

# How the Category of Embodiment Transforms the Problems of Philosophy of the Language: The Case of Understanding

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The ‘embodiment’ refers to the dynamical interactions between the brain, the body and the physical/cultural environment.

(Gibbs 2005, 67)

## 1. Introductory remarks

In recent decades of the research activity of cognitive science the current known as ‘embodiment’ (embodied cognition, embodied mind) has been more and more visible in such different and inter- and disconnected areas as philosophy, socio-cultural studies, phenomenology, developmental psychology and biology, evolution theories, neurophysiology, neurocomputational modeling, robotics, linguistics and others (Rohrer 2007). It has also been cognitively fruitful and refreshing in shaping new ways of treating fundamental philosophical issues in such distinctions as: mind/body, inner/outer (Svensson / Lindblom / Ziemke 2007, 252), subject/object, the objective/the subjective (Lakoff / Johnson 1980), the theory/the experience or problems: of understanding, the status of linguistic meaning and category of reference (Zlatev 2007), the role and the character of metaphor – naming only few. One has to be aware of the fact that embodied approach constitutes complex philosophical project in progress and as such is very difficult to analyze and judge. Nevertheless, I claim that it has transformed the basic problems of philosophy of language and the modes of studying so dramatically that it is worth taking a closer look at the consequences it has brought for philosophical studies of language. Let us keep in mind that the category of embodiment is tightly connected with re-formulated philosophical category of knowledge, where knowledge is treated as situated, em-

bedded in the environment and cognitive capacities of the subject as a dynamic and unstable phenomenon which relies on many different factors (neuronal, phenomenal, social and cultural), including unconscious ones (Lakoff / Johnson 1999, 102-103). Consequently, the aim of the embodied approach to language is very different from disembodied one. I want to specify what kind of differences we are exactly talking about here, but before I will do so, let me shortly characterize the category of embodiment.

## **2. Three ideas of embodiment**

Dealing with vast, complex and complicated material, overfilled with various theories formulated in embodied approach to cognition and mind, I have decided to select and name three, the most representative presentations of the category of embodiment as I see it (though there are different and more complex typologies in literature: Ziemke 2003, Rohrer 2007). They will be called respectively: neuronal, experiential-phenomenological, socio-cultural. These modes of understanding of embodiment are not mutually exclusive. They appear in one theory, but very often one of these modes becomes dominant in certain conception. Let me point out their most important features.

While talking about embodiment we can treat it as the physical substrate and emphasize neuronal realization of all cognitive activities we are examining (Rohrer 2007, 359). This is connected with methodologies which are supposed to be more 'objective' for they use findings from neuroscience (neurophysiology, neuropsychology or neurocomputational modeling). The main assumption here is that embodied cognitive systems need to have physical grounding and that in case of humans, basic features of neuronal organization determine human cognition to the large extent. In other words, cognition is in non trivial way dependent on its physical medium, which means more than just the fact it is realized by brain and its neurons. Among other things it means for example that human conceptual thought is ruled out by various processes which are beyond human conscious awareness (Lakoff / Johnson 1999, 9-15). We should be able to construct models which will explain the correlation between neuronal, behavioral and conceptual levels of human cognition.

The second sense of the category of embodiment seems to be the most known and can be called experiential-phenomenological. We are taking into account two interrelated dimensions here, namely personal experience connected with one's body, and broadly understood environment (together with other people with whom we interact) in which this experience takes place. The main idea, which is directly taken from phenomenology (Husserl, Merleau-Ponty), is that by means of introspection and reflection we can study the role our bodies play in shaping our identity and our culture. Body is understood here as an object of perception and an indispensable source of perception, as a physical object and as a phenomenon very different from materially understood entity. It is emphasized here that bodies project fundamental and initial orientation onto the objects in the world we live in. According to this view, human cognition has its beginnings in sensorimotor system generated by human body with its specific characteristic. In other words, we can interact with the world because we are equipped with sensorimotor capacities, which leads us to another sense of embodiment.

The third understanding of the category of embodiment refers to the wild notion of praxis and practices which in case of humans take place in social and cultural environment. It is underlined here that when an individual performs (acts) we can deduce the form of cultural level of embodiment from that practice and vice versa. The question here is also how a particular person with her body and mind is constructed by the means of being embedded in a particular culture (Rohrer 2007, 350). Great significance is attached here to the notion of interaction, both with other embodied minds and with the environment. We emphasize here that not only nervous system and motor and perceptual capacities of our bodies are relevant to cognition, but also the fact that they are situated in a certain place, historical time and given mother tongue.

### **3. Traditional (disembodied) versus embodied approach to language**

The considerations in this part of my paper have to be necessarily oversimplified. I want to point out some fundamental and basic ideas which underlie the traditional way of studying language in philosophy. I do not intend to show that all theories which one can find in the broad theoretical area of

the philosophy of language, especially when one takes all its nuances into account, are good illustrations for all theses stated in the so called disembodied approach to language. On the contrary, the advocates of the embodied approach quite often draw some inspirations and solutions from complex philosophical tradition of dealing with language conceptions. Nevertheless, we can conclusively point out important and essential differences. Just by looking at the companions to the philosophy of language and basic manuals to that domain of philosophy, we can enumerate its fundamental problems, categories and notions. For example, we can find there the problem of meaning and theories of meaning (with such notions like propositional attitudes, holism, naturalized semantics, metaphor); the problem of the relation between language, truth and reality (which generates among others such issues like realism and its oppositions, theories of truth, analyticity, rule-following); the trouble with reference, identity and necessity (with such terms like rigid designation, objects and criteria of identity, modality) (Hale / Wright 2000). Language is mainly treated here as a phenomenon which can be described on a symbolic, formal level (the idea developed out of Chomskyan linguistics) where meaning is a kind of abstract content (Rowlands 2004, 173). What is more, language seems to be a kind of passive, transparent medium between cognitive subject and the world as an object of cognition (where object/subject distinction and the objective/subjective distinction are taken for granted).

The idea of language as something embodied is quite often connected with the famous work on metaphor done by Lakoff and Johnson (Lakoff / Johnson 1980). When we oversimplify their view we can say that the metaphor plays the fundamental role in shaping our ways of thinking, hence it also creates reality we live in. This fundamental linguistic category is embodied in very direct sense, namely because basic metaphors are based on bodily relations. When we follow Lakoff and Johnson in their later book *Philosophy in the Flesh*, we can give more detailed explanation. They claim that the world's languages make use of quite a small number of basic image schemas which are tightly related with the function of human's body (Lakoff / Johnson 1999, 36). As Gallagher used to put it, language is a modality of human body, which is supposed to be illustrated in gestures – treated as the origin of human language in integrative theory of gestures which Gallagher advocates, and in relations between language

centers and motor areas in the human brain (Gallagher 2005, 125). Additionally, Gallagher claims that the body generates gestural expressions only if there is another person, for it motivates and mediates this process (Gallagher 2005, 129).

There is an indispensable need of posing the following question: 'Why philosophy of language traditionally understood is not sufficient?'. We could answer initially and preliminary in a very general hence unsatisfactory way. Namely, that it does not describe natural language as it is used by humans in their everyday activities. The embodied approach underlines the need of taking into account the full context of everyday life of humans – including especially the subjective experience. The traditional approach with its theoretical inclination (with meaning as something symbolic, formal, often explained in terms of truth-conditions; knowledge as built up out of propositions) seems to be too narrow in understanding language and therefore not able to describe human cognition. To put it differently, language in embodied view is seen as an integral part of human bodies, hence as an important component of their functioning, also on neuronal level. It is 'not just as an abstract formal system' (Feldman 2006, 8, 333). If one of the aims of the philosophy of language is to describe human cognition, it has to characterize human language experience using evidence from psychology, neuroscience and philosophy. As we can deduce from the mentioned presentations of the category of embodiment, the problems of meaning and understanding are in a sense empirical problems. Though 'empirical' should not be treated here as in the neopositivist view rightly so criticized by Quine (Quine 1951). Language for example can be treated as a source of data which will allow us to understand human experience. The embodiment plays the central role in the generation of language and this role has to be made more specific for using language as such. To sum up, the traditional approach to language to the large extent simplifies the object of its studies. The embodied current tries to underline the complex character of the phenomenon of language and does not promise to include all of its aspects in one theory.

#### 4. The case of understanding

Let us oversimplify and claim that according to the traditional view of language, to understand a sentence means to be able to map the expressions which are heard or seen onto representation on their meaning (Weiskopf 2009, 6). Meaning here as we have seen before, is an abstract formal entity which can be computed by a cognitive system. Let me now compare this approach with the embodied one.

Embodied neuronal approach states that understanding language involves almost the same neuronal activity as in the case of moving and perceiving (Feldman 2006, 5), which means that more or less the same basic neuronal mechanism is functioning when people use abstract thoughts and when they move their hands. This results in initial claim that the capacity to use and understand language is an integral part of broader bodily-neuronal cognitive system, and as such is not a kind of higher order cognitive faculty. It cannot be treated separately, but rather as continuous with other human mental activities. Following the studies of simulation mechanisms and the functioning of mirror neurons we can see that they play fundamental role in human capacity of understanding others and probably also of understanding language. Roughly speaking, in order to understand the action which is observed by a given agent, she simulates what she is observing by means of her own sensorimotor processes (Svensson / Lindblom / Ziemke 2007, 253-254). It is worth noting that the evidence from contemporary brain science suggests that the genesis and the evolution of language involves complicated net of interactions between 'the internal' (neuronal, physical) and environmental elements, which means that nature vs. nurture debate in case of language is cognitively fruitless (Feldman 2006, 282).

Phenomenological and socio-cultural view of embodiment suggests that understanding language is a part of wider category of understanding others, which requires practices with shared experience that makes the communication possible. Zlatev for example introduces the concept of mimetic schemas which coordinate embodiment and situatedness of human cognitive subject in a frame of work which can be coherent. According to him linguistic symbols are embodied because their meaning is partly constituted by these mimetic schemas. Their functioning involves phenome-

nological body, representational structure (though with a reformulated sense of representation) and the possibility of pre-reflected sharing them with others (Zlatev 2007, 326). Once again: body as a phenomenon, neuronal mechanisms and environment full of others, integrally constitute basics for functioning of language and language understanding. We should treat understanding as a process in which agents use their knowledge about how their body could interact in environment. In embodied approaches language communication and (communication in general) does not occur between Cartesian minds producing specific theory in internal mental realm. As a result of this theory speech, gestures or certain actions appear (Gallagher 2005, 212). Rather these gestures, interactions and speech constitute understanding itself. Gallagher points out that the understanding of other's intentions is possible because they are directly seen in others' embodied actions which mirror our own ability to act (Gallagher 2005, 224). The crucial notions here are common situation and social context which allow us to use our practical know-how, and make use of understanding others and understanding others' linguistic expressions possible. We can do so, long before such philosophical phenomenon like theoretical reason is fully developed (so, also earlier than mature adults language is used). One is not able to understand language and what is more is not able to explain the functioning of language learning system unless one is able to point out the relevant information which is available for a language user from her social and linguistic environment (Rowlands 2004, 200).

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