by adding to it the agency of an interpreting organism. Now the organism is no longer merely a location for the interpretant but acquires agency as an entity which realises the modelling of the interpretation, that is, as a selector of certain significant aspects of the object.

3.2. Karen Barad and material-discursive nature of meaning

Karen Barad concerns the domain of semiotics by invoking the Foucauldian notion of “discursive practices”. Barad seeks to offer a post-humanist interpretation, not limited to human writing and speech, but focusing on understanding discursivity as an ontological creation of the possibility for the subsequent emergence of meanings: “Discourse is not what is said; it is that which constraints and enables what can be said. Discursive practices define what counts as meaningful statements” (Barad 2003: 819).

Having made an inclusive expansion of the definition of “discursive practices”, Barad proceeds to their main theoretical statement, namely, the statement about the ontological interweaving of discursive practices and material phenomena (Barad 2003: 808). And although we met the statement that Discourse is material even in Foucault, the redefinition of discursiveness as not only a phenomenon of human culture takes this thesis to a new level (Barad 2003: 809).

Barad upholds not only the materiality of discourse (since they bring with them material reconfigurations of the world), but also the discursiveness of materiality: “material phenomena are inseparable from the apparatuses of bodily production: matter emerges out of and includes as part of its being the ongoing reconfiguring of boundaries” (Barad 2003: 822).

For Barad, it is discursive practices and not separate individual agents that create the conditions of the possibility for semantic contentfulness. Also, primary semantic units are not words but material-discursive practices (Barad 2003: 818). Against the background of such a unity of materiality and discursiveness, the meaning emerges as “specific material (re)configurings of the world, and semantic indeterminacy, like ontological indeterminacy, is only locally resolvable through specific intra-actions” (Barad 2003: 819). Such an understanding of the role of discursiveness in semiosis is close to the role of the Deleuzian “virtual”, which also creates an ontological field of possibility for the further emergence of semiotic phenomena.

However, since Barad proclaims the inseparability of materiality and discursiveness, in this case, the very condition for the emergence of semiotic phenomena is already inextricably linked with material reality. Thus, while discussing Deleuze, we considered his concept of the virtual as a non-material and non-actualized ontological field aimed at the emergence of meaning, then discursiveness in the case of Barad, implies the materiality of what Deleuze would call virtual even before its actualization. Barad writes that the “field of possibilities is not static or singular but rather is a dynamic and contingent multiplicity” (Barad 2003: 819). Thus, the dynamic virtuality of discourse, which creates the conditions for the emergence of semiotic phenomena, is directly performed by material phenomena and transformations. Applying such a model to the biosemiotic context, we discover the ontological elementarity of meaning, which is not represented in the material *ex post facto*, but the becoming that originates in materiality, and its dynamics always carry material consequences. Such a view would simultaneously integrate into biosemiotics ontological basis in line with Deleuzian virtuality, but at the same time establishes a connection with the materiality of organisms.

Emphasizing this connection allows us to avoid the wrong ontological assumption about the isolation of the virtual dimension of meaning from the materiality of the organism that produces or perceives this meaning. Instead, we assume that meaning comes not just from a separate organism but an interorganismal virtual element of meaning. At the same time, this element has direct materiality at both levels: of its emergence from a multitude of organisms intertwined in the environment and at the level of its material efficiency.

Such an interpretation could indeed complement a Deleuzian attempt to formulate an ontological cascade for the emergence of meanings. However, as in the case of Bennett, Barad does not pay due attention to the distinction between living and non-living matter, so such an interpretation may be helpful for integrating Deleuzian ontology into biosemiotics but is not significant for understanding Barad’s thought in itself.

Again, it is advisable to discuss the ignorance of the difference between animate and inanimate matter in the context of Barad's thought. Although such a view unites them with Jane Bennett, this ignoration is performed here slightly differently.

For Karen Barad, the relationship of materiality and discursiveness is crucially mutual and dialectical; Barad defines them as mutual entailment (Barad 2003: 822). In this case, the articulation of each of the elements occurs in connection with the other. However, in this case, the very concept of matter becomes problematic because if we are discussing the formation of the matter, which cannot occur without the participation of discursiveness, this leads to the idea that it is a question of the interaction of the material and semiotic formation of the organism. However, Barad does not address biological discourse, even though the theme of the posthumanist intertwining of the material and the discursive clearly hints at how organisms' semiotic and material activities are mutually intertwined.

Instead, Barad turns to another intersection of meaning and materiality, particularly quantum physics. Of course, such phenomena as quantum uncertainty create a wide field for speculation about the relationship between materiality and meaning. However, the choice of physics instead of biology as the meeting point of discursiveness and materiality is somewhat problematic. The fact is that in the case of a biological context, materiality and discursiveness (which we can still understand as an ontological space for the emergence of semiotic phenomena) are very directly intertwined both at the level of the organism and at the level of networks of interorganismal relations. For example, the semiotic recognition of one or another phenomenon and the biochemical reaction to this recognition are inseparable in the structure of behaviour and are described in the same scheme of the functional circle. Suppose the meeting place of materiality and discursivity is quantum physics, and discourse is understood as the creation of the very possibility of meanings. In that case, we are faced with the problem of correlations. The core of this problem is that although quantum physics often includes phenomena such as observation and interpretation, nevertheless, the correlation of such physical materiality and discursiveness can be traced much weaker than this ratio at the level of biological phenomena. The follow-up of this connection is especially complicated by the fact that the discursiveness of materiality is explained by highlighting the role of "apparatuses of bodily production" in the emergence of matter itself (Barad 2003: 822). After all, "bodily production" isn't encouraging us to think of materiality at the level of micro-objects. Discussing "bodily production" is not necessarily talking about a human being, but it encourages to think in terms of the biological bodies.

There is also another problem implicitly related to this lack of the biological, namely, how Barad's project articulates its posthumanist perspective.

Both Karen Barad's and Jane Bennett's attempts to frame their theories as posthumanists have certain incompleteness. Both approaches come from the theoretical legacy of French post-structuralist philosophy. Bennett's project is based on Deleuzian philosophy, while for Barad, one of the primary authors is Foucault and his theory of discursiveness. However, in attempting to construct a materialist and posthumanist critique, post-structuralist theory as a tool is a controversial choice. On the one hand, it does offer a range of tools to provide, among others, an ontological (Deleuzian) and historical (if we can use the word for the Foucauldian project) bases for posthumanism. One has only to recall a Foucault's big promise: "that man would be erased, like a face drawn in sand at the edge of the sea" (Foucault 2005: 422).

On the other hand, the problem with post-structuralism is that this debunking of humanism is still taking place in highly humanitarian discourse. After all, the entire list of disciplines that left cracks in the basis of the humanistic project: political economy, psychoanalysis, anthropology, the Foucauldian genealogical and archaeological projects questioned the sovereignty of the human subject and humanism, continuing to ignore the obvious biologized argument of human non-exclusivity within the biological species' diversity. This ignoring cannot be called a shortcoming of post-structuralism, but it is one of the reasons why the "new materialisms" ignore the fundamental distinction between living and non-living matter.

Thus, the posthumanist perspective of the "new materialism" differs from the posthumanist biosemiotic perspective. For biosemiotics, the departure from the anthropocentric perspective is due to the fact that the semiotic activity of a human being (including language, writing, and conscious behavior) is considered "merely" as one of a wide variety of the living organisms' semiotic activities. Of course, the human being's Umwelt differs from the Umwelts of other species. But Umwelt of any species is the same – different from others. That is, biosemiotics, recognizing the fundamental difference between a phenomenon of living and non-living, blurs human exceptionality within the boundaries of the living organisms' species. The suspicion of a binary opposition between life and non-life, inspired by post-structuralism that "new materialists" have, is quite understandable. First, this may be due to their (pretty valid) mistrust of binary oppositions in general. Secondly, the opposition between living and non-living matter can be considered not only as a space for removing the opposition between human and animal but as its conceptual extension while maintaining the same form of thought. However, such non-biologically based posthumanism creates some difficulties for the new materialists. Based on a post-

structuralist project and at the same time striving to build a materialistic philosophy, biological discourse seems to be a good space for such a synthesis since biological categories are relational, processual, material, and at the same time, in most cases, do not follow anthropocentric tendency, considering human as one of a wide variety of species. The refusal to use the biological discourse blurs the post-humanistic and anti-anthropocentric component, creating a perspective for describing all the same efficient processes rather than targeted criticism.

Thus, the materialistic counterattack in terms of meaning has a twofold effect. On the one hand, it opposes idealistic trends and the Kantian basis, proclaiming a material and objectified ontology for semiotic phenomena.

Both authors return materiality to the very ontology of meaning but in different ways. Bennett understands that phenomenon, which was called invisible and virtual in Merleau-Ponty and Deleuze, respectively, as a non-representational but nevertheless effective force of matter. On the other hand, Barad claims indispensable materiality of any discursiveness, as a mutually conditioned interweaving of the materiality of the world with the very condition for the emergence of meanings. If we equate the Deleuzian virtuality of meaning with Barad's "discursiveness", then this allows us to expand the biosemiotic consideration of materiality. In this case, the materiality of the semiotic meaning not only has efficiency due to the specific materiality of the sign object or representamen and not only at the level of the corporeality of a particular interpreting organism. But, the very ontological inter-organismal space of meaningfulness, the element of meaning, has a material origin and material trajectories of actualization. Thus, the new materialism can offer biosemiotics a number of useful remarks: this is an increased attention to the forms of agency of objects and representamens; assumptions of non-human forms of discursiveness and its reciprocal relationship with materiality; an assumption about the presence of an unrepresentable efficiency of material objects (including those which play role of object in semiosis).

At the same time, the constructiveness of the "new materialists" for biosemiotic discourse is rather conditional due to the deliberate ignorance of the difference between living and non-living matter. Of course, this ignorance is not a reason for overlooking the possible contribution of the new materialists, for example, Deleuze also did not pay due attention to this distinction. However, the point is that the new materialists and biosemiotics are asking the same question about the nature of meaning and the role of materiality in its nature. Their answer to the question about the nature of meaning diverges primarily in the aspect of the difference between living and non-living life because it is this difference that allows biosemiotics to distribute various functions behind various

elements of semiosis, for example, as in the case of Peirce's structure of a sign or as in Maran's case of highlighting a modelling functioning realized by the interpreting organism.

Conclusions

Such a small exploration into the field of continental philosophy and biosemiotics shows, first of all, that the discussion about the materiality of semiotic meaning is rapidly transforming into a discussion about the immateriality of meanings. However, as we can observe, the nature of this immateriality is also not obvious. Therefore, in order to gather the polyphony of the authors presented in the work into unified conclusions, I propose to articulate again two key questions.

The first would be the obvious question of whether the meaning is material? So, I turned to two very different authors - Deacon and Merleau-Ponty, both authors moved along the border territory of the discourse of corporality, albeit in opposite directions. In Deacon's case, it is a move away from the physicalist discourse of modern science towards an attempt to justify the non-materiality of meanings and other phenomena in relation to which the organism's intentionality exists. In the case of Merleau-Ponty, corporeality, habitually ignored by the then continental philosophy, comes to the fore. Both authors, despite the opposite trajectories of movements, almost intersect in a compromise position regarding the materiality of meaning. For both of them, the meanings are not material, but have close relational connections with the materiality of the organism. In Deacon's case, this relationality is related to the negativity towards which the organism's intentional dynamics is produced. In the case of Merleau-Ponty it's related to the ontological dialectic of the visible and invisible in the organism-body, where both components are necessary for a semiotic relation with the environment. That is, in both cases we meet the immateriality of meanings, the formation of which is closely connected with the material dynamism of the organism. Such an answer seems to be satisfactory.

We tried to question it by referring to the "new materialists", but the fact that they ignore the division of nature into living and non-living, which is fundamental to biosemiotics. Nevertheless, the new materialists successfully increase the role of materiality, endowing it with non-representative efficiency and emphasizing its role in semiosis. And in this case, it is not only about the materiality of the interpreting organism, but also about the materiality of the sign's object and representamen.

However, in both cases of Deacon and Merleau-Ponty, the nature of this immateriality is not completely clear. In Deacon's case, it is due to negativity in which the meaning is placed, which creates a situation of indistinguishability for the meanings. In the case of Merleau-Ponty, meaning is the relation of the visible-invisible organism to the environment. Therefore, here arises the question about how we need to describe the immateriality of meaning, in order not only to state the fact of its existence, but to make a suggestion about its structure. One of the theoretical options

for the structure of immaterial meaning is the Deleuzian distinction between the virtual and the actual, which can be done even with immaterial phenomena. The actualization of meanings is preceded by the virtual reality of the elements of meaning and biological reasonableness. Thus, the virtual structure of meaning repeats the biosemiotic idea of the close connection between vitality and semioticity. However, the theory of virtuality also complements this biosemiotic view, substantiating the spaces of meaning and biological need not just as a context (which can be taken out of brackets) in which the meaning appears, but as a virtual component of the particular meaning. By combining the virtuality of the certain organism's biological need and sphere of meanings as such, this view helps to consider a particular meaning at the same time as part of the unique Umwelt of a representative of a certain species and as an objective semiotic event.

The question that was tangentially raised in the work, and which deserves deeper consideration, is the question of biosemiotic dynamism at the virtual and actualized level of meaning. Particularly promising seems to me the question of the correlation between virtual and actual dynamics of meaning and their relations with other diverse forms of biological dynamics.

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KOKKUVÕTE

"Materiaalsus ja tähendus: ontoloogilised suhted"

Käesolev töö pealkirjaga "Materiaalsus ja tähendus: ontoloogilised suhted" seab eesmärgiks materiaalsuse ja tähenduse suhte mitmetasandilise analüüsi. Esimeseks tasandiks on seos tähenduse ja interpreteeriva organismi kehalisuse vahel. Seejärel, kui tähenduste ontoloogiline immateriaalsus on selgunud, analüüsitakse ka selle immateriaalsuse olemust. Analüüsis kasutatakse Merleau-Ponty ideed nähtavast ja nähtamatust ihust, Deaconi ideed organismi loomupärasest ententsionaalsusest negatiivsusele ja Deleuze'i ideed virtuaalse ja tegeliku reaalsusruumi piiritlemisest. Materiaalsuse idee tuleb tagasi ühes "uus-materialismi" teooriatega. Töös analüüsitakse neid püüdeid tähenduse materiaalsust tõestada võrdluses biosemiootiliste teoreetiliste printsiipidega. Vaadeldakse mõlemaid "uus-materialistide" teooria aspekte: ideid, mida on võimalik biosemiootilikasse integreerida (materiaalsete objektide roll, materiaal-diskursiivsete suhete dünaamilisus); ja ka lahknevust, mis tuleneb vajadusest eristada bioloogilist elu elutust mateeriast. Kokkuvõttes analüüsitakse töös nii semioosi materiaalsuse eri aspektide mõju tähenduse materiaalsusele kui ka kontseptuaalseid vahendeid, mis võimaldavad kirjeldada selle immateriaalsust.

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