

Reclaiming Mind, Body and Cognition

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The evidence from cognitive science, the science of the mind and brain, plays its crucial role: concepts, language, reason and feeling are embodied in the deepest way. Reclaiming cognition helps to take embodiment as a living phenomenon since everything we think, say and do depend on the workings of our embodied minds. Using tools of the emerging field of cognitive linguistics, I analyze the foundations/research of this concept, raising important issues of cognition, the mind and the notion of time flow through the time-space case study. The mind as fully embodied provides us with knowledge of the daily things encountered in the world and makes us who we are. This is philosophy in the flesh.

This article examines the primacy of real-world bodily experience for understanding the human mind. I also embrace the idea that the peculiarities of the living human brain and body, and the bodily experiences they sustain, are essential ingredients of human sense-making and conceptual systems. These conceptual systems are created, understood and sustained, through very specific cognitive mechanisms ultimately grounded in bodily experience, which is in turn somewhat constrained by the nature of the world that we function within. In embodied / experiential realism, there is no 'unbridgeable gulf between language and thought on one hand and the world on the other'. Language and thought are meaningful because our functioning as part of reality motivates them. It is because 'the body is in the mind', as Johnson puts it, that our basic-level and image-schematic concepts are meaningful. (Lakoff, 1990)

Through the time-space case study, I favor the idea that cognition and the study of mind need to be reconsidered. First, I will present the time-space case through current work done in the emerging field of cognitive linguistics, focusing on the understanding of the notion of time flow. Second, this analysis will raise important issues that demand understanding of cognition and the mind: a view that sees the mind as fully embodied. Finally, I will describe what full embodiment means to avoid misunderstandings. I will take embodiment to be a living phenomenon in which the primacy of bodily-grounded experience (e.g. motion, intention, emotion) is inherently part of the very subject matter of the study of the mind – an embodied-oriented approach that has an explicit commitment to all of cognition. We must have a clear understanding of these important mental phenomena, which have been at the core of much of mainstream cognitive science and philosophy of mind.

The emerging field of cognitive linguistics has confirmed that an important amount of abstract thought is unconscious, that is, it happens below the level of awareness and therefore is often beyond introspection. It has also shown that concepts are systematically organized through everyday cognitive mechanisms such as conceptual mappings, which are subdivided into conceptual metaphors and blends. A key concept in this theory is that the 'projections' from source to target domain are not arbitrary because they are motivated by our bodily-grounded experience, which is biologically constrained. For example, expressions like 'She greeted me warmly' or 'Send her warm hellos' show a conceptual metaphor which allows us to conceptualize affection in terms of bodily grounded thermal experiences: warmth. This mapping is not a mere arbitrary social convention. It is based on a human invariant, which is the shared experience of the correlation between the bodily sensation of warmth and affection from the earliest days of our ontogeny (Maturana, Varela, 1987). Among hundred of conceptual metaphors that have been studied in depth in the last decade (Lakoff, Johnson, 1980), there is the one concerning our understanding of time in terms of motion in space.

Expressions that make use of completely different words, being about different subjects, and being observed in different contexts, do have something in common: they all serve to express ideas about time in terms of objects, positions and movements in space.

'Faster than ever we are approaching the end of the millennium; he finally left his sad past behind; the winter hasn't arrived yet; he is organizing a retrospective of Hitchcock's movies; the days ahead of us are promising; the concert took place the day before yesterday; Christmas is gone; it started all the way back in the thirties; the millennium bug will bother us well beyond the year 2000; so far we have been lucky.'

People immediately understand that the days ahead of us refer to days in the future. People never seemed to be puzzled with expressions such as 'we are approaching the end of the millennium'. Somehow, they implicitly understand that approaching implies that the given time (the end of the millennium) is a moment that has not occurred yet, and that it may occur soon.

When producing speech, people usually generate an impressive amount of spontaneous gestures, bodily postures, and facial expressions. Rather, people produce, in perfectly synchronized manner, spontaneous gestures, which match the meaning, timing, and form of the oral expressions used (Thelen, 1999). For example, with a hand or finger people point towards something in their backs at the very moment when they say 'all the way back in the thirties', or they show something in front of them when saying 'the days ahead of us'. Therefore, bodily actions and speech not only are coherent but also occur with striking synchronicity with speech. Moreover, in everyday conversations, people make astounding inferences in matter of milliseconds. For example, what does it mean to say that 'Christmas is gone'? Gone where? From where to where? After all, Christmas is a social event, and as such it does not move anywhere. Similarly, if two people are sitting in a pub drinking beer, why should they say 'faster than ever we are approaching the end of the millennium', if they are just there, simply sitting, how can they approach anything? From where are they approaching it? Faster than what?

How is it that human beings understand, so effortlessly and unconsciously, ideas, experiences, and inferences about time, while talking about space? How can that be?

This mapping -time events are things in space - provides some interesting insight into the nature of the human mind and human conceptual systems. More precisely, two aspects are especially relevant: the universality of the use of one-dimensional space as source domain of the mapping, and the primacy of the inherent bodily orientation.

The issue of universality also raises another question: is it possible to observe cultures in which time events are conceived in terms other than objects in space, in terms of sweet-and-sour tastes, chromatic experiences, and other situations?

There is no evidence that such a case exists. In all languages studied so far (oral and written), time events are in one way or another conceived in terms of things (entities or locations) in space. Linguists have not observed the conceptual structure of time flow based on domains of human experience such as tastes, flavors or colors. Given this, the future can't taste purple as Núñez posits it.

It's worth mentioning that in all cultures studied so far, the mapping time events are things in space is not taught deliberately and systematically at school or through any form of specific instruction. These observations suggest that such mappings are not mere social agreements or conventions. Human beings, no matter the culture, organize chronological experience and its conceptual structure in terms of a very specific family of experiences: the experience of things in space.

There is one bodily orientation that is predominant in a wide range of human cultures, namely the future as being ahead of us and the past as being behind. If we are really serious about studying the mind, we can't ignore this simple but important fact. This means that in explaining this and any 'human apparatus', we must propose a research program that considers, in an essential way, the primacy of the peculiarities of the human body, bodily experiences and actions which underlie basic forms of human sense-making. Regarding the bodily orientation involved in our time-space case study, this means proposing an explanation that, among others, takes into account fundamental features of human movement.

It would be a serious mistake to consider the predominant bodily orientation in this mapping as an

accident, and as anecdotal data. A theory of mind and cognition must consider the primacy of the specific constraints of our bodily-grounded experience shaped by the peculiarities of our brains and bodies. In sum, what it is learned from this case study is that in order to understand cognition and the mind, one must conceive them as fully embodied phenomena (Lakoff, Johnson, Núñez, Varela).

In the last couple of decades, the study of mind has experienced an interesting and gradual change. There has been a tendency to move from a rational, abstract, culture-free, centralized, non-biological, ahistorical, unemotional, asocial, and disembodied view of the mind, towards a view which sees the mind as situated, decentralized, real-time constrained, everyday experience oriented, culture-dependent, contextualized, and closely related to biological principles – in one word, embodied (Núñez, 1995). This gradual change has produced terms such as 'embodiment', 'embodied mind', or embodied cognition' (Clark, 1997; Johnson, 1987; Lakoff, 1987; Varela et al., 1991)

'Full embodiment explicitly develops a paradigm to explain the objects created by the human mind themselves (i.e., concepts, ideas, explanations, forms of logic, theories) in terms of the non-arbitrary bodily experiences sustained by the peculiarities of brains and bodies'. (Lakoff and Núñez, 2000)

An important feature of this view is that the very objects created by human conceptual structures and understanding are not seen as existing in an absolute transcendental realm, but as being brought forth through specific human bodily grounded processes. Conceptual systems and forms of understanding are not considered a priori, but they become subject matters to be explained in real-time bodily-grounded terms. From this perspective, not only are color categories embodied (they are not out there in the world), but also the concept of democracy, the truth of Pythagoras' theorem, or the essence of any mathematical object are embodied. (Lakoff and Núñez, 2000)

In sum, we must understand the conceptual structure involving elements such as future-being-in-the-front, past-being-in-the-back, and so on, not as a priori transcendently objective ideas, but through the peculiarities of our brains and bodies that make them possible. What is needed, then, is an embodied-oriented commitment to all of cognition. The cognitive mechanisms that make these everyday phenomena possible are structured by fundamental bodily-grounded experiences. This study supports the embodied nature of the mind. Referência Bibliográfica

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