

Embodiment and Aesthetics: Cognition Going Wider

Two years ago, in 2018, a long-awaited publication saw the light: *The Oxford Handbook of 4E Cognition*, edited by Albert Newen, Leon De Bruin, and Shaun Gallagher. In the words of Tom Froese, a contributor to the volume, such an important collection of articles and critical notes just a few pages shy of one thousand having found a collective place with a highly prestigious publisher “ma[de] the field of ‘4E Cognition’ official” (emphasis added).

But what is this field like? What kind of scholars is involved? Mostly, it is philosophers, psychologists, and cognitive scientists who are interested in the idea of why and how thinking is, so to speak, never *only* thinking. More explicitly, what unites scholars interested in 4E Cognition is the notion that, at least in some (but not infrequent) cases, mental processes are dependent, at different degrees, on extra-cranial and/or extra-bodily factors. This notion is almost on the whole antithetical to the fundamental tenets of classical cognitive science, which conceives the human mind as a substantially disembodied software controlling a hardware, i.e. the body.

Despite the large-scale recognition granted by the *Oxford Handbook*, however, the label ‘4E’ (which canonically stands for embodied, embedded, extended, enactive) is problematic in its own right. Its ‘numerical’ character suggests the presence of a fragmented plurality of positions among its proponents. This is actually the case. The main problem is that the different E’s are not always brought together in perfect harmony or not even compatible at all. Radical Enactivism, for instance, is at odds with the extended mind model on the thorny issue of internal mental representations as well as on the computationalist account of the mind. In general, there is continuity and dialogue between the proponents of these cognate approaches, yet points of disagreement persist.

On the top of all that, sometimes it is not even clear which E's are the right E's or the ones represented by the label. In fact, some advocate a 3E Cognition, leaving aside Andy Clark's extended mind paradigm (for example, Scarinzi in this volume), whereas others include the Gibsonian 'ecological' cognition approach among the four, again at the expenses of the Extended-E. The very term 'embodied' has different traditions of usage: while most of the times it serves as the lowest common denominator for all of the E's (despite being one of them, curiously), in other contexts it may have narrower meanings (see Larry Barsalou's grounded cognition, which sees embodiment as a part of its overall proposal).

These hardly irrelevant differences notwithstanding, what really makes all of the E's hold a common position within contemporary philosophical psychology is their opposition to a number of theses of former cognitivism and classical cognitive science. More or less strongly, the embodied mind is not seen as always intra-cranial and always representational, as the orthodoxy of cognitive science would maintain. Or, more generally, the mind is not seen analogically as the biological version of a computer.

The first, obvious, reason for us to choose the topic of the philosophy of embodiment is that it belongs in several different ways to the interests of our journal, which focuses on the philosophy of mind as well as on aesthetics and the philosophy of language. But there is also a second, more general, reason. As the publication of the *Oxford Handbook* demonstrates, not only is embodiment a theme that cannot be any longer ignored or dismissed, but it presents itself as more compelling than ever. Not solely for its philosophical weight *per se* - as it poses many difficult challenges to the mainstream cognitivism - but also for its important implications for robotics, AI, education, and ethics. Besides, insisting on this theme appears to be more crucial than ever in light of the institutional and theoretical crisis of the research programme of cognitive science described by Núñez et al. (2019).

This composite movement is undoubtedly plural and likely in need of a higher degree of unification, if it aims to become even more recognized worldwide, and with full dignity. Certainly, further theoretical steps are still necessary to fulfil the promises that 4E Cognition has made to psychologists and cognitive scientists - not to mention the problem of an empirical embodied cognitive science, which is in many respects yet to come. In conclusion, we feel that giving space to such a vibrant multidisciplinary field can offer valuable food for thought to our readers.

It is important - continuing the metaphor - to further highlight that this mental nourishment is not one-sided, but rather a varied diet. The essays gathered here are evidence of how broad and heterogeneous the field of 4E Cognition research is, on a (synchronic) cross-disciplinary level as well as on a (diachronic) historical-philosophical level.

sophical one: the problems it raises and the themes it discusses go far beyond those strictly pertaining (or believed to strictly pertain) to the cognitive sciences and the philosophy of mind as they have evolved in recent decades.

Indeed, the current debate confronts, both positively and negatively, a long tradition of thought dating back, at least, to the beginnings of modernity. It is not by any chance that the so-called 'Cartesian paradigm' lies often in the background and acts as a critical reference point for the essays in this collection and, more generally, for much of the contemporary scholarly literature on mind and cognition. We said "both positively and negatively" to emphasize that the contemporary debate does not just (negatively) oppose, for instance, the Cartesian and post-Cartesian mind/body dualism, but it also (positively) revives the interest that several modern philosophers and thinkers took in the spheres of sensitivity, affectivity etc., notably during the seventeenth century (just think of Leibniz) as well as in the dense and still partly underexplored age of the Enlightenment.

Moreover, we cannot avoid noticing that when modern philosophy dealt with the problem of mind (and body) it did so without worrying about disciplinary distinctions or boundaries: if a problem was a philosophical problem, that was because it was a physical, psychological, and (maybe) ethical (and aesthetic) problem as well. In relation to this, the multidisciplinary that characterizes the philosophy of embodiment is - perhaps to the surprise of those who cultivate a unilateral vision of modernity - more a revival than a radical novelty. This does not deny that contemporary multidisciplinary occurs at a stage where the various disciplines have experienced a large and extensive development towards sectoral specialization - hence the difficulties, but also the great challenges that a multidisciplinary approach poses to scholars and researchers.

Yet, as the contributions to this issue show, this multidisciplinary has very vast and porous boundaries: if the mind and cognition extend beyond the brain to include the body and the environment, it is evident that studying the mind and cognition is studying, and not in a merely subsidiary way, everything involving or concerning the body and the environment - starting from experiences that can be described as aesthetic-and-affective and experiences that arise from interactions with the physical and sociocultural environment.

Actually, with respect to the wide range of themes and problems involved, the essays collected here give preference to those issues that have to do mainly with aesthetics - both in the sense of philosophy of sensitivity and affectivity and in the narrower sense of philosophy of art - and with ecology - understood as the study of interactions with the environment and as the discipline questioning the very idea of environment. Two things are worth pointing out here. First, the convergence on the aesthetic-and-affective was not planned by

the editors but arose from the thematic choices of the authors; and this is perhaps to indicate that the dimensions of sensitivity, affectivity and aesthetic experience are deemed (the most) particularly urgent and theoretically relevant today – almost as if an ‘AE’ standing for ‘aesthetic’ should inevitably be added to the canonical E’s that overall connote the philosophy of embodiment. Second, for 4E Cognition scholars the environment is a specific research theme, and furthermore, so to speak, a sort of *fil rouge* that (inter)connects and unites all the terms of the problem: mind, body, and environment. In other words, for these scholars the mind is *in* an environment, and it is *itself* an environment.

From the 4E perspective, and especially from the enactive standpoint, which is the one chiefly addressed by the essays collected in the present issue, aesthetic and ecological approaches to mind (and cognition) are fundamental: for, shall we say, the mind (and cognition) is *already* affectivity and environment. This can also make us understand that aesthetic and ecological questions are important not merely because they are “applications of 4E principles, but because answers to these questions have the potential to loop back into theory and to challenge already formulated principles” (Newen, De Bruin, Gallagher 2018, 13). What 4E scholars think they can find in aesthetics and ecology is an improvement of the theory, not only a test-bench for its possible confirmation.

The first of the essays in this issue is entirely devoted to aesthetics, in both the aforementioned meanings of the term. Firmly persuaded that it requires almost all the four E’s to understand the great variety of aesthetic experiences, in their “4E Cognition and the Spectrum of Aesthetic Experiences” Mia Burnett and Shaun Gallagher develop a pre-eminently enactive, affordance-based approach to art and aesthetic matters. In particular, they claim that

an orientation around affordances [as it is in the enactive theories] rather than tools [as in the extended mind analysis of art] [...] is the first principle of a positive account of art [and aesthetics] in a 4E cognition framework. (*infra*, 165)

Therefore, embracing enactivism in the idea that embodiment and culture are integrated to form a whole, the authors propose to regard aesthetic experience as a “double attunement” toward the objects: immediate and affective, re-organisational and reflective at once. In their words, within a 4E perspective “[b]ody, brain and environment form one system in which aesthetic experience can be simultaneously and variously characterized as sensory-motor, affective, cultural and cognitive” (*infra*, 173).

The aesthetic domain, with its dual character, is the well from which Anna Boncompagni also draws on. Her “Enactivism and Nor-

mativity. The Case of Aesthetic Gestures” offers an analysis (which aims to be ultimately a philosophical one) of some conceptual difficulties that enactivists face in discussing normativity, namely that of “accounting for normativity while avoiding overly reductionist outcomes” (*infra*, 177). Reviewing some valuable, enlightening insights of Wittgenstein and the pragmatists, Boncompagni suggests that aesthetic gestures of appreciation and disapproval (found to be natural and cultural at the same time) could be considered as the paradigmatic cases of enacted normativity. Since these gestures “could help characterize human cognition as intrinsically enactive *and* normative” (*infra*, 191), it is worth, for enactivists, working on them in order to provide a thoroughly untainted-by-reductionism account of normativity.

Carlos Vara Sánchez’s “Raw Cognition. Rhythms as Dynamic Constraints” also addresses the enactive view. More precisely, Vara Sánchez holds that a concept of rhythm based on entrainment (which is akin to Dewey’s, but whose earliest roots are traced back to Archilocus) and not on order and repetition (a notion of rhythm that, instead, is due to Plato first) can be a useful item for enactive approaches to cognition. This – he argues – for the very reason that such a concept “allows us to think of the different oscillators that we find in the body, brain, and environment as parts of nested dynamic constraints” (*infra*, 196) modulating cognition in a way that is not linear: bodily, brain and environmental rhythms mutually interact so as to entrain and be entrained into a global cognitive rhythm.

As stressed above, many of our interactions within the physical and social world are characterized by the presence of a powerful watermark: affectivity, which plays an important role in our everyday lives, and not only from a private, introspective point of view, as the driver of many of our actions. With the essay “Emoting the Situated Mind. A Taxonomy of Affective Material Scaffolds”, Giovanna Colombetti goes in the direction of systematizing the relatively untouched (pun intended) territory of artifacts when they function as scaffolds for affectivity. Her proposed taxonomy of affective artifacts directly rearranges the one compiled by Richard Heersmink (2013), which originally regarded cognitive artifacts. While there is conceptual overlapping between the sub-categorization of these two ways in which artifacts can interact with human agents, a number of differences still arise. In sum, “objects are complex things which can affect us in many different ways in virtue of their material properties as well as of what we take them to refer to”, an ability granted by the “historical and enculturated” (*infra*, 233) character of human cognition.

The last essay of this issue addresses a debated topic within the 4E scientific community we hinted at earlier: how many E’s are really needed by the new embodied cognitive science? In her “4E’s Are Too Many. Why Enactive World-Making Does not Need the Extended

Mind Thesis”, Alfonsina Scarinzi claims that four E’s are too many, while three E’s (Embodied, Embedded, Enactive) would suffice in order to successfully get over Cartesian cognitivism for good. The author also further explicates her position on why exactly it should be so: enactivists can agree with her assumption, but she offers an argument different from others appeared in the past. Her argument pivots on the distinction between the embodied agent (i.e. an organism) and the environment; this distinction – argues Scarinzi – should be maintained, albeit conceived in a different manner from classic cognitive science. This conceptual background also appears to better fit with an enactive account of artifact use and sensorimotor couplings.

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