On Embodying Decision-Making and the Endless Circularity of Understanding the Mind

Toma Strle
University of Ljubljana, Slovenia
toma.strle/at/pef.uni-lj.si

>Upshot • To provide an illustration of some of the author’s theses, I firstly discuss contemporary accounts of embodied decision-making. I argue that they do not endorse the embodied cognition thesis in its essential (or radical) scope and thus cannot provide a meaningful account of decision-making. Secondly, I briefly discuss researchers’ intrinsic embeddedness in their scientific culture and life-world and the associated inseparability of the subject and the world. I end the essay with a question pertaining to the seemingly endless circularity of knowledge emergence in cognitive science which, arguably, entails that we cannot reveal the “invariants of the mind.”

1 In theoretical as well as empirical accounts of the mind, one cannot but notice the growing trend of discussing and researching cognition as embodied, extended and/or enacted (the 4Es; see Vörös, Froese & Riegler 2016). But this, as Kristian Martiny rightfully claims in his target article (in §16, for instance), does not mean that the thesis of embodied cognition and the consequences it entails – at least as it was spelled out by Francisco Varela, Evan Thompson and Eleanor Rosch in *The Embodied Mind* (1991) – are taken into account in their full and essential scope.

2 This holds especially for the professed third-person sciences (such as neuroscience or behavioural sciences) that advocate the embodied nature of cognition. There, one often “discovers” phenomena, claimed to be embodied in this or the other way, that are “embedded” in, conceptualised and researched from the perspective of the cognitivist (i.e., representationalist) framework (see e.g., Varela, Thompson & Rosch 1991: 134f). These so-called “embodied” approaches conceptualize the researched phenomena as objects, existing somewhere in a pregiven world, independent of the observer, of social and cultural practices and devoid of values (of individuals or researchers), experience and first-person(al) perspective (see also Strle 2013, 2016a). As such, these approaches essentially cannot be called embodied cognition (enaction) proper (or, said to be embodying cognition, as Martiny puts it) and considered to be in any way (radically) transforming cognitive science, for they linger in the cozy grounds of the tradition (see also Vörös & Gaitsch 2016 for a similar claim).

3 A good example is decision-making research, where more and more scientists – with good intention, of course – are trying to “embody” decision-making. They claim, for instance, that the brain’s sensorimotor regions are crucial for perceptual decision-making (e.g., Fillimon et al. 2013); attempt to understand bidirectional influences between actions and decisions (e.g., Lepora & Pezzulo 2015); advocate the importance of studying real-time decisions of animals in interaction with their environment (e.g., Cisek & Pastor-Bernier 2014); or argue, for instance, for so-called embodied economics (e.g., Oullier & Basso 2010). Moreover, since most studies of decision-making are carried out in labs and use extremely simple “choice” tasks, some are beginning to show concern for the ecological validity of such studies (e.g., Camerer & Mobbs 2017) – however, without any reflection on the traditionally accepted presuppositions and methodological practices of third-person research they endorse.

4 Notwithstanding the efforts to overcome the traditional assumptions and directions in decision-making research, none of the above-mentioned studies and approaches, even though most could be put under the umbrella of one or some of the 4Es in the “weak” sense, take the thesis of embodied cognition seriously enough, or consider – even though some do refer to it (e.g., Oullier & Basso 2010) – embodied cognition in the enactive sense of Varela, Thompson & Rosch (1991).

5 Although one can identify many “points of departure” from the enactive understanding of cognition in the so-called embodied accounts of decision-
making, I will first and foremost discuss their ignorance of the experimental and the consequences it entails and second, their unawareness of their own intrinsic embodiedness in a specific (third-person, in this case) scientific culture.

« 6 » Quite typically, the “weak” embodied accounts of decision-making do not focus any research energy on the experiential and first-person aspects of decision-making – an essential methodological as well as epistemic step for any proper embodied account of decision-making (furthermore, they also do not even touch upon the “double nature” of embodiment). Accordingly, they do not have any insight into what meaning (decision) situations, if any, have for decision-makers. They do not, for instance, know whether a situation is understood as a decision situation by the alleged decision-makers (deemed as such by researchers) in the first place; how alternatives are understood and created by the agents; what subjective consequences (if any) a decision situation entails for decision-makers or how subjective consequences and their importance are “evaluated”; how decisions are interwoven with decision-makers’ goals, values and their interactions with their environment, etc. How – if at all – situations and decisions are constituted and created by and for the agents is quite beyond such approaches (see Strle 2016a for a more detailed account and critique of the “weak” embodied accounts of decision-making). Thus, the purportedly embodied accounts of decision-making provide a rather shallow and possibly a false account of decision-making. Allow me to illustrate some of the claims by means of an example.

« 7 » Imagine a person walking towards a coffee house, sitting down, browsing the menu for some time and, when the opportunity arises, ordering a cup of coffee. From the perspective of the third-person scientists, this person is thus made by persons, “for they are made by persons, their ignorance of the experiential and the first-person perspectives of the purportedly deciding subject. She might just be looking at the menu to conform to social rituals of being in a coffee house and might be, when pretending to browse the menu, actually thinking about something else entirely and not considering any options after all. Furthermore, it could be that her “decision” to order a cup of coffee was not a decision at all, for she always orders a cappuccino and thus simply follows her habit: no decision-making to be “found” in this case. On the other hand, we can imagine the same situation but a different person who has just “decided” to start leading a healthier lifestyle. Although she dislikes the potential consequences such a “decision” entails, she yields to her friends’ conviction that unhealthy habits need to be changed. When in the coffee house, she vigorously struggles in her mind whether she should order the juice with cream she so likes or the healthier, but to her not-so-tasty, green tea – possibly quite a difficult decision for that specific person in that specific (social) situation, full of anxiety, elaborate deliberations about the alternatives and subjective consequences, reflections on her own goals and values, etc.

« 8 » How a “purely” third-person account of decision-making could even differentiate between the two radically different ways of decision-making is quite unclear. Admittedly, the example is simplified and only representative of rather “simple” decisions (at least from a third-person perspective), but nonetheless indicates that decision-making cannot be understood without taking into account the experienced sense and meaning a subject brings forth into a situation that essentially emerges out of the interaction of the subject and the world. As such, decision-making, as any other cognitive “phenomenon,” cannot be understood, at least not in any meaningful way, from the perspectival and methodological tools of objectivistic sciences.

« 9 » The phenomenological study of decision-making of parents of infants in intensive care by Michael van Manen (2014), on the other hand, is, to my knowledge, one of the few studies of decision-making that takes the thesis of embodied cognition further than most other embodied accounts of decision-making (and towards Martinis’s more radical proposal, as described in §§44–46, for instance). And, although van Manen does not speak of decision-making as embodied, he allowed ordinary persons, with their specific values, cultural backgrounds and experience, to co-generate knowledge about decision-making. Among other findings, he could, by pursuing a phenomenological take on decision-making, show that the way parents experienced and interpreted “decision” situations – in which they had to “decide” between trying a very risky procedure that could leave their infants severely disabled and terminating the life-support on which they depended – strongly determined whether the situation was even understood as a situation that affords decision-making. That is, for some parents, the presented situation was not understood (and felt) as a decision situation at all. A conclusion that could not have been reached by any third-person – embodied or not – account of decision-making.

« 10 » All in all, the “weak” approaches to embodied decision-making and cognition in general – not valuing the lived experience, not questioning their observational and objectivistic premises and not taking and working with any but the third-person perspective (§9) – thus do not by any means endorse any stronger and essential commitments of the embodied (enacted) view of cognition.

« 11 » Let me elaborate on the second point of this essay, pertaining to the essential commitments of embodied cognition. The “weak” embodied accounts of cognition (and decision-making), of which most endorse the traditional presupposition of third-person sciences, do make inferences about the subjective matters of the mind. But one should note that such inferences are not objective third-person inferences, as free from first-person content as most third-person scientists would like to have it. That is, they cannot be claimed to be “third-person,” for they are made by persons, trained in specific ways of doing science and accustomed to accept specific presuppositions about, and conceptualisations of, the mind. Moreover, first-person content of such inferences emerges from the life-world (see §20 and §21, for instance) in which researchers (as any other person) are intrinsically embodied (e.g., from their everyday experience and “naïve” theories they have about the mind or decision-making). As Varela nicely expresses the point:

http://enaction.info/13/1/039.martiny
What is problematic is that this double-natured embeddedness (in a scientific culture and life-world) of inferring has remained unreflected and not researched in cognitive science. But if we are to radically embody cognitive science, as Martiny argues (e.g., in §§9, 11, 20, 66), we cannot stop at systematic research of experience or at uncovering correlations with third-person accounts of mental phenomena, the “mild” neurophenomenology promises (see Petitmengin 2017 for the distinction between light or mild and deep or radical neurophenomenology). What is required, is (systematic) reflection upon and research (see, e.g., Kordel 2016 and Petitmengin 2017) into our own theoretical stance(s), presuppositions and practices (whatever they are: third-, first- or second-person). Namely, theories, research and findings are structured around and constituted by presuppositions, practices and values of the research community and the life-world we are embedded in.

If we do not try to understand and research how our own practices, values and viewpoints bear upon the findings and conclusions we draw from our research, and if we do not try to understand how the world we inhabit bears upon the very practices, values and viewpoints we passionately defend, we cannot understand (or claim to be endorsing) the full scope of the circularity that is intrinsic to any research and understanding of the mind (and, possibly of the enactive view of cognitive science). As is succinctly put forth by Maurice Merleau-Ponty towards the end of his Phenomenology of Perception:

“The world is inseparable from the subject, but from a subject who is nothing but a project of the world; and the subject is inseparable from the world, but from a world that it itself projects.” (Merleau-Ponty 2012: 454)

The hard question of course is, whether endorsing such a seemingly endless circularity of knowledge emergence means that we, in the end, cannot reveal “invariants of the mind” (see also Strle 2016b). For instance, “invariant phenomenological structures, such as that of the embodied nature of cognition” (§50) that Varela (1996) seems to hope for (but see Petitmengin 2017) in his neurophenomenological programme. And, would we not, by presupposing that such invariants do, in fact, “exist to be discovered,” end up behaving in a similar way to the way third-person sciences do?

What is more, is it not that cognitive science is, in fact, about “variant entities of the mind” that, to use the language of Ian Hacking (quoted from Brinkmann 2005), change according to the classifications, descriptions and actions pertaining to them? That is, are not “entities” that cognitive science tries to understand actually much more “fluid” and “unstable” than we would want to admit, possibly ever changing according to how we approach them? I am not sure whether the author is willing to endorse such a radical opening up of cognitive science and it would be interesting to hear what he thinks about the possibility of such an endless “looping” of understanding the mind that has been, in somewhat different words, already described by Varela in, for instance, his 1984 article “The Creative Circle: Sketches on the Natural History of Circularity.”

Admittedly, even though the intrinsic circularity of trying to understand the mind, the world and their relation is, arguably, unavoidable, and awareness of it possibly necessitates a kind of existential uncertainty, we should not try to escape from it by remaining in the “safe” grounds of third-person sciences or, nowadays, in “mild” neurophenomenology. For, only by allowing uncertainties to remain a part of our life-world, can we, in fact, claim to be opening up cognitive science and, to quote Varela, allow for ethics to be “the very foundation of knowledge, and also its final point” (Varela 1984: 323).

All said, I strongly sympathise with Martinys’s call for opening up cognitive science. His take on what it means to be an embodied cognitive scientist is, in my view, a welcome illumination and critique of cognitive science.

Toma Strle is a philosopher, cognitive scientist, and assistant professor at the University of Ljubljana. He holds a bachelor’s degree in philosophy and a doctorate in philosophy and cognitive science (he did his PhD on the topic of metacognition in decision-making). His main research interests include decision-making, metacognition, consciousness and the relation between first- and third-person approaches to studying the mind.

Received: 7 October 2017
Accepted: 12 October 2017

Varela on the Pragmatic Dimension of Phenomenology

Andrea Pace Giannotta
University of Florence, Italy
andreapacegiannotta/at/gmail.com

> Upshot. I examine Varela’s relationship with Husserl’s phenomenology, highlighting Varela’s acknowledgment of the pragmatic dimension of its phenomenological reduction. I argue that Varela sees, in some developments of phenomenology, a deconstruction of the subject-object duality and an embodied view of the mind. I also highlight the existential dimension of Varela’s radical proposal, which contributes to further opening up and embodying cognitive science.

Kristian Martiny’s target article successfully shows how to “open up” and “embody” the cognitive sciences. Drawing on his research on cerebral palsy, Martiny argues that the cognitive scientist must question the objectivist and observational premises that are present in most of the classical cognitive sciences, by working simultaneously with first-, second- and third-person approaches and by the rethinking of the concept of what a laboratory is by, e.g., engaging with subjects in the everyday world and working with audio-visual media and theatre. Martiny argues that these strategies for opening up the cognitive sciences were first introduced by Francisco Varela more than 25 years ago, with his radical proposal of an enactive approach to cognitive science.