

Utopian and Scientific Enactivism: Never Ever Getting Back Together?

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Abstract: Meyer and Brancazio make an important distinction between two enactivist projects: “utopian” and “scientific.” I agree that contemporary enactivists would benefit from more clearly distinguishing these projects and their success conditions. However, I wonder whether there are times when letting these projects merge with each other might be helpful, or even necessary.

1. 32 years since the publication of *The Embodied Mind*, enactivism has emerged from its rambunctious adolescence and self-assured twenties, and is now ready for its quarter-life crisis. The revolutionary reshaping of cognitive science that many enactivists youthfully hoped for, and some prophesied, has not materialised. Why not, and what should enactivists do about it? In their target article, Russell Meyer and Nick Brancazio suggest a partial diagnosis and prescription. Past enactivists have failed to, and future enactivists would do well to, clearly distinguish their *utopian* aspirations from their *scientific* ones. Enactivism’s *utopian* agenda involves articulating an overarching and coherent vision of embodied subjectivity and its place in nature. Its *scientific* agenda consists in using enactivist conceptual tools, modelling strategies and operationalisations to make concrete, targeted interventions into current scientific practice. The utopian project is guided by and assessed according to considerations of philosophical cogency; the scientific project is guided by considerations of practical utility and fertility for working cognitive scientists.

2. These different construction plans and success conditions are reason enough to prise the utopian and scientific facets of enactivism apart. Meyer and Brancazio go further, arguing convincingly that a blurry vision of the boundaries between these projects has sometimes led enactivists to develop their views in ways that do not make clear progress on either one. For example, if an enactivist’s goal is the utopian one of working towards a satisfying and cohesive vision of mind’s place in nature, they should not waste too much time tutting and wagging fingers at instances of past or present cognitive science that are deemed incompatible with an enactive conception of mind. They should get on with the job of spelling out a compelling and philosophically defensible vision of embodied subjectivity. If their goal is to make a concrete and constructive intervention into current scientific practice, they should not waste too much time proselytising about philosophical and metaphysical commitments. They should get on with providing specific suggestions for useful operationalisations,

modelling strategies or experimental designs that make use of enactivist conceptual apparatus. A welcome moral of Meyer and Brancazio's story is thus that the critical, finger-wagging mode of engagement with contemporary cognitive science that philosophers of embodied cognition sometimes adopt is of limited utility, whether one has utopian or scientific aspirations.

3. I agree that enactivists today would benefit from attending more closely to the utopian/scientific distinction, and focusing their efforts on making clear contributions to one or the other project. I would like to ask whether this was always so, and whether it will always be so henceforth. I will focus on the type of enactivism that emerges from Francisco Varela, Evan Thompson & Eleanor Rosch's *The Embodied Mind* (1991) – an enactivism, or enactive approach (Thompson 2018), that emphasises the roots of the structures of subjectivity in the self-sustaining dynamic organisation of living systems, and aspires to show how a simple kind of proto-subjectivity entailed by organic life itself can ramify into the complex structures of mature human perception, agency and understanding. Might getting this project into view have required blurring the boundaries between the utopian and scientific projects that Meyer and Brancazio argue should be kept distinct? And might delivering on the reciprocal interplay between phenomenology and cognitive science at which the enactive approach aims require blurring them again in future?

4. Meyer and Brancazio suggest at least two ways in which parts of *The Embodied Mind* run together utopian and scientific projects. First, Varela, Thompson and Rosch (1991) present late-20th century cognitive science as dominated by a cognitivist orthodoxy, committed to construing minds as algorithmic symbol-manipulators. Cognitivism serves as a foil for much of *The Embodied Mind*, with Varela, Thompson and Rosch arguing that its inability to do justice to living subjectivity should motivate an alternative, enactive approach to the study of mind. As Meyer and Brancazio rightly point out, however, cognitive science has never been a monolithic enterprise, always comprising a shifting patchwork of variously interrelated domains and modes of enquiry and explanation (§34). Depicting it otherwise requires disengaging from the fine-grained detail and diversity of scientific practice as it is carried out, and ignoring that working scientists tend to be primarily concerned with the pragmatic ends of prediction and control, not with taking a stance on the metaphysical structure of their objects of study. I take part of Meyer and Brancazio's idea here to be that Varela, Thompson and Rosch's *scientific* project of accurately characterising and constructively engaging with the practice of contemporary cognitive science is impeded by being mixed together with a *utopian* project of diagnosing an overarching picture of cognition that is alleged to dominate the mind sciences, and replacing it with an alternative.

5. Second, Meyer and Brancazio gently chide Varela, Thompson and Rosch (1991) for depicting Rodney Brooks's early robotics as a proto-enactivist research program, ignoring the cognitivist elements of his work and his indifference to many of enactivism's key tenets and aspirations (§§41–43). This treatment of Brooks (also echoed in more

recent enactivist work) again zooms out from the detailed mode of engagement with his work that a constructive *scientific* enactivist project would require, in favour of tendentiously enlisting him as an ally in the *utopian* project of depicting cognition as fundamentally a matter of ongoing interaction with a meaningful environment. More importantly, the example of Brooks underlines the point that utopian theory-building is of limited interest to most working scientists – as Meyer and Brancazio summarise,

“If one can do work that, by enactivist standards, is viewed as a success, and which elicits a broader uptake than enactivist work and nudges the mainstream in a desirable direction (à la Brooks), the motivation for adopting enactivism’s full suite of commitments is undermined.”
(§43)

Utopian enactivists would thus be better served by arguing directly for their overarching vision of mind’s place in nature than by attempting to mine the history of scientific practice for evidential support, since the pragmatic and opportunistic methods of working scientists are at odds with the demands for ideological purity and philosophical cogency that drive utopian theorising.

6. I agree with both these points. However, I wonder if the blurring of the utopian/scientific boundary makes more sense in the context of *The Embodied Mind* and its immediate reception. The late-20th-century mind sciences were not a cognitivist monolith, but they were surely *more like* a cognitivist monolith than, say, the mind sciences of the early 20th century, or the present day. Brooks is not plausibly enlisted as an ally of utopian enactivism. Nonetheless, there is surely some plausibility in placing his work in the context of a broader dissatisfaction with, and nascent move away from, cognitivism that was taking shape in the 1980s and 1990s. Zooming out from the cognitivist aspects of Brooks’s methodology allows us to see potential links between his mobile robots and the currents of ecological psychology (Gibson 2015), cultural psychology (Bruner 1990) and early embodied cognition (Clark 1989) – an emerging pattern in the patchwork practices of researchers that constitutes a turn towards foregrounding the embodied, embedded and engaged character of the minds that they study. Getting this gestalt into view required squinting a bit, foregrounding some aspects of the motley of late-20th-century cognitive scientific practices whilst backgrounding other details. This surely constituted a valuable achievement that has had lasting impacts on science and philosophy. So, my first question is: could temporarily ignoring the important differences between scientific and utopian research be necessary in certain theoretical and historical contexts, such as the context within which *The Embodied Mind* was written? **(Q1)**

7. Perhaps Varela, Thompson and Rosch were indeed writing in a context that legitimated depicting the mind sciences as dominated by a cognitivist orthodoxy. And perhaps that context also legitimated abstracting away from some of the fine-grained details of the approaches of the “virtuous pagans” (§40) they depict as intellectual ancestors, and painting with broad brushstrokes when it came to suggesting how an

overhauled science of mind might look in practice. However, I think it is much less plausible that we are in such a context *now*. Mainstream cognitive science has moved on from the simple cognitivist idea that psychological states can be exhaustively explained via appeal to inner symbol-manipulation. Nonetheless, much work in the philosophy of embodied cognition still frames itself in terms of a revolutionary attack on cognitivist shibboleths. Proponents of embodied cognition have now had several decades to specify concrete and productive avenues of cognitive scientific enquiry that respect the embodied and engaged character of mindedness. Nonetheless, contemporary work on embodied cognition still often excuses itself from providing novel, detailed and plausible models of psychological capacities, or blueprints for empirical implementation, appealing to the implicit or explicit justification that the sheer bleeding-edge iconoclasm of the proposed alternative framework means that getting its broad outlines into view is progress enough for now. These postures made much more sense twenty or thirty years ago, but it is time to move beyond them. Meyer and Brancazio's exhortation to attend to the distinction between utopian and scientific projects will, I hope, help with this.

8. So, I agree with Meyer and Brancazio that Varela, Thompson and Rosch blur the boundaries between utopian and scientific enactivism. Like Meyer and Brancazio, I agree that contemporary enactivists would benefit from a clearer vision of these boundaries. I have suggested, however, that temporarily blurring these boundaries can prove useful in some contexts, such as that in which the authors of *The Embodied Mind* found themselves. My second question is: in order to deliver on the aspirations of the enactive approach set out in *The Embodied Mind*, might blurring the boundaries between the utopian and scientific projects be necessary in future? **(Q2)** A crucial aspect of Varela, Thompson and Rosch's enactive approach involves working towards a closer interplay between (a) the detailed structure of our ongoing scientific practice, and (b) our self-conception as living, experiencing subjects. Its initial chapter reflects on the "fundamental circularity" involved in a scientist's using the methods and conceptual tools of their culture to study and explain their own mindedness – cognitive scientific practice is constrained by our pre-theoretical grasp of the thoughts and experiences that form its subject matter; but our grasp of those thoughts and experiences, and our best attempts to articulate them faithfully and precisely, are conditioned by the cultural apparatus for reflection and understanding we find around ourselves, including scientific practices and concepts. Our experiences, our self-conception, and our science of subjectivity thus stand in an evolving and reciprocal relationship to one another. It is a core commitment of the enactive approach outlined in *The Embodied Mind* that a satisfactory understanding of human subjectivity must recognise its own status as a product of, and participant in, this reciprocal relationship.

9. I will not try here to summarise or reconstruct Varela, Thompson and Rosch's reasons for making a recognition of the evolving interplay between subjectivity, self-conception and science so central, or the various ways in which this interplay is reflected

in more recent enactivist work (see especially the first and last chapter of *The Embodied Mind*, and Thompson's most recent books). Suppose that we agree with them that incorporating a recognition of this interplay is an important goal for any adequate understanding of our minds and lives as facets of the natural world.¹ Then, it seems to me, it follows that an enactivism that delivers on the aspirations set out in *The Embodied Mind* must ultimately reject the claim that there is a clean demarcation between the scientific and utopian enactivist projects. It may still acknowledge that those projects should sometimes, for pragmatic reasons, be treated as distinct and pursued separately. Perhaps we are in such a situation now – in which enactivist efforts have been overly focused on utopian, big-picture theorising at the expense of concrete and productive contributions to ongoing scientific practice, and a reorientation is called for. Nonetheless, the metric according to which claims made by a science of subjectivity should ultimately be assessed is their capacity to clarify our understanding of ourselves and our place in nature. This assessment can only take place against the backdrop of an existing picture – the kind of picture of mind, life, nature and the relations between them at which utopian enactivism aims. Over time, the results of the mind sciences count among the influences that can incrementally reshape that picture, giving impetus to new scientific enquiries – the kind of outcome at which scientific enactivism aims. So, for the kind of enactive approach envisioned by Varela, Thompson and Rosch, whilst the utopian and scientific facets of enactivism can be pursued independently of each other, they are ultimately two interrelated moments of an overarching and ongoing journey towards self-understanding. I find the case that *The Embodied Mind* presents for this vision compelling. Indeed, on my more enactivist days, I am convinced that it is the only shape that a viable naturalist understanding of mind's place in the world could take. However, it seems to involve blurring the boundaries between projects that Meyer and Brancasio suggest should be kept sharply distinct. So, whilst Meyer and Brancasio make a good case that utopian and scientific enactivism could do with a trial separation, I wonder – do they see any prospects for an eventual reconciliation?

¹ What precise understanding of “nature” and “the natural world” is operative here? I take this to be an open question for the enactive approach. The approach is committed to rejecting the uncritical identification of “nature” with the posits of our current natural sciences (Varela, Thompson & Rosch 1991: chapters 1 and 10; Vörös, Froese & Riegler 2016), holding instead that our conceptions of subjectivity and of the natural world should continually and reciprocally inform each other in an instance of the “fundamental circularity” under discussion here. Hence the questions of how “nature” should be understood, and of what it means to “naturalize” subjectivity, are not ones that can be answered prior to and independently of our ongoing practices. See, e.g., Thompson (2020) for further discussion of these issues, and an illustration of how this reciprocal interplay between scientific and subjectivity practices and conceptions of nature might unfold.

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