

duction of the vital to the chemico-physical so well-established? Phenomenologically, there seem to be some fundamental doubts, which a program of the phenomenologization of nature must take into account.

« 8 » My final remark concerns the existential background of the phenomenologization of nature, namely the non-dualistic experiential relation to nature. Non-idealistic correlationism is not limited to thinking about the correlation of mind and nature, but, on a more fundamental level, it also involves experiencing it. Vörös pleads, apparently alongside Varela's neuropsychophenomenology, for a cultivation of embodied experiences (§35). However, the specific configuration of the interrelation between the cultivation of a proper attitude and the ability to have conceptual insights remains unclear. Of course, (phenomenological) thinking is to a great extent based on cultivating a specific attitude (Gaitsch 2014). However, it is uncertain what meditation or similar practices could provide for the more specific task of phenomenologizing nature: What kind of "small change" may we expect from it? In this regard, the sketch of a "circular interrelation" (§40) in the conclusion seems like an afterthought, and deserves further elaboration.

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Cognitive Science and Phenomenology: A Step Towards the Epistemic Ensō

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> Upshot • This commentary highlights the contribution of "The Uroboros of Consciousness" to the integration of phenomenology with cognitive sciences by replacing the question of how we want to make such integration. In a very pertinent manner, this article looks at the other side of a coin that until now has been turned to the requirements and criteria of validity of the naturalistic paradigm. This movement allows us to come back to the original intention of this dialogue and to ask ourselves what we can do to make it more satisfactory.

« 1 » The target article by Sebastjan Vörös deals with one of the key questions of the opening process towards the understanding of experience in the field of cognitive sciences. This question is of how we understand the integration of cognitive science and phenomenology. While this question should be at the basis of this opening process, curiously, it has been poorly addressed so far. In this sense, "The Uroboros of Consciousness" is a great contribution to the current discussion about the development of the cognitive sciences.

« 2 » The central idea developed in this paper is that the integration of cognitive science and phenomenology involves a double movement: on one hand, a naturalization of phenomenology, and on the other, a phenomenologization of nature. With this, the author emphasizes that...

“the introduction of phenomenology into cognitive science is [...] not merely a *quantitative* addition to and extension of a pre-determined framework of natural sciences, but involves a *qualitative* transformation of our fundamental understanding of nature and science [...]” (§1)

« 3 » As pointed out by the author, so far the debate on the integration of cognitive science and phenomenology has focused on the discussion of whether phenomenology is a research program in itself and whether it meets the requirements imposed by what he calls the "naturalistic" paradigm.

« 4 » After reaching the conclusion that phenomenology does have a methodology of its own that is compatible with the naturalistic paradigm, the author sets out the following questions: Have the research programs which have so far tried to carry out this integration been managed successfully? Or do they correspond to small changes of secondary importance in the "transcendental project" proposed by Edmund Husserl? At this point the author presents, from the perspective of phenomenology, the objections to integrating with the cognitive sciences. This is, in my view, the major contribution of this paper since it looks at the other side of a coin that until now has been turned to the requirements and criteria of validity of the naturalistic paradigm.

« 5 » The first objection has to do with the difference in the objects of study addressed by phenomenology and the natural sciences. Phenomenology deals with no exact essences, therefore it cannot be subject to formalization, which is a fundamental process of the natural sciences. Thus phenomenology would not be subject to naturalization. The second objection has to do with the fact that the natural sciences assume the existence of a natural world independent from the observer. In contrast, in phenomenology this assumption is bracketed and its interest focuses on the structure of the experience as such.

« 6 » While these concerns appear to question strongly the possibility of a successful integration between phenomenology and cognitive science, the author foresees a possible outcome. This could be a transformed naturalism, based on a re-conceptualization of the concept of nature that includes "issues such as meaning, context, perspective, affordances and cultural sediments" (Zahavi 2010: 15, cited by Vörös §21). He proposes a two-step process to integrate satisfactorily phenomenology and cognitive science.

« 7 » The first step would be a conceptual shift towards a way of understanding cognition characterized by what he calls

the “4EA” (extended, embedded, embodied, enactive, and affective), in contrast to the “traditional” way of understanding the problem of cognition or GOFAI (“Good Old fashioned Artificial Intelligence”). The main difference between these two approaches would be a way to understand the mind-body problem and in particular the relationship between the nervous system and consciousness. In general terms, while GOFAI adheres to the idea of a pre-existing world that is independent from the observer and understands cognition as the computation of symbols that represent the outside world, the 4EA approach rejects this view and argues instead for the co-dependency and co-determinations of subject-object.

« 8 » This conceptual shift certainly seems fundamental. If at one point we believed that we could find the solution of all human mysteries in our genes, today we seek “the truth” in our brains; the explosion of disciplines such as “neuroeconomics,” “neuroart” and “neuromanagement” somehow represent the hope of finding a solution to social and cultural issues in our neurons. There is much confusion in how we understand the relationship between the nervous system and consciousness. Perhaps the biggest problem is not in doing research that focuses only on studying neural activity without integrating subjective experience, which is therefore “reductionist,” but in the interpretation of the results thus obtained. The problem is the reductionist interpretation, and solving that it is necessarily a conceptual change.

« 9 » The second step is to translate this conceptual transformation into a change, not only in the way of understanding, but also in how to experience our relationship with nature and with our mental life. The author argues that despite the reception and development that the vision represented by 4EA has had, this has not necessarily been “embodied” by its supporters.

« 10 » This step seems central to me: conceptualizing differently the body-mind problem is not the same as actually living it differently. Without this change of attitude, we risk defending an approach superficially, by fashion, without understanding what its transformative character is. This can make us operate from the same reductionist and

dualistic paradigm as before, but this time, for instance, putting electrodes on the monks’ heads when we try to understand their skills in exploring their mental experience.

« 11 » While this article fully complies with its main objective, which is to provide a general idea of what it means to take seriously the integration of phenomenology into cognitive science, it concludes with a proposal that, in my view, has already been made. In essence, the invitation given by the author does not differ much from what Varela proposed 20 years ago (Varela 1996a): a conceptual change from representationalism to the enactive approach, and a pragmatic attitude that develops tools to incorporate the study of experience to the scientific field. Hence, we may ask: (a) why did Varela’s original proposal lead to adaptations, interpretations or readings in which phenomenology is subjugated to the criteria of validity of the natural sciences? (b) How can we, in fact, implement this paradigm shift?

« 12 » Regarding the first question, I think that an interesting exercise that could shed light on finding a response would be to conduct an analysis of the historical roots that explain the need for control, certainty and objectivity that characterizes the current way of doing science.

« 13 » Regarding the second question, I think one hint might be to embody research about experience through the analysis of practices that facilitate direct contact with the experience. These practices might well be meditation and the phenomenological reduction, but not only these. For instance, improvisation skills in music (Nachmanovitch 1990), dance (Ravn 2010) or drawing (Eslava 2014) are practices that can teach us, through direct contact with our experience, about our cognitive processes and consciousness. One could identify through tools such as the elicitation interview (Petitmengin 2006) the peculiar and common features of practices that promote openness and flexibility and encourage this attitude in different contexts.

« 14 » Since Varela made his proposal, his heirs have been responsible for paving the theoretical way of the phenomenological approach to be considered in the scientific field. Perhaps, this is a turning point, where

instead of trying to adapt the phenomenological approach to the naturalistic paradigm, we should take another step and expand the limits of the naturalistic paradigm. The target article is a great contribution in this direction.

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The Enkinaesthetic Betwixt

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> **Upshot** • Vörös proposes that we phenomenologise nature and, whilst I agree with the spirit and direction of his proposal, the 4EA framework, on which he bases his project, is too conservative and is, therefore, unsatisfactory. I present an alternative framework, an enkinaesthetic field, and suggest further ways in which we might explore a non-dichotomised “betwixt” and begin to experience our world in a non-individuating, non-dual aspect.

« 1 » There are many things to like about Sebastjan Vörös’s target article, not least of which is the clarity of style and presentation of some very subtle and complex ideas; but more than this, it is the way in which the article stretches imaginatively over a broad range of interdisciplinary material and provides a really very good account of the recent revival of phenomenological approaches in cognitive science. The ultimate aim of his article is to demonstrate that, if we are to have a thoroughgoing grasp of