

Forthcoming - Open Peer Commentary on “Beyond Individual-Centred 4E Cognition: systems biology and sympoiesis” by Mads Dengsø & Michael Kirchhoff

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Individuals for Anti-Individualists

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Abstract: Dengsø and Kirchhoff offer a revised dynamic conception of the individual in place of the bounded cognitive agent of classical cognitive science. However, this may not be sufficiently robust to ground the enquiries into individual and cultural differences that remain vital in the proposed “deterritorialized cognitive science.” It also needs to make contact with rich traditions of 4E research on socially distributed cognition, which are neglected in Dengsø and Kirchhoff’s critique. It is just because individualization is a fragile process, and because boundaries are hard-won achievements, that anti-individualists who highlight the multiplicity, heterogeneity, and dynamism of cognitive ecologies must reconfigure rather than eliminate or efface the individual.

1. Better integration with biology has always been one central motivation for 4E cognitive theories and their situated and distributed kin. In critical and constructive modes, Mads Dengsø and Michael Kirchhoff (hereafter D&K) seek to advance 4E cognition by making this alignment precise, pinning down ways of articulating core 4E claims that do or do not fit with our best biological thinking. I support their focus on the anti-individualism that has always been at the heart of the 4E program. 4E theorists have long forcefully criticized the conceptions of individual cognitive agency that drive classical views of human nature in mainstream modern Western philosophy, cognitive science, and culture. In treating the bounded individual as the foundation of agency, classical accounts of mind committed to two claims that 4E theorists reject: the empirical claim that cognition is entirely *internal* to the individual, and the normative claim that autonomous agency requires individuals to be *self-sufficient*, the self-contained sources and generators of their thoughts and actions, without depending *constitutively* on “external” bodily, ecological, or social resources. To undermine and replace this entrenched individualism, and to combat its pernicious effects on how we treat our bodies, our ecologies, and one another, 4E theorists argue that anti-individualist alternatives have both theoretical and practical advantages: they ask us to embrace interdependence and entanglement, to acknowledge that cognitive processes are intrinsically hybrid, holistic, or “distributed” across diverse, dynamic, meshing or coalescing resources.

2. In their target article, D&K argue that this mission is incomplete in some strands of 4E research, that a residual individualism can be diagnosed in the way some theorists still privilege the individual organism as the primary locus of cognitive agency. The requests for clarification in this commentary are animated by my perspective within the second- and third-wave variants of the extended or distributed cognition research program that is one of D&K's central points of reference, and which does not share the enactivists' strong life-mind continuity thesis. With anti-individualism reinstated at the heart of 4E cognition, setting aside orthogonal debates about representations and traces (Sutton 2015), we need effective replacements for the classical modern conception of the bounded and possessive individual. As D&K ask, "[h]ow are we to understand cognitive agency if not through the privileging of the autonomy of an individual organism?" (§37). Or as we might put it, what are individuals for anti-individualists?

3. To clarify D&K's response to this challenge, we can ask whether they want to eliminate individual cognitive agency, or to dramatically rethink it. Since D&K note "the risk of losing sight of any useful notion of cognitive agency" (§37), I think that their intention is to offer a replacement notion of individual cognitive agency, jettisoning only the erroneous and unhelpful classical internalist notion, and instead developing a rich, biologically viable alternative. However, it is not clear whether D&K recognize that this reconfigured conception must still be sufficiently robust to play certain explanatory roles that remain important even in the "deterritorialized cognitive science" towards which they guide us (§48; Sutton 2010). I agree with D&K that individual cognitive agents are constructed rather than foundational or "pregiven." However, constructivism is not eliminativism, for what is constructed has its own distinctive features and powers. **So, on D&K's view, are such constructed individuals still distinguishable, engaging in distinctive cognitive processes and actions? (Q1)**

4. Once we reject conceptions of individual cognitive agents as "preformed," "prescribed," or "pre-established," we see individualization as an ongoing process. Cognition does not start inside the head and then extend or expand outwards. The Vygotskian idea that mind soaks *in* during development and enculturation was explicit in many contributing strands of early 4E cognition across philosophy, anthropology, education, and developmental psychology (Clark 1997; Michaelian & Sutton 2013). I agree that individual organisms should not be prioritized or privileged as the necessary or inevitable locus of cognitive agency. Systems exhibiting forms of cognitive agency in natural environments are indeed not "necessarily individualized" (§42), but they are *sometimes* individualized, as the positive component of D&K's article itself shows. When systems exhibiting cognitive agency do emerge, they are dynamically assembled and maintained, and control in such systems is "necessarily" distributed (§12); fluid ongoing processes of construction assemble multiple and temporary boundaries within and between such systems.

5. When such constructed individuals do emerge as the products of distributed assembly (§53), they are not the sole *sources* of intelligent action. However, in line with John Dupré's pluralist realism, I note that they are still distinguishable and tangible, and have distinctive features and powers. Since D&K (§30) draw on Dupré's promiscuous

individualism in pointing to the roles of epistemic factors in identifying boundaries between or within cognitive systems, it is worth noting that Dupré argues that constructivism is entirely compatible with a pluralist realism. Dupré is not suggesting that *only* epistemic factors matter here: as D&K (§50) note, distinctions between organism and environment are “not just [...] a product of inquiry” but also arise in “the maintenance of the dynamic potential of the system.” Our concepts are (fortunately) not all-powerful, and do not on their own bring boundaries or individuals into being. Dupré is a promiscuous *realist*, for whom “countless” things exist: “atoms, molecules, bacteria, elephants, people and their minds, and even populations of elephants, bridge clubs, trades unions, and cultures” (Dupré 2002: 5; see discussion in Sutton & Tribble 2012). In including “people and their minds” in his relational, dynamic ontology, Dupré notes that “as for my promiscuous realism about kinds, the point is not that there are no boundaries suitable for delineating individuals, but that there are too many” (Dupré 2021: 39). Do D&K agree that even (or especially) anti-individualists need to retain and deploy revised conceptions of individuals *within* deterritorialized cognitive sciences?

6. Such deterritorialized cognitive science does require us radically to rethink mainstream research programs. However, we do not want to lose contact entirely with them, because radical critique is most effective *within* the vast heartland of the cognitive sciences, in revisionary engagement with their specific enquiries into memory, decision-making, action, emotions, and so on. Because individualization is now what requires explanation, studies of enculturation and development within specific cultural contexts must be central to the new programs. Autonomy and cognitive agency are relational rather than intrinsic and internal: we are constitutively interdependent creatures, reliant on other people and on ecological resources not only in childhood or in trouble, but throughout our lives (Harcourt 2016; Sutton 2018). Yes, control is necessarily distributed across (and within, and between) such individualized cognitive agents, but this point is the *beginning* of cognitive scientific enquiry, not the end. Control is not all equally distributed, and not always distributed in the same ways or on the same dimensions: so, we want precisely to examine such differences in the extent and forms of interactivity within, across, and between distinctive assemblies of cognitive systems. Though we have dispensed with individuals as the essence or core of cognitive agency, we cannot dispense with them entirely. Without robust replacement notions of (dynamic, assembled, emergent) individuals, we run the risk of losing grip on things we still want to understand better about individuals in interaction. Individuals differ from one another in many ways and on many dimensions. Different individuals are animated by different histories, even as their nature or boundaries shift. Alongside many other things, we want to understand such differences in what individuals *bring to* their various ecologies, groups, and interactions and just what they *do in* those interactions (Sutton 2010: 198f).

7. For D&K, “cognitive agency is specifically a property of meta-organismic organization” (§4). This bold claim requires a broad and inclusive understanding of “meta-organismic organization.” In treating meta-organisms as “coalitions comprised of several different types of organisms all at once” (§32, cf. also §44), D&K can include within this conception of meta-organismic cognitive agency cases of both sub-

organismic and super- or inter-organismic multiplicity. It is then natural to ask whether social or sociotechnical organization is included within this account of cognitive agency as a property of meta-organismic organization? Many cases and forms of cognitive agency are cases and forms of social, sociotechnical, or sociocultural organization, as studied for decades in central 4E traditions, especially in second- and third-wave extended mind theory. Yet D&K do not highlight (and barely acknowledge) social and sociotechnical organization beyond the individual organism. Beyond one mention of “social entanglements” in §50, D&K’s only reference to social processes is diverted into a critique of Shaun Gallagher’s reliance on “minimal selfhood” (Footnote 2). D&K’s critical construal of existing work in extended cognition thus rests on a partial survey. Do D&K identify a perniciously “individual-centred” approach to cognitive agency as operative in 4E research on group and team cognition, on transactive or socially distributed remembering, on distributed sociotechnical processes in navigation, on embodied skills, or on processes of enculturation in early child development? For decades, across these various 4E traditions, cognitive agency has not been tied to individual organisms: the idea that the individual organism is not the pre-given core of cognitive agency has long been not just accepted but actively deployed, and cannot reasonably be used to criticize the bulk of 4E cognitive theory. The work of Edwin Hutchins, for example, is hardly marginal to 4E traditions. Kirchhoff elsewhere clearly treats social interaction and cultural practices as potentially partly constitutive of mind (Kirchhoff & Kiverstein 2019; Constant et al. 2022). So, it is curious that D&K are silent about social and cultural organization. More strongly, we can ask: **Why should 4E cognition treat the integration between cognitive science and biology as more primitive or important than the integration between cognitive science and the social sciences?**

(Q2) This is an important question for constructivist 4E theories, because focusing single-mindedly on “grounding our understanding of cognitive systems within biology” (§2), as opposed to integrating that understanding more firmly with anthropology or developmental psychology (for example), runs the risk of the asymmetric reductionism that we want to avoid, and of missing rich resources for understanding social, cultural, and sociotechnical features of the “meta-organismically distributed structure” of cognitive agents (§36).

8. The passage in which I sketched a “deterritorialized” third-wave version of extended cognition, though published in 2010, had circulated since 2005. It would, I suggested, deal –

“with the propagation of deformed and reformatted representations, and dissolve individuals into peculiar loci of coordination and coalescence among multiple structured media [...] Without assuming distinct inner and outer realms of engrams and exograms, the natural and the artificial, each with its own proprietary characteristics, this third wave would analyze these boundaries as hard-won and fragile developmental and cultural achievements, always open to renegotiation.” (Sutton 2010: 213)

This was, obviously, more a dream or a shorthand recipe than a worked-out research program. While D&K and others build on and expand it as theory, it also now animates a range of applied enquiries – into the enculturation and ongoing formation of dynamic individuals in specific cultural or bodily contexts, such as domains of expertise, and

increasingly also into normative or political factors that drive interest-dependent processes of individualization, which are vital pragmatic considerations not mentioned by D&K. Because cognitive agency is partly ascribed or *granted*, entrenched power structures can reduce or remove it. To take one example, in brilliant ethnographic work on migrant workers who are marked as unskilled, Natasha Iskander (2019, 2021) shows in detail how diachronic agency is actively and systematically denied as many are forced to give up futures. It is just because individualization is a fragile process, and because boundaries are hard-won achievements, that anti-individualists who highlight the multiplicity, heterogeneity, and dynamism of cognitive ecologies must reconfigure rather than eliminate or efface the individual.

Funding

Thanks to the Leverhulme Trust for funding my Visiting Professorship at the University of Stirling, and to the Templeton Foundation for funding the project “Concepts in dynamic assemblages: cultural evolution and the human way of being” (PIs A. Fuentes & G. Downey).

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Received: 3 August 2023

Revised: 7 August 2023