DE GRUYTER

Manuel Dries (Ed.)

NIETZSCHE ON CONSCIOUSNESS AND THE EMBODIED MIND

MONOGRAPHIEN UND TEXTE
ZUR NIETZSCHE-FORSCHUNG

Nietzsche on Consciousness and the Embodied Mind

Edited by Manuel Dries

DE GRUYTER

ISBN 978-3-11-024652-0
e-ISBN (PDF) 978-3-11-024653-7
e-ISBN (EPUB) 978-3-11-039165-7
ISSN 1862-1260

Library of Congress Control Number: 2018950639

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at http://dnb.dnb.de.

Typesetting: 3W+P GmbH, Rimpar
Printing and binding: CPI books GmbH, Leck

www.degruyter.com

MIX
Papier aus verantwortungsvollen Quellen
FSC® C083411

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Christa Davis Acampora

2 Nietzsche and Embodied Cognition

> *Along the guiding thread of the body.* —
>
> Supposing that 'the soul' was an attractive and mysterious idea which philosophers, rightly, gave up on with reluctance—perhaps what they're now learning to exchange for it is even more attractive, even more mysterious. The human body [*menschliche Leib*], in which the whole most distant and most recent past of all organic becoming regains life and corporeality, through which, over which, beyond which a tremendous, inaudible rivier seems to flow: the body [*Leib*] is a more astonishing idea than the old 'soul'. (NL 1885, KSA 11, 36[35])[1]

This chapter reviews resources in Nietzsche's philosophy that potentially contribute to alternatives to brain-centered views of cognition, specifically, contemporary work in embodied cognition and extended mind.[2] After surveying these positions, I mention some ways in which Nietzsche's philosophy is compatible with and, to some extent prescient of, these views. I then focus on how his broader philosophical projects might offer some indication of how to orient further research and possibly address some apparent unsavory consequences of contemporary theories. I conclude with the suggestion that it might be that the significance of Nietzsche's work for this growing area of research could be best realized through indirect critical engagement rather than direct contribution.

There are at least four ways one might try to put Nietzsche in dialog with contemporary research in the area of embodied cognition. (1) One could focus on the importance of the body for Nietzsche, which is clearly evident in his work, and the attention he gives to the various sciences that study the body.[3] (2) One could examine the way in which features of our embodiment, for Nietzsche, give rise to and supply forms for how we think about the world and the concepts we generate or discover

1 Translated in Nietzsche (2003). I have corrected an italicization that was inconsistent with the German original.

2 There are many different approaches to developing alternatives to brain-based views of cognition and a variety of names given to such alternatives, including situated cognition, embedded cognition, extended cognition, and others. I do not purport to deal with all of these views and will, perhaps unfairly, lump them together in my discussion since, as I elaborate below, I am largely looking at how Nietzsche's views might contribute to framing or orienting such lines of research rather than directly contributing to them. Further, I consider how Nietzsche provides some resources for addressing certain unfortunate consequences of some of these views (some of which may or may not follow for the whole lot). A very helpful overview of the varieties of alternatives to brain-based theories of mind and cognition can be found in Wilson and Foglia. I am grateful to the authors of this article for orienting my initial research into these areas and providing me with a wealth of sources to consult. A classic discussion of some of these views by an active contributor to the area can be found in Clark (1998 and 1999). For a clear and succinct overview of embodied cognition specifically, see Shapiro 2012.

3 There are a variety of approaches of this sort: see, for example, Emden (2005), Blondel (1991). On Nietzsche and the sciences, see Moore (2002).

https://doi.org/10.1515/9783110246537-003

(that is, how features of embodiment give rise to certain cognitive structures).[4] (3) One could consider the ways in which Nietzsche is (or is not) prescient of particular theses in contemporary embodied cognition by focusing on his epistemological views and the causal role of the senses, including Nietzsche's sensualism, itself a contested topic.[5] And (4) one could survey and mine conceptual resources in Nietzsche that are relevant for dealing with some of the particularly challenging difficulties confronted in and by the positions of embodied cognition. The latter might be sorted into two different general kinds: what might be called the labors of embodied cognition—that is, what advances their own philosophical agendas and, in some cases, involves paradigm shifting and searching for a more adequate conceptual vocabulary, and means of addressing some problematic consequences that follow from these views.[6] The main purpose of this chapter is to lay a foundation for further exploration of the fourth of these approaches. To a great extent, I think the resources for this are already developed in the scholarly literature on Nietzsche. Thus, the bulk of this chapter involves attuning the audience to some of the major concerns in theories of embodied cognition with suggestions for how current interpretive insights from Nietzsche's works might be applied (sections 2.1–2.3). In the concluding section, I suggest that however interesting it might be to demonstrate how Nietzsche himself advanced a philosophical agenda with affinities to those of embodied cognition theorists, future research along these lines might be more productive if focused on how Nietzsche's ideas can be used to critically engage them.[7]

2.1 Embodied Cognition

A focus on what is called "embodied cognition" is often presented as an alternative to brain-centered views of human cognition and how these bear on considerations of

4 An approach of this sort might well examine how Nietzsche's philosophy is relevant to a particular line of research that falls under the heading of embodied cognition found in the work of Lakoff and Johnson (1999, 1980).

5 Riccardi is, to my knowledge, closest to this line of thought, and has published an intriguing analysis of Nietzsche's sensualism, sorting through the positions and disagreements of Hussain and Clark and Dudrick, particularly with respect to how to interpret and reconcile apparent inconsistencies in Nietzsche's *Beyond Good and Evil*. See Riccardi (2011) and below.

6 Günther Abel has helpfully outlined the ways in which Nietzsche potentially provides conceptual resources that might be used to critically and constructively engage with contemporary problems in philosophy of mind. He largely focuses on the views that are the subject of critique in explorations of embodied cognition. My chapter aims to extend these ideas to this other, specific domain of philosophy of mind, pointing out where Nietzsche contributes to the further development of these ideas and where embodied cognition might be advanced by further consideration of some of Nietzsche's views.

7 Throughout, I point out exemplary passages from Nietzsche's texts, but the interested reader would do well to consult the wealth of interpretive scholarship that already exists, which I document along the way. The intended contribution of this chapter is to frame future research (and perhaps discourage what might be less productive) and not to provide a novel interpretation of Nietzsche.

moral psychology. Generally speaking, brain-centered views identify and examine the brain structures and processes that make possible cognitive activity, broadly construed to include perception, the development of preferences, emotions, and decision-making.[8] Proponents of embodied cognition, minimally, argue that brain-centered views are too limited either because other parts of the body and its various systems essentially contribute to these very same processes or because cognitive activities themselves are more expansive so as to include or require (proximally or distally) participation in the world and interaction with other entities. While there is great variety in forms of embodied cognition, just as one finds variety among mainstream brain-based approaches, there is general agreement among those holding views that fit under the umbrella of embodied cognition that *sensation* and *action* —our sensory processes and motor systems—are vitally important for cognition. In embodied cognition theories (ECTs), cognition is more than abstract information processing for which the sensorimotor systems provide input but make no other essential contribution: the body is more than a practical necessity for human cognition, and incorporating that fact has theoretical relevance.

For the reader who worries about a false dilemma right from the start in the distinction between embodied cognition and brain-based views (after all, "the brain" is involved in virtually everything "the body" does, and the brain itself is surely *part of* the body), it might be helpful to identify the specific targets of criticism that ECTs make. Generally speaking, philosophers of embodied cognition focus on alternatives to computational and representational models. For my purposes in this chapter, I will take these as representative of a group that has at least as much variety as the views on which I am focused. To some extent, embodied cognition defines itself, at least in part, through contrast with the research agendas of cognitive science, which model human cognition in terms of computational manipulation of abstract symbols. Many ECTs also challenge the emphasis on the representational powers of mind that is often the focus in philosophy of mind. Some, though certainly not all, oppose eliminative materialism, the view that all mental states can be explained by a completed science of the brain. Additionally, defenders of embodied cognition often differ from their counterparts with respect to *what* they think is the nature (or character) of cognition along with *how* (or where) it happens, although virtually all cognitive theorists, regardless of orientation, acknowledge that very much of what counts as "cognition" happens in the background, so to speak, and is not (normally) part of conscious experience.

Minimally, ECTs emphasize features of human embodiment in addition to the brain as crucial sources for cognitive processing and activity. Proponents of embodied cognition, obviously, place significance on the body. But just what counts as "body" and "embodiment" and their role in cognition are the subject of considerable disagreement. In many versions of ECT, "the body [is] a piece of the cognitive process

8 See Prinz (2009).

itself rather than [...] a link in a causal chain that extends further upstream to cognition" (Shapiro 2013: 129). For some, somatic features, experiences, and processes contribute to (or determine) concept formation and the relations among concepts. That is to say that at least some of our basic concepts are linked with features of our embodiment, such as up and down, front and back, etc. (Lakoff and Johnson 1980, 1999). How we understand the world and the conceptual material that forms the basis of our cognitive activities is shaped by the kinds of bodies we have.[9]

For other ECTs, human bodies acquire their significance and meaning insofar as they are known in relation to others and by means of our involvement in the world. A difference here concerns whether simply having the particular kind of bodies that we do shapes our cognitive activities and products and/or whether it is bodily interaction (with other bodies and entities in the world) that has these effects.

Still other ECTs prioritize involvement of the body because they wish to reformulate our conception of cognition, shifting it from a purely mental process to a kind of activity (Clark 1997) that crucially depends upon a certain kind of agency (O'Regan and Nöe 2001, Nöe and O'Regan 2002). For some of these theorists, human agency is realized first and foremost through active engagement in the world (Nöe 2009). The relevance of this work and the conceptions of agency that seem to logically follow from the major theses of embodied cognition also lie at the heart of concerns some critics raise about the consequences of such views, as discussed below.

While not categorically true, it may be a fair general observation that contemporary ECTs lie out of the mainstream and often construct their views in a reactionary way. That is, they take brain-based models as the norm and define their own terms in relation to these views. This makes for interesting but challenging comparison with Nietzsche's views, because the sciences of the brain were nascent in his day. In the nineteenth century, the brain-based view of cognition was itself an emerging alternative to a norm that assumed that whatever cognitive activity may be, it must be the product of mind, which is formally distinct from the material substance of the body. Indeed, one can find passages in Nietzsche's works, particularly in his notes, that suggest he inclined toward the emerging brain-based views precisely because they represented alternatives to the dualism that results from the Cartesian conception of mind as mental substance. This is not to say that Nietzsche is an eliminativist materialist. His views about history and culture, particularly art, led him to strive toward a reconceptualization of the spiritual rather than its elimination. But, this tension in Nietzsche's thought makes taking sides in the contemporary debate over embodied cognition a challenge if we simply focus on Nietzsche's statements that appear to be immediately relevant to topic. However, this difficulty need not bother us too much for several reasons. Brain-based models have developed much further since the days of Helmholtz and other pioneers in the area that Nietzsche read with admiration. Moreover, the views to which *they* were opposed—such as those reliant on

9 Experimentally tested by Boroditsky and Ramscar (2002). See discussion by Shapiro (2013: 127).

speculation about spiritual substance—are all but absent today, and in this respect, Nietzsche, brain-based theorists, and embodied cognitivists are united in rejecting such approaches.

Concern to orient cognitive science and philosophy of mind and consciousness toward a framework of embodied cognition is motivated by the observation that brains, as necessary as they are for cognition, are biological entities that are part of larger biological systems, interacting and immersed in a complex physical world. While this particular observation is largely uncontroversial, proponents of embodied cognition argue for *prioritizing* the fact of embodiment,[10] claiming that it shifts the theoretical framework in ways that are truer to the facts and promises to avoid certain errors at the same time that it solves other intractable problems. Chiel and Beer point out that "continuous feedback between nervous system, body and environment are essential for normal behavior" (1997: 554). Clark puts it this way: "attention to the roles of body and world can often transform our image of both the problems and the solution spaces for biological cognition" and "understanding the complex and temporally rich interplay of body, brain, and world requires some new concepts, tools, and methods—ones suited to the study of emergent, decentralized, self-organizing phenomena" (1998: 506). It is worth recognizing the two different emphases here. Some, though not all, proponents of embodied cognition believe that the shift in prioritizing the embodied nature of our cognitive capabilities will be truer to the facts of our biology. In this case, the biological basis for cognition is a first principle. A second concern, again not universally foremost but generally shared, pertains to conceptual adequacy and ingenuity. The claim is that traditional cognitive science, proceeding as it has, has left us with an inadequate conceptual repertoire. In views that are regarded as more radical, these theorists believe that we simply will not make progress in understanding the nature of human cognition (and consciousness, though these are obviously not synonymous) without a new set of conceptual resources and analytical tools, which ECTs seek to supply.

That the entities that are the subject of investigation have a biological basis might not need any further explanation even if justification concerning precisely *how* the biological features support and give rise to cognition certainly does. The latter is one of the main problems in philosophy of mind stretching back to the dawn of the modern period and is the crux of the problem with the dualistic view that regards body (and brains) as one kind of substance and the mental (or spiritual, in earlier times) as substantially different. How do the facts of our biology play a role in the what, where, and how of human cognition, broadly conceived? This concern is shared by virtually all cognitive theorists, and ECTs in particular. When we begin

10 The precise role that the body plays is also hotly contested by ECTs. This disagreement gives rise to differing theses concerning whether the body limits, regulates, or distributes cognitive activity. Brain-based views more or less avoid this problem by holding that cognition somehow supervenes on the physical or that the particularities of the physical body beyond the brain are somehow causally remote from (and somewhat accidental to) cognition itself.

to investigate this further with any degree of seriousness, ECTs claim, we confront a number of challenges that must be addressed and for which traditional views do not provide obvious or ready solutions rather than stubborn assumptions. For example, where do we draw the line with respect to what is required for cognition? Is it *in the skull* (as Clark and Chalmers 1998 ask), or is it the brain plus (plus, the CNS, plus the sensorimotor system)? Additionally, human development theory and neurophysiology tell us that cognition and the brain structures that organize and support it are not fully formed at birth; moreover, it appears that the organization of the brain is *plastic* and such plasticity stretches throughout a lifetime. The objects of our inquiry, then, are emergent, and so our conceptual schemes and analytic tools need to account for these facts.

Related to emergence is the fact that significant cognitive development appears to depend upon a variety of environmental factors and, crucially, *interactivity.*[11] What role or roles does environment play? To what extent are environmental factors and interactions essential? If and when such features are essential, does it make sense, then, to think they are somehow part of the cognitive system itself? The latter concern is largely associated with extended mind theses, which are not necessarily varieties of embodied cognition theories, although ECTs might draw on similar patterns of reasoning in motivating their accounts of the relevance of the body insofar as they extend cognition out of skull.

If it sounds highly implausible (if not ludicrous) to think that the human cognitive system might extend not only beyond the skull but also potentially beyond the body so as to include nonhuman objects and, potentially, other beings, then we might consider one further feature of cognition that emboldens ECTs to press for a more robust conceptual architecture for their domain of inquiry, namely *portability.* A feature of human cognition on which there is general agreement is that we have the ability to offload cognitive tasks. This happens in a variety of ways, but two that are frequently discussed are our use of instruments and tools and memory devices, discussed further below.

Developments in philosophy of mind, psychology, and neuroscience have led to changes in conceptions of cognition, knowledge, and the role of the body. The variety of cognition that is often the subject of discussion in the current literature is cognitive activity oriented toward action. This particular focus is perhaps related, at least in part, to the fact that most modeling for cognition has been computational. Artificially reproducing it has been the subject of active research in robotics. Programming and reproducing human action is incredibly complex, much more so than Watson-like replication of encyclopedic knowledge retrieval (setting aside impressive advan-

11 For the view that consciousness is not merely interactive, involving multiple entities, but is itself better conceived as realized only *in* activity, or *enactive*, see O'Regan and Nöe (2001).

ces in identifying relevant context).[12] Current research in robotic AI focuses on "routines for interacting with the environment," which drastically reduces the need for producing complex internal representations and abstract calculations (M. Wilson 2002: 625).[13] The work of Beer (1989) and Brooks (1991) lends support for the view that cognition requires far fewer representational resources than what are assumed in other cognitive models in order to plan for action. Beer considers the example of programming a robot to successfully navigate an obstacle-laden, dynamic environment (a busy office with people coming and going and objects moved to different locations) to accomplish the relatively simple (for a human) task of picking up empty soda cans. It turns out that the greatest success was achieved by minimizing the representational resources. The robot was most successful when it relied on a set of layered activity patterns, creating a dynamic system with feedback from the environment rather than continually consulting a master plan, mapping out the office, and scanning and sensing changes and obstacles. This difference leads some to suspect that cognition required for human action might be better conceived in terms of connections of "stimulus to an action without the need of intervening representations" (or rules) (Shapiro 2013: 136). Such views potentially shrink one area (what's in the skull) at the same time they expand the number of components to include more of the body outside of the skull and entities in the environment.[14]

While not all ECTs hold all of the views that could be ascribed to extended mind theses, they share some related views insofar as they seek to extend cognition beyond the brain/skull boundary, and this extension implies involvement in a larger

12 Watson is the name of a computer technology developed by IBM, the signature features of which are that it appears to have a significant rate of success in parsing natural language and "learns" from user feedback and response to improve accuracy.

13 Wilson 2002 identifies and evaluates six major claims of ECT, which appear to have overlapping agreements among the variety of its adherents. These include the views that: cognition is situated (1) and time-pressured (2), oriented toward action (3) and includes "offloaded" tasks (4), some of which are bodily based (5) (as in gestures) and physical (e. g. diagramming for problem-solving), and others that are separable components in the environment (6) (e. g. tools, instrument panels, memory storage devices). Wilson considers these in a different order, but she does not attribute any special significance to the order she sets up. Her article provides a helpful entry to the study of embodied cognition, and she offers useful evaluation of each of these major claims.

14 There are many different formulations of just what kind of representations are required and the extent to which they are necessary. One position to which ECTs are inclined is that representations, when relevant or appropriate for understanding mental objects, are robust (in contrast with the view that they are highly abstract and symbolic, which then need the subject to add, through computational production, the richness of the world). The robustness includes some of what the cognitivist model would have as the product of cognition. In other words, the world brings cognitively salient information, the world has cognitive salience. Unsurprisingly, then, some ECTs also look not only to phenomenologists such as Merleau-Ponty for some of their theoretical orientations and inclinations but also Gibson and his theory of affordances. The latter is discussed at length in Shapiro (2013).

system or organization.[15] Clark and Chalmers are the best-known advocates of the extended mind thesis, arguing that cognition is distributed across the traditional subject and the environment. They call their view *active externalism* because it entails not only that the environment is involved in or influences cognitive activity but also that it *participates*, actively:[16] the hard and fast "skin/skull boundary" is unjustified. In support of their claims, Clark and Chalmers point to studies that identify and describe the distribution of tasks and reliance on "environmental supports" in various cognitive activities. Such tasks are not merely practical representations or rehearsals , rather carry epistemic import, what Clark and Chalmers, following Kirsh and Maglio, call "epistemic action." That is, such environmental interactions and manipulations "augment cognitive processes" and do not merely provide data to be processed in the mind of the subject. Clark and Chalmers focus on thinking of cognition in systematic terms, a system with distinct "coupled" parts: "In these cases [of active externalism], the human organism is linked with an external entity in a two-way interaction, creating a *coupled system* that can be seen as a cognitive system in its own right," which can be evaluated in terms of "systematic behavioral competence" (2010: 29). The question naturally and rightly arises as to where and how we draw the line with respect to such couplings. Why are some connections more essential than others so as to create something ontologically, efficaciously, distinct? Given that contextual relations can be reconfigured in a variety of ways according to fields of concern, what makes some couplings essential and others occasional? Thus far, answers to these questions have not yet convinced critics of these views.

For Clark and Chalmers, the emphasis on coupling allows them to meet and overcome a charge originally aimed at the externalism of Putnam and Burge, namely that their arguments only show that *content* is externalized not the processing or real activity of cognition, the "causal or explanatory role in the generation of action" (2010: 29). By contrast, in their view: "The external features in a coupled system play an ineliminable role—if we retain internal structure but change the external features, behaviour may change completely. The external features here are just as causally relevant as typical internal features of the brain" (2010: 30). This idea, while not one Nietzsche specifically held, is relevant to his conception of agency and the multiplicity of agential powers he envisioned as a more adequate description of how agency is realized (BGE 12). As I shall point out in the next section, Nietzsche's views also incline him to shift away from pinpointing a causal seat or center in subjectivity and

15 The importance of interactivity in this model leads some to look to dynamical systems theory for further resources.

16 Clark and Chalmers try to draw interesting distinctions between what they regard as the *passive* externalism of Putnam and Burge and their own *active* variety, claiming that in the earlier views, "the eternal features [...] are distal and historical, at the other end of a lengthy causal chain [...] not present [...] the relevant external features are *passive* [...] Because of their distal nature, they play no role in driving the cognitive process in the here-and-now" unlike their own example (2010: 30).

to focus instead on articulating a scope of activity or domains of action as the basis for realizing agential powers for which one might be responsible.

Clark and Chalmers acknowledge the difficulty with the coupling notion they suggest. Coupling implies the possibility that at least some elements or features might be *decoupled*, as mentioned above, and this suggests a need to discover and identify "the constant core of the system" (2010: 31). Nevertheless, Clark and Chalmers hold that "contingency of coupling does not rule out cognitive status" (2010: 31). But this seems to be just an assertion rather than a solution to a challenge, and the basis for their claim requires something of a science fiction like imaginative projection to a future time when we might be able to plug in and unplug parts of the brain. They try to shift the focus to assessment of *reliable* (and regular, though they do not put it this way themselves) *coupling*. Other views that regard the brain as the seat of cognition and among an assembly of parts, which non-externalists are inclined to do, too, also support the coupling notion and thesis and would, theoretically, seem extendable.

Clark and Chalmers believe their position is supported by research in situated cognition (Suchman 1987) and real-world robotics (Beer 1989), dynamical approaches to child development (Thelen and Smith 1994), and research on collective agents (Hutchins 1995). They maintain that "cognition is often taken to be continuous with processes in the environment" (2010: 30). The notion that cognition might be found in a spectrum of phenomena is highly relevant to Nietzsche's own inclinations (e.g. GS 110; BGE 36, BGE 213), but it is not necessarily compatible with how Clark and Chalmers characterize organisms as extended via additional components. I shall elaborate these ideas below. Even if it should turn out to be the case that this is not the best description of cognition, thinking of it in this way, they maintain, opens up new and different avenues for investigation. Different explanatory methods might very well lead to different discoveries even if the overarching theoretical construction that initially motivated the new method later stands in need of revision (2010: 30).

To illustrate their claims, Clark and Chalmers offer a thought experiment that is the subject of much discussion in subsequent critical response to their work: Imagine Otto and Inga, both of whom want to go to the Museum of Modern Art. Inga recalls her belief about the location of the museum from memory whereas Otto, an Alzheimer's patient, retrieves his belief from a notebook that replaces his deficient memory. "Otto *himself*," Clark and Chalmers claim, is best regarded as an extended system, a coupling of biological organism and external resources" (2010: 39). But this might sound absurd, or at the very least, it holds a residual sense of *the real* Otto, as discrete organism, hooked together, or, in Clark and Chalmers' terms, *coupled* with his notebook so as to result in an "extended system." A shift of thinking from *things*—entities conceived as units of being—to fields or organizations might help to overcome some conceptual resistance to this way of thinking. This would allow us to, as Clark and Chalmers put it, "see agents themselves as spread into the world" (2010: 39), something with which Nietzsche might well agree (e.g. GS 110; BGE 12;

NL 1885, KSA 11, 40[38]; NL 1885, KSA 11, 38[1]; NL 1888, KSA 13, 14[79]). As for how far it should go, just how far we might extend the mind, Clark and Chalmers do not have a hard and fast answer, but the ambiguity and uncertainty of the *extent* and *range* of the extension should not lead us to reject the notion of extension altogether. Trust, reliance, and accessibility, they claim, can still be found in these arrangements and used as criteria for assessing integrity of a distinctly conjoined cognitive system.

This particular theoretical orientation also makes it possible to conceive of social extension, a collective mind, so to speak. Those inclined toward this view often suggest that language makes this not only possible but likely.[17] This notion is also shared by Nietzsche, as others have discussed at greater length (GS 354; see especially Abel 2001 and 2015, Katsafanas 2005, and Emden 2005).[18] But one need not focus on individual language speakers to develop this position. The idea that cognition might be dispersed socially is developed at length by Hutchins (1995). For my purposes, Hutchins offers the most extensive development of the idea that cognition is realized in larger systems rather than individual brains in skulls. He uses navigation (on a ship) as a metaphor for exploring and specific example revealing features of large, distributed, complex intelligent systems, and argues for "a coherent account of cognition and culture as parts of a larger system" (1995: 353). Hutchins elaborates how culture is "a human cognitive process that takes place both inside and outside the minds of people" (1995: 354), and he highlights the dangers of preserving the inside/outside opposition with respect to identifying a *location* of the seat of cognition.[19]

For Hutchins, cognition is significantly cultural. By this he means that it is produced and circuited through culture, not just influenced by culture.[20] There are certainly some obvious problems with conceiving of cognition in this way, not the least of which is that this could well be a variety of the extended mind thesis run amok insofar as it might expand or extend what counts as cognition indefinitely to a

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17 Language "serves as a tool whose role is to extend cognition in ways that on-board devices cannot. Indeed, it may be that the intellectual explosion in recent evolutionary time is due to much of this linguistically enabled extension of cognition as to any independent development in our inner cognitive resources" (Clark and Chalmers 2010: 39).

18 Abel (1999) offers some extended discuss of Nietzsche's views about consciousness as developing under the pressure to communicate, making consciousness public, shared, and extended. He emphasizes the centrality of language in creating the network of conditions that makes this possible and the role of consciousness in stabilizing social systems. Brief mention of this larger work appears in his 2001 and 2015 articles in the context of contemporary discussions of philosophy of consciousness and mind.

19 "Another cost of failing to see the cultural nature of cognition is that it leads us to make too much of the inside/outside boundary or to assume the primacy of that boundary over other delimitations of cognitive systems" (Hutchins 1995: 355).

20 It is for this reason that Hutchins thinks that among the analytic tools we have for studying cognition, we should include ethnography (1995: 371). His elaboration of the navigation of a ship is not intended as analogical or metaphorical. He takes it as a specific and definite manifestation of a cultural cognitive process.

point that it simply disappears as anything in particular. Moreover, the fact that cognition *may* be realized in larger systems does not prove that human cognition *must* be reducible to this or emulate it—if accurate, it would only show that it is reproducible. Many brain-based theories are compatible with that idea. But contemplating Hutchins' views (rather than simply adopting them) does have several advantages, including gaining a better appreciation for an *organizational* model as opposed to one that retains the *organismic* framework, and challenging us to broaden our perspective on where cognition happens and how it is realized. One need not think that *individual* minds include one's calculator, hard drive, and datebook to see value in recognizing that these tools and artifacts are part of a larger cognitive system, one that, in some cases, makes individual cognitive activity possible, and that there is value in shifting the unit of analysis to the systematic level.

Hutchins' main theoretical point is that the computational model of mind as conceived by Turing, for example, assumes (or worse, mistakes) the operations of a system for the model operations of the manipulation of symbols in the environment (1995: 361). "The properties of the human in interaction with symbols [in the world] produce some kind of computation. But that does not mean that computation is happening inside the head" (1995: 361). Computation occurs within the system as a whole and is not isolated in or limited to one particular part.

Thinking in this way produces some interesting results, such as when, for example, Hutchins takes up the case of Searle's Chinese room thought experiment. It is true that Searle himself in the Chinese room fails to speak and comprehend Chinese just by virtue of competently applying the rules for use of the language, but if we see the room itself as a cognitive system, we recognize that *it* realizes "speaking Chinese" even if any one of its parts does not independently do so. The symbols and operations we perform with them that are parts of cognitive activity are not merely "inside the head," the prerogative of a "cognitive inner sanctum" (1995: 366) in which "the physical is an implementational detail" but rather are the products of systematic cultural currency (Hutchins 1995: 365–366). The computational model of mind and cognition inclines us to make an erroneous assumption that is shared with folk psychology in "mistaking the properties of the sociocultural system for the properties of a person" (1995: 366).

But, if we extend cognition and mind this far, in what sense do we still have independent, individual selves? For Clark and Chalmers, "these boundaries may also fall beyond the skin" (2010: 39). This blurs the boundaries of our conception of agency, something I have argued elsewhere that Nietzsche was keenly interested to do,[21] and I shall elaborate further below. Clark and Chalmers say they are resisting "the hegemony of skin and skull" so as to "be able to see ourselves more truly as creatures of the world" (2010: 39), a goal that is surely consonant with Nietzsche's own (e.g. GS 109, Z III, BGE 230).

21 Acampora (2008; 2013a, ch. 4).

Theorists of embodied cognition further argue that our conception of cognition itself requires expansion. This would change the object of investigation and how the phenomena are isolated, and, in turn, what tools are appropriate for capturing and analyzing its most salient features. Thus, leaders in this area of research, such as Varela, Thompson, and Rosch (1995), argue for a shift away from regarding cognition largely as problem-solving to one in which cognition is a form of sense-making, "'cognition in its most encompassing sense consists in the enactment or bringing forth of a world by a viable history of structural coupling' (1995, 205)" (cited in Shapiro 2012: 123). It is *world-making*, an activity, rather than (exclusively) *world-modeling*, the production of abstract representations. In terms of the kinds of activities taken as paradigmatic of cognitive activity, and so forming the basis of the objects observed in the lab or speculatively described, they are most frequently activities that are not part of everyday experience: solving mathematical equations, playing games such as chess, and working puzzles (Shapiro, Hutchins). ECTs argue that these distort the conception of cognition by magnifying just one form it takes. To more fully appreciate cognition, we need to observe it, "in the wild," as Hutchins (1995) puts it, and this will require more tools than those brought to bear in the lab; we shall also need resources available in work in anthropological fields broadly construed.

When we take into account *extension* (including interactivity), *plasticity*, *emergence*, and *portability*, are our traditional philosophical concepts of mind and cognition adequate for analysis of our object of inquiry? Some have argued that they are not. For example, it might be more helpful to think of cognition as realized in emergent decentralized organizations, "a result of the interplay of a variety of forces spread across brain, body, and world" (Clark 1998: 507) rather than a property or function limited to discrete organisms. The adequacy of the basic concepts that organize the study of cognition, thought, and mind is a topic to which I will return in section 2.4, since it is here that Nietzsche might offer promising contributions. But before turning to those ideas, it is worthwhile to review a couple of aspects of Nietzsche's views that might be thought to have immediate relevance to the topic of embodied cognition, since Nietzsche is widely regarded as giving greater priority to the body than some of his predecessors, and because he is skeptical about conceptions of cognition in the history of philosophy and the role these have played in conceptions of philosophical anthropology.

2.2 Nietzsche, the Body, and Cognition

Although I think the most productive use of Nietzsche's philosophy with respect to its possible contributions to theories of embodied cognition will be found in the alternative conceptual resources and theoretical orientations available in his work, his views about the body and, in particular, the sensorimotor system, as they relate to cognition are important to note. A theory of mind that might be imputed to Nietzsche

might also be relevant. So, I will briefly sketch in this section some of these points of contact, ideas that are developed more extensively by others.

2.2.1 Body and Language

The importance of Nietzsche's views about the body have been the subject of numerous serious studies of his work in which "body" is taken in a variety of senses, including as a metaphor with cultural force (Blondel 1991) and as evident of his anti-idealism (if not empiricism) and his interest in naturalizing philosophy, either from an evolutionary or anthropological perspective (Richardson 2004, Abel 2001 and 2015, and Emden 2005). Nietzsche's interest in and emphasis on the body follows from his interests in the natural sciences, including varieties of evolutionary theories (Moore 2002), and is continuous with his broader project of revaluing values and overcoming pernicious polar oppositions (Abel 2001 and 2015). His efforts to revalue the body are aimed at not only highlighting our material constitution but also overcoming its denigration as inferior to spirit or soul (see Z; NL 1886–87, KSA 12, 5 [56]).

Discussion of Nietzsche's views concerning the importance of the body and their relevance for contemporary theories of mind has developed along at least two different but related tracks: through reflection on the nature and status of our sensory organs and information provided by senses, the topic of focus in the next section, and in his ideas about the metaphorical nature of language and thought and processes of metaphorical transference from bodily experiences to mental ones. It is along these lines that Nietzsche's views might be thought to most closely resemble those of one particular strain of embodied cognition theory, that developed by Lakoff and Johnson (1999, 1980), in which features of our embodiment loom large in shaping the specific basic concepts we employ in our understanding of the world.

Johnson argues that "abstract conceptualization is based on metaphorical extensions of body-based concrete concepts and sensory-motor capacities" (2006: 53). For example, "patterns of sensory-motor experience (e.g. containment, balance, forced motion, iteration, motion along a path, increase/decrease in intensity, and verticality) structure both our concrete and abstract concepts. These image-like patterns of body-based meaning (called image schemas) are then metaphorically elaborated to define abstract concepts" (2006: 52). That Nietzsche holds similar ideas has been demonstrated and developed by numerous others (especially Abel 2001 and 2015, Emden 2005), although direct comparison with Lakoff and Johnson is uncommon and could still yield fruitful and productive comparison.[22] The idea that concepts

22 There is also a wealth of literature addressing Nietzsche's views about metaphor, metaphorial transference, and the relation between the body and metaphor, including the body *as a metaphor* and the body as *interpreting* (and thereby providing the basis for metaphorical production). In addi-

are derived in a way that involves a metaphorical transference from one domain (bodily movement in space and time) to another (abstract conceptual formations unrelated to those original activities) is evident throughout his writings, and one could look to Nietzsche's texts to add to the examples that Lakoff and Johnson analyze (e.g. BGE 3, BGE 21, BGE 22). For Nietzsche, these processes can have cultural and historical influences (e.g, Western culture's tendency to substantialize; or the multifarious meanings of the body itself as evident in Blondel 1991 and 2006) as well as biological and morphological origins (e.g. our conceptualization of the future and time as moving forward in the direction of our usual line of sight, or the prevalence of visual metaphors for insight and knowledge as the result of the dominance and primacy of our visual sensory system).[23]

Emden (2005) explores how Nietzsche thinks consciousness, cognition, and language are *all* linked with metaphorical structures and processes: metaphorical transfer or translation occurs between and among domains of cognitive and sensual awareness. Both metaphors and metaphorical processes stem from bodily experiences and physiological, morphological structures. So, Nietzsche would affirm certain key ideas about the relevance and significance (even primacy) of the body for consciousness, as ECTs might argue, both in terms of its objects and its form.[24] That is, some of our fundamental concepts that we regularly use to understand ourselves and the world are the result of metaphorical notions of the body (that is, they are the production of metaphors themselves). And the process of translating our sensual experiences to so-called spiritual ones can be described as metaphorical transference or translation. Some might protest that this stretches the notion of metaphor too far so as to confuse it with analogical thinking. This might be fair, and the defenders of metaphor theory might owe the challenger a response. But it is less relevant whether it is appropriate or not to describe this process as metaphorical than to note that Nietzsche repeatedly focuses on the process of applying or transferring one domain of experience, whether it is that of sensation, as the case may be for embodied cognition theorists, for example, to another domain, in the case in question, that of cognition.[25] That this might inform both conscious and unconscious thought is a topic to which I shall return below, but first, I wish to highlight some features of Nietzsche's

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tion to Abel and Emden, cited above, see also Moore (2002), Blondel (1991 and 1998), and Kofman (1993).

23 For extensive development of the latter in the history of philosophy, see Levin 1993. On Nietzsche's preference for auditory and olfactory metaphors, see Blondel (2006: 70–71).

24 More discussion of Nietzsche's ideas about the relevance of the study of the body for our understanding of consciousness and psychic life more generally appears in section 2.4 below.

25 Emden explores a possible relation between Nietzsche's interest in forces and a dynamic view of life and the shift in eighteenth-century physics from celestial bodies and forces to forces such as electricity and magnetism. Emden notes that this resulted in "a fundamental epistemic shift away from static conceptions of nature." Nietzsche utilizes theories of nerve stimulus transference for a speculative theory of transference of sensory stimuli and language, which involves the "leaping" from "one sphere to another" (2005: 99).

views about the senses and some contemporary efforts to link these ideas with concerns shared by theorists of embodied cognition.

2.2.2 Senses and Sensualism

Further research into the extent to which Nietzsche himself develops views that are prescient of or potentially still valuable for contemporary research and development of a framework for embodied cognition will likely contend with questions about the role of the senses in Nietzsche's views of cognition—to the extent that he has such—and the nature of our cognitive powers more generally. While views about the strength and adequacy of our representational powers to support our epistemological claims are germane to an assessment of whether Nietzsche anticipates certain key ideas found in ECTs, I am not sure that they would be terribly relevant for actually promoting or advancing contemporary research in this area; that is, I doubt such would possibly yield *contributions* to this area.

A broader view of cognition that also includes unconscious cognitive activity is evident in contemporary discussions and is arguably among Nietzsche's concerns. And such research may or may not focus on whether or not the senses themselves *lie* (that is, generate misrepresentations or distortions of reality). Our sensory *organs* and systems appear obviously linked with the body, and reference to them appears in Nietzsche's perplexing claim about sensualism in *Beyond Good and Evil* (e.g. BGE 15). Thus, what he says about the senses there might appear germane for research into Nietzsche's own views about what we now call *embodied cognition*. I remain skeptical about the potential value of bending Nietzsche's ideas on this topic to fit this framework, but I introduce them here so as to acknowledge this strain of work in the relevant scholarship and suggest some avenues for its further development.

One reason I find this approach problematic is that while Nietzsche was very interested in contemporary theories about sensation and their relation to mental representations (Moore 2002, Richardson 2004, Emden 2005, Riccardi 2011), he had neither special knowledge nor insights about this, and I find that he never achieved a developed view about the actual relation between the two. Drawing on some of this interest, however, Riccardi (2011, and this volume) has scouted what he calls Nietzsche's interest in "ecological cognition," something he notes that he contemplated calling *embodied cognition*, and so it is worth reviewing a few of the details here.

Riccardi (2011) examines the role of the body, in particular the sensorimotor system, with respect to debates in the Nietzsche literature concerning cognition, especially the reliability of our representational powers, or what Nietzsche scholars call "the falsification thesis," the view that our representations necessarily falsify what we observe or the objects of our assertions (see Clark 1990, Hussain 2004, Clark and Dudrick 2004). The concern among Nietzsche scholars and others who

look to Nietzsche for insight into human psychology and its cognitive powers, is that if we cannot help but falsify reality in our representations and cogitations about it, then the possibility for real knowledge—knowledge of the world *as it truly is*—would seem to be in doubt, if not an impossibility.[26] Riccardi makes an admirable attempt to examine this concern in the context of related discussions among Nietzsche's contemporaries as well as in light of current debates in philosophy of mind concerning the character and relevance of sensorimotor processing and data for knowledge and action in the world.[27]

The upshot of this for Riccardi is that Nietzsche holds a view about the role of the senses in cognition that is *ecological:* "This means that cognition is something we can make sense of only by considering the relation between organism and the environment" (2011: 247). While this might sound much like the enactive view mentioned above, that is not exactly what Riccardi seems to mean. Instead, he explains "[e]very organism [...] is the focus of its own representational world, shaped by the concrete, embodied configuration of its perceptual apparatus" (234). In the "ecological understanding of perception [...] our sense organs work as a representational interface between us and the outer world" (235); "our representational world is an ecological construal which depends on the way in which we are embedded in the environment" (236). This seems to be both specific and immediate—our local environment—and historical and developmental—the result of our evolution. What Riccardi links with the "ecological" in Nietzsche is less about a special interest Nietzsche might have in the role of the environment *per se* in our cognitive functioning than it has to with qualifying the context, extent, scope, or range of our cognitive abilities.

Something that is less developed in Riccardi (2011) is the nature of what he calls the "physical grounding" or the data generated by the senses (specifically, the sensory organs), and its connection with Nietzsche's power ontology, his view that what exists is better characterized in terms of *organizations of forces* than as *substances*.

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26 There are a host of concerns and different angles that lend subtlety and complexity to this matter, and they are not always sorted out so carefully in the literature. For example, one might consider whether, if it is really the case that Nietzsche holds something like a falsification thesis, he thinks this is true about any and every claim (that the formulation of claims falsifies that which they are about; the process of conceptualization or formulation itself perhaps misforms its object), or whether this applies chiefly or exclusively to empirical claims, claims generated on the basis of our observations (in which case it might be our senses that falsify thus leading us to hold false beliefs). In other words, is the concern about falsification directed toward (and advanced on the basis of insights about) our observational powers, or does it primarily indicate something about our cognitive limitations? How does this view stem from and stand in relation to Kant's distinction between the noumenal and the phenomenal? And just what is Nietzsche's standard for falsification? What is the status of a fabulation, a lie, or a misrepresentation, and how does that affect our epistemic projects? Riccardi entertains a number of these distinctions and examines them in relation to published works of Nietzsche's contemporaries with whom he had some acquaintance. Clark (2018) has more recently clarified her view of the scope of the falsification thesis.

27 In particular, Riccardi (this volume) stretches Nietzsche's views to claim that he holds a position much like Papineau's, particularly his notion of "sensory templates" (see Papineau 2007).

Riccardi recognizes that Nietzsche's power ontology is relevant, particularly what he calls the *Machtquanta* theory, and this plays an important role in his examination and elaboration of Nietzsche's views about the senses. Riccardi concludes that Nietzsche holds that "sense organs are causally efficacious [...] in being the 'devices' by which power exchanges between organisms and environment are modulated; senses 'do not lie' [...] because their outputs are 'physically grounded' responses to environmental inputs" (2011: 239), but I think this stretches the textual evidence too far to make it fit with contemporary discussions. Further research could continue to pursue a related line of thought by focusing less on the extent to which this creates problems of compatibility and consistency with Nietzsche's purported epistemological views and more on the kinds of conceptual structures and logical relations Nietzsche anticipates as following from his ontological hypotheses and speculations. More on these prospects appears in the final section of this chapter.

My focus is on cognition rather than consciousness, even though consciousness is obviously a relevant concern in any theory of mind that also wishes to comment on cognition. Several papers on Nietzsche's views of consciousness are relevant for those examining the extent to which Nietzsche's views are immediately informative for a theory of embodied cognition (Anderson 2002; Katsafanas 2005; Riccardi 2011, and this volume). In addition to the body—its priority and its relevance and involvement in cognitive activities—views about representations, their nature and their necessity, stand out as particularly important in ECTs, as mentioned above. And finally, the extent to which mind, and particularly what might be called consciousness, is causally efficacious (or must be conceived as such in a theory of mind) crops up in the discussions of the views summarized in section 2.1 of this chapter. So, whether Nietzsche has anything special to contribute to that line of inquiry might also be worth pursuing.

2.2.3 Consciousness and a Theory of Mind

The idea that "consciousness is not an essential property of the mental"—namely, the view that much of mental life is *unconscious*—is a view that Nietzsche shares with contemporary cognitive scientists and philosophers of mind (e.G., GS 354 and GS 357). This includes the conception of cognition. Cognitive activity is not necessarily conscious, for Nietzsche; indeed, very much of it may be unconscious, as suggested above in the discussion of metaphoric transference from one domain to another in our sense-making and world-making mental activities.

In constructing a theory of mind from Nietzsche's remarks about consciousness, unconscious mental life, and cognition, Nietzsche scholars have tended to focus on the question of whether or not consciousness is epiphenomenal or causally efficacious. (This, in addition to ruminations about what views about representation can be attributed to Nietzsche.) There is a fair amount of discussion in Katsafanas (2005) of some standard fare topics in philosophy of mind applied to reading scat-

tered remarks in Nietzsche's texts, including those about perception, representation, what it means to have a concept, and the distinction between what is conscious from what is unconscious.[28]

Again, while this is an admirable exercise that helps to focus contemporary concerns, this strikes me as also stretching Nietzsche's views primarily to fit these discussions rather than to illuminate Nietzsche's own views. An exception to this general observation is when Katsafanas arrives at the intriguing conclusion that, for Nietzsche,

> conscious states causally interact with unconscious states, altering the unconscious states in a variety of ways; but, since the conscious states are already simplified versions of the unconscious states, this alteration of the unconscious states often results in unconscious experience coming to represent the world in inaccurate ways. (Katsafanas 2005: 2)

Katsafanas is able to show how this makes sense of Nietzsche's analysis of *ressentiment* and the work of the bad conscience, and it is possible to see how there could be a number of other useful applications of this insight. The nature of this kind of interaction, between the unconscious states and conscious states, is characterized in terms of "differing conceptualizations of an underlying unconscious state creat [ing] profound changes in that unconscious state, as well as in the mental economy as a whole" (2005: 19). The ways in which the "mental economy as a whole" can be affected by concepts that are realized in and organize conscious mental thought is a fecund area for further research, not only in Nietzsche studies but also in philosophical inquiry more generally.

There are numerous points of shared concern between Nietzsche and embodied cognition theorists, including the idea that cognition is situated (historically, culturally) rather than strictly and solely a formal, rule-based manipulation of abstract symbols. Both Nietzsche and ECTs emphasize the complexity of thinking, so as to include action (thus, both have sympathies with a phenomenological tendency to cast perception as a kind of activity, or at the very least resembling activity (e.g. NL 1885, KSA 11, 40[38])). Both regard cognition as realized or evident in something the body *does*, not just what a mind (or brain) *knows* or *thinks*. In both sets of views, we find resistance to the notion that higher order thinking (conceptualization, rationalization, etc.) is *different in kind* from the sort of thinking that is necessary for sensation, emotion, and action (e.g. NL 1885, KSA 11, 37[4]).

However, as I have already indicated, I think Nietzsche might not be a direct contributor to theories of embodied cognition. This does not mean that his work is irrelevant to the advancement of such views. Indeed, quite the opposite is true. I think there are some important respects in which Nietzsche's philosophy is especially useful for philosophers of embodied cognition to take heed, as I elaborate in the next

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28 Katsafanas (2016) develops these ideas in a sustained way. Unfortunately, its publication occurred after this text was finalized with the publisher.

section. Nietzsche is especially concerned to examine the relation between our basic assumptions or interpretative starting points and frameworks and the kinds of investigations and conclusions these facilitate (e.g. BGE I, especially §§12 and 20). One frequently discussed in the literature is our tendency to adopt an atomic conception of reality, to see things as comprised of discrete or separable atomic substances. A related and more contemporary conceptual formation that organizes a field of research that was the subject of intensive investigation in his day is the concept of the organism (as biology rapidly developed toward a complete science). Nietzsche's power ontology inclines him toward the perspective of thinking of things in terms of organizations of power relations rather than as discrete organic (organismic) substances (e.g. NL 1885, KSA 11, 37[4], 38[1], 43[1]; see also NL 1888, KSA 13, 14[79]; NL 1886–87, KSA 12, 7[2]).[29] The distinction between an organism and organization, and the limitations and opportunities that are afforded by these different conceptual structures, has been examined in Nietzsche's works by several scholars, who have also used this alternative to bridge Nietzsche's work with contemporary research in philosophy of mind and language. I think this is particularly promising for Nietzsche scholars interested in *embodied cognition* and likely a more fruitful path to pursue than looking for his own views on the matter, so following a review of some criticisms of embodied cognition, I shall return to resources in Nietzsche's works that might be available in formulating responses to critics of ECTs and thereby potentially furthering development of that line of inquiry.

2.3 Critics of Embodied Cognition

There are a variety of criticisms made against embodied cognition theories, including but not limited to the role that sensorimotor systems play in their views, the status of information supplied by the senses, the relevance of perception to cognition, the involvement and relevance of feedback "from the world," and the necessity of representation for cognitive function. It is beyond the scope of this chapter to review all of these lines of challenge and attack. Instead, I want to focus on just a few concerns critics have about the consequences of such views for our moral psychology, a domain to which Nietzsche is widely regarded as making significant contributions at the same time that he leaves us with even more difficult challenges.

The most moderate critics of ECT might very well agree with the starting point of such views, namely that cognition, whatever it may be, is surely embodied: without the body, especially but not only the brain, we could have no cognition.[30] Certain idiosyncrasies of the human body—the number of cone receptors in the eyes, for exam-

29 Extensive discussion and documentation of Nietzsche's power ontology can be found in Richardson (1996).

30 I take Jesse Prinz as one "moderate" of this sort.

ple—surely affect what we perceive, and such perceptions at least inform our cogitations about *what there is, and what there is to be done* in the world. There is an even fancier theory about what is gleaned from the environment in terms of affordances, but I won't deal with that here.

Whether or not self follows mind is the subject of debate among ECTs and is a fault line of criticism by others (R. Wilson 2004, Churchland and Suhler 2009). In addition to concerns about identity, integrity, and competence of the agent, following these models, there are worries about the implications of these views for identifying the center of causal responsibility and, ultimately, moral responsibility (Anderson 2002, Prinz 2009). One might argue that even an organization of interactive parts still has distinctive elements and that the ECTs mistake the interacting parts with the real seat of cognition. But many ECTs regard cognition as an activity or process rather than merely an assembly of elements (or any particular element therein).[31]

One significant concern revolves around the status of an agent whose cognitive powers are thought to be distributed throughout a network or system. Given that at least some aspects of cognition are involved in deliberation about action, weighing moral choices, and anticipating consequences, to what extent are the traditional concepts of moral psychology and responsibility compatible with ECTs? To meet this challenge, some might be inclined to identify the morally relevant causal center in such extended systems. But if such can be isolated, one must wonder whether the extensions that are not part of the causal center are really integral and essential after all. Even if some agreement could be reached about this, and I suspect it would be difficult if not impossible, this solution might generate problems of its own.

Dempsey and Shani (2013) argue that the eliminativist solution to the mind-body problem (reducing everything to material substance and eliminating the spiritual substance) simply repeats another one of Descartes' errors in "treating persons as self contained, and, as it were, atomic units which are in some fundamental sense detached—or detachable—both from the body proper, and the environment in which they are embedded" (2013: 591). In other words, the search for the "causal center," while possibly providing a basis for addressing the 'Frail Control Hypothesis' and concerns about competence and responsibility, might nevertheless be irreconcilable with a major organizing idea behind theories of embodied cognition, namely that related aspects of cognition (body, interactivity in the world, extended components) are *essential* rather than merely accidental. In short, the very notion of a causal center, convenient for addressing other concerns, might be problematic itself.

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31 Concern to address this but in a different context (in relation to bodies and identities) is found in Sullivan (2001). It is the form of the relation, a way of conceptualizing what occurs in mutually informing interactive systems, the co-constitution of body and mind in a very different way from the ECTs discussed here. Sullivan's book includes some discussion of Nietzsche that is not particularly relevant to my topic, along with discussion of Dewey (and his conception of 'body-mind'), to whom a number of ECTs refer.

Ciano Aydin includes this very concern in his own critique of extended mind theses. Aydin 2013 claims extended mind theses still retain an inner/outer distinction even as they claim to have overcome it. The problem would seem to be potentially shared among ECTs in "ascribing to cognition an original starting point in an internal biological core, an inside that utilizes the outside world [or extra-brain body] in order to fulfill certain cognitive tasks that it has set for itself" (2013: 2).[32] Aydin observes that in Clark's view, for example, the brain continues to be regarded as "the driver's seat" (Clark 2008: 122, Aydin 2013: 8). And, thus, such views fail to recognize evidence of reciprocal formation in which "socio-cultural practices can reshape certain cortical areas of the brain or transform the brain's representational capacities" (Aydin 2013: 8). By including artifacts, material objects in the world, in our conception of mind, according to Aydin, we come to appreciate that "our thinking is not pregiven or naturally present in a presumed inside world but that it unfolds itself by virtue of and through objects and artifacts (cf. Wittgenstein 2001, §16). It is crafted and shaped by physical things" (16). "From an artifactual perspective, thought is located in a world of objects, which are no less mental for being 'out in the open,' and no less real for being mental" (16). On this view, cognition is expansive and self-organizing without any particular part being internally responsible for the organization as a whole.[33]

I doubt that Nietzsche has anything new and meaningful to contribute to the debate between those making the case for extended functionalism, for example, and those claiming that human cognition and consciousness are not platform-neutral and are significantly and distinctly shaped by bodies and their particular characteristics—that is, I doubt that one could find in Nietzsche something positively new rather than simply evidence that he shares a general inclination toward this view. But the underlying motivation here to see persons as more than just their operating systems is potentially undermined by the very same reasons ECTs marshal against brain-based views: they simply expand the operating system to include entities outside the skull to the point that they risk erasing any meaningful form of individual identity, personal responsibility, and accountability.

On this front, ECTs are subject to some of the same kinds of criticisms Nietzsche is. This is hardly a virtue, so my pointing it out lends no support for either view, but it does suggest a similar orientation. In light of this, it might be worthwhile to consider how one might address concerns about the implications of Nietzsche's views resulting from his alternative conceptions of agency (some of which stem from his views about the body and the nature and extension of agential powers). In the redress of concerns about the implications of Nietzsche's views, we might find resources for responding to challenges along these lines mounted against ECTs. At the same time, I

32 Aydin doesn't propose we jettison these theories but rather that we should look to Peirce's "artifactual" notion of mind to help address this.

33 Aydin refers to Clark (2008) and Wittgenstein (2001).

expect, the Nietzschean responses will apply additional and new pressures on ECTs with the result that putting Nietzsche in dialog with theories of embodied cognition productively replaces some challenges with new ones.

2.4 Nietzschean Contributions

Recall that ECTs present cognition in ways that raise problems with respect to our usual conceptions of extension (including interactivity), plasticity, emergence, and portability. A repeated concern they express is that our traditional philosophical concepts of mind and cognition may be inadequate for analysis of our objects of inquiry. One finds in Nietzsche a similar abiding concern about the relation between overarching theoretical orientations and our conceptual formulations for capturing and analyzing our objects of interest. But in proposing alternatives, ECTs might reiterate some of the very views they purport to challenge, as discussed in the preceding section, and they could create some new problems of their own. In this section, I isolate a few of these worries and indicate how Nietzsche might offer some useful resources for clarifying and/or addressing them.

I focus on three related ideas: 1) conceiving the activity under investigation in terms of a *process*, 2) shifting concern from identifying *components* involved in the activity to seeing it as an *organization*, and 3) regarding the nature of what is sought as *emergent* from a *continuum* rather than a discrete activity or phenomenon. These very same features in Nietzsche's philosophy have been brought to bear by Günter Abel (2001, 2015) in considerations of philosophy of mind of the traditional sort, but this work has not been widely reviewed by English-language audiences, and, with very few exceptions, it has not yet been applied to theories of embodied cognition specifically. However, it is in the formulation of such alternatives to the traditional approaches and assumptions of philosophy of mind that we might expect such views to have the widest audience and potentially the greatest effects.[34]

34 For example, Abel's work is not mentioned in Katsafanas (2005), which elaborates Nietzsche's philosophy of mind with respect to key ideas he holds concerning consciousness, language, and nature (in this context, brain function). His work comes the closest to elaborating what Nietzsche's views of embodied cognition might be if we were to examine his philosophy under this rubric. Abel's article was published in 2001, and many of the developments summarized in the first section of this chapter proceeded that publication. Additionally, Abel's work is focused more on Nietzsche's potential contributions to philosophy of mind more generally, and in this respect Abel puts *mainstream* philosophy of mind in dialog with a critical alternative, the very role that some ECTs adopt for themselves. In some respects my chapter here argues that the general approach of Abel's work can be fruitfully applied even in ECTs and that this is perhaps the most significant contribution Nietzsche's work could make to that field. Taking up his challenges, ECTs would be further strengthened as a viable alternative to the views they oppose. Abel's 2001 text has now been published in a somewhat condensed and updated form in Dries and Kail (2015).

2.4.1 From Things to Processes

A significant preoccupation in ECT is ascertaining and challenging both traditional and brain-based views of *where* cognition occurs. If the statement of this concern is jarring—*where* may seem an inappropriate way of putting it—this is indicative of our unsettled views about the nature of the very phenomenon we are seeking. Does cognition, whatever it may be, occur in the brain, in a brain interacting with a body, or in some combination of or conjunction with brain, body, and world?

While virtually everyone can agree that the three elements artificially distinguished here—brain-body-world—are somehow *involved* in most, if not all, cognitive activities, there is very much disagreement as to wherein lies the *causal center* in these relations such that the most essential component might be identified and its means of relation clarified. It is clear from Nietzsche's notes, and inferable from other published remarks, that he does not come down on the side of those who give the brain this pride of place (e.g. GS 39, GS 110; NL 1885, KSA 11, 37[4], NL 1886–87, KSA 12, 5[56]). Be that as it may, it is not clear on what grounds we could take Nietzsche as an authority on these matters. Instead of focusing on which team to which Nietzsche might be recruited, we could take up the more abundant evidence he mounts against the larger concern to which this is related—namely, the quest for the causal center. Focusing on this theoretical orientation can draw our attention to a whole constellation of interests that, taken together, might very well give us different answers as well as different questions to further pursue.

Nietzsche repeatedly observes that whenever we take an object for investigation, we risk undermining ourselves insofar as we extract it from the conditions of its existence, rendering it lifeless (literally or metaphorically, depending on the inquiry), and we potentially import, inappropriately, a host of metaphysical assumptions in hypostatizing what it is that we seek to understand (e.g. GS 110 and GS 354). This concern is not a manifestation of the so-called falsification thesis, mentioned earlier, but rather stems from Nietzsche's views about language as providing a template for thinking, or at least the kind of thought in which we engage when doing research, and the idea that grammar significantly structures, if not determines, the basic relations among ideas that we bring to our investigations. An example of this that is repeatedly discussed in the Nietzsche literature involves the subject-object relation, and our assumption that actions must have subjects that undertake them. Thus, even if a theory of embodied cognition could successfully mount the case that cognition is better conceived as an activity, there might still be a need to account for *what* is active, and which components are the essential ones in the causal chain, that which is responsible for the *doing*. But what matters on Nietzsche's expressivist account of action is *the doing*. The supposition of a doer behind any doing not only adds nothing to an explanatory account, it also solves nothing since it merely relocates the problem (or even multiples it), resulting in the need to account for the nature of the causal relation between the doer and deed, and to provide an adequate

account of the nature of the *doer* such that its causal efficacy can be established (see GM I 13; cf. BGE 3, 6, 12, 32).[35]

There are some who find the extended mind theses ludicrous because of the extent and range of what is construed as "external" but essential. How far does "mind" extend in such cases if in fact it escapes skulls? Such objections can lean toward *reduction ad absurdum* and slippery slope fallacies. But, if we shift the focus from the causal center and the dilemma of determining what is "in" or "out," internal or external, perhaps some of these more undesirable prospects could be avoided or at least softened if not dissolved.

Recall that one feature of the family resemblance among the different versions of embodied cognition theory is the view that cognition is more adequately conceived as an activity than a set of operations or patterns of symbolic representations and manipulations. Put another way, cognition is not a *property* of mind. This notion would clearly seem to be compatible with Nietzsche's views, and we could push it even further by thinking of this activity as realized in processes rather than things.[36] Abel puts it this way: "The Nietzsche-world is a world of process objects" in which "[t]he physical identity of individual objects over a stretch of time is based on the type-identity of the events involved" (2001: 13). Nietzsche considers the possibility "subjectless processes" (discussed in Abel 2015: 8; see NL 1885, KSA 11, 36[21] and 36[22], and especially NL 1885–86, KSA 12, 2[151]).[37] The world thus conceived presents us with "highly complex dynamic interactions of many lively and intelligent organizations of forces" (Abel 2001: 12). This way of thinking also extends to our conception of subjects and is related to Nietzsche's interest in "force points" (*Kraft-Punkte*) and "quanta of power" (*Machtquanta*) (e.g. BGE 12; NL 1885–86, KSA 12, 2[69]; NL 1888, KSA 13, 14[79]) as alternatives to a substance metaphysics (e.g. HH 18; GS 109 and GS 111; TI Reason 2 and 5; NL 1885, KSA 11, 35[35]).[38] Another area that could be productively explored at greater length is the conceptual adequacy

35 This idea is important in Katsafanas' analysis of the passages Leiter cites as evidence of Nietzsche's view that consciousness is epiphenomenal and not causally efficacious, in which Katsafanas shows that Nietzsche is not arguing that consciousness itself can be no cause but rather that the Ego, as conceived in philosophy, does not exist. Some have looked to Nietzsche's expressivism as inspiration for situated and embodied cognitive theoretical views (e.g. see Gallagher 2009: 56). I discuss these passages from Nietzsche in the broader context of his works in Acampora (2013b).

36 I focus here on the general fact that Nietzsche is inclined to see cognition in terms of an event or process. A more elaborate account of *why* Nietzsche thinks this might also explore the relation Nietzsche describes between consciousness and language, evolving in the context of the demands of socialization and the need to communicate to achieve cooperation to meet environmental challenges and pressures.

37 Abel provides brief but helpful discussion of whether a process model requires an agent to engage in or direct the activity and the compatibility of this idea with the notion that consciousness has a subject (Abel 2015: 8). Translations of Abel (2001) are my own, aided by the translation available in the abbreviated and updated English presentation in Abel (2015).

38 It is important to note that the Nietzsche does not think there is a single, unified process of the world as such (NL 1887–88, KSA 13, 11[74]).

of the *subject* of embodied cognition. This distinction is relevant for characterizing relations among different entities and accounting for their interactions, for which an organizational model might be more adequate.

2.4.2 From Organisms to Organizations

Related to the idea of replacing our conception of *things* with *processes* and how this bears on the subject of cognition is the idea that our concept of the organism (generally construed as a *thing*) is in need of reform. Some have argued for replacing the concept of the *organism* with the model of a functional *organization* (Aydin 2007; see, for example, NL 1885–86, KSA 12, 2[87]).[39] There is a current of sympathy for this view running through ECT, although the organismic concept continues to creep in. Johnson 2006 discusses the virtue of the organizational model in relation to the ideas of James and Dewey, and I think we could add Nietzsche to the mix as well (see also NL 1885, KSA 11, 40[21]). Johnson emphasizes the significance of thinking of mind as a functional achievement, a process, rather than a *seat* of causal activity.[40] The activities of mind and cognition in particular are thus seen as emergent psychophysical processes that are based on complexity and continuity, realized in a functional organization (e.g. BGE 16, BGE 17, BGE 19; NL 1885, KSA 11, 37[4] and NL 1886–87, KSA 12, 5[56]).

On this view, self-consciousness and all other mental states are to be regarded as "emergent properties and consequences of diverse and highly complex interactions of the many continuents making up the organization and guaranteeing its functionality in which the overall system results" (Abel 2001: 17; 2015: 10). Mental life, thus, is the "result of highly complex organization and dynamism of entire complexes," "assemblies" of neural activities (Abel 2001: 18; 2015: 10), rather than the bearers of properties or the products of something caused in a particular part or region of the brain.[41]

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39 Aydin provides ample textual evidence of this interest in Nietzsche's work, including discussion of how organizations emerge, transform, and degenerate. See also Abel's discussion of this theme (2001: 17 ff.; 2015: 10–13).

40 "To say that I have a 'mind' is to say that I am an organism whose potential for very complex interactions has risen to the level where I can share meanings, engage in various modes of inquiry and reasoning, and coordinate activities with other creatures who have minds, using symbols that have meaning for us. [...] Once we understand that mind is a functional achievement, it ceases to be surprising that mind is always continuous with body and could not exist with out body." (Johnson 2006: 50)

41 Abel makes a connection at this point with Dennett's conception of multiple drafts, a view that might be especially congenial to Nietzsche, particularly given his perspectivism and interest in interpretation and hermeneutics. Thus, the literary metaphor is apropos. But I am not sure this is entirely helpful, since we tend to think of writing and revising in terms of the execution of authorial intent. The metaphor suggests there is an author or subject, a doer behind the deed, which is problematic. I

This idea could be useful for reforming certain insights found in the work of Clark and Chalmers. Insofar as they preserve the organismic notion of human existence, they set themselves up for another skeptical challenge. If we think of *organisms coupled* with other *external components* in a *system*, then, the components would seem to be potentially severable. And if the latter, this raises concerns about whether the external components are really essential and therefore not truly identifiable with the cognitive activity in question.

To be clear, this is not an argument in favor of active externalism. I do not think Nietzsche himself held such a notion, even presciently. Rather, I'm suggesting that Nietzsche's general philosophical inclinations and orientations might be useful for countering some of the arguments against externalism, and that these reflect limitations in our own thinking, not necessarily fuel for the position in question. In short, active externalism might still be false, but not necessarily because it suffers the limitations or failings its critics charge. These same conceptual shortcomings are present in and diminish the competing views, too.

Aydin 2007 similarly argues for replacing the concept of the organism, which is potentially self-contained, with the concept of the organization. The former conjures associations with something that is fixed and discrete, while the latter are more easily conceived as contingent and malleable, which might be truer to the facts of human existence and the phenomena of human experience. Moreover, because it is easier to conceive of organizations as overlapping and subject to reconfiguration, its concept includes less rigid distinctions between what is internal and what is external. In this case, the blurring of boundaries need not be pernicious, and it shifts the focus of concern to the bases of organization rather than causal centers.[42]

The organizational conceptual model crucially facilitates conceiving of how cognition might be embodied, or perhaps better, not *em*-bodied, but *bodied*. This provides us with further insight concerning not only mental existence but also the nature of bodily existence insofar as the body is part of the organizational structure one is and perhaps is paradigmatic. Indeed, Nietzsche imagines that investigation of the organizational structure of the body and the ways in which it manages to bind together an incredibly complex multiplicity of living beings might serve as "a guiding thread" for insight to the nature of mental or psychic life (see especially NL 1885, KSA 11, 37[4] and NL 1884, KSA 11, 27[27]).[43] The body and bodily experience entail "high-

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am not suggesting Abel advocates that view—quite the contrary, and he acknowledges this is a limited step forward. The important point for him is "it depends mainly on the processes of the highly complex interaction of the involved subsystems" (2001: 19; 2015: 10–11).

42 Müller-Lauter's (1999) discussion of Nietzsche's ideas about integration and *disgregation* (and decadence) are highly relevant here, as this shifts the focus from ontological status to one of organizational integrity and functional unity. In Nietzsche, see TI Untimely 35; CW 7; A 9; NL 1885, KSA 11, 43[2]; NL 1888, KSA 13, 14[83]; TI Errors 2; NL 1888, KSA 13, 14[219].

43 See also NL 1884, KSA 11, 26[374] and 26[432]; NL 1885, KSA 11, 36[35], 39[13], and 40[15]; NL 1885–86, KSA 12, 2[68], 2[70], and 2[91].

ly complex and dynamic interplay of multifarious small intelligent processes" (Abel 2015: 17; cf. BGE 19). Just as the concept of the thing is altered, so too is the idea of the body shifted away from a thing or inert substance to a complex dynamic of many smaller processes for which the concept of an organization is more apt. In this case, the body is a manifestation of interpretative nature itself (Blondel 2006; see NL 1885, KSA 11, 37[4]).[44] The body is thereby conceived as an organizational complex in which there is a dynamic relation of many smaller processes.[45] From these complex and overlapping organizational relations, cognition emerges within a continuum of activities that constitute and characterize human existence.

2.4.3 Emergence and Continuum

One of the particular attractions of embodied cognition theories is that they offer a glimmer of hope for escaping what have been intractable dilemmas in philosophical thinking between *either* body *or* mind as the seat of cognition (even though some views of embodied cognition might be thought to eliminate mind in the interest of resolving the dilemma). Nietzsche shares an interest in overcoming this dilemma. And although he neither gives us a testable theory of embodied cognition nor assesses (to any great extent) their particular theses, he does have general theoretical orientations that are compatible with such views. This includes his interest in avoiding the false dilemma of mind or body (or even introducing a third alternative), and his inclination to regard his objects of inquiry as emergent from and locatable on a spectrum rather than consisting in discrete polar oppositions.

Repeatedly, Nietzsche challenges our habit of thinking of things in terms of absolute dichotomies that are radically distinct (e.g. BGE 2), replacing that view with one of an essentially related continuum so that superficially apparent opposites[46] —such as material or physical and mental or spiritual, inorganic and organic— admit of a *scale* much as our values do (see Abel 2015: 4 ff.). Nietzsche writes: "what forces us at all to suppose that there is an essential opposition of 'true' and 'false'? Is it not sufficient to assume degrees of apparentness and, as it were, lighter and darker shadows and shades of appearance—different 'values,' to use the lan-

44 Blondel elaborates how the body, for Nietzsche, is "an interpretative constellation," described in terms of "drives [*Triebe*], which unceasingly try to increase their own power and to absorb or digest each other" (2006: 72).

45 Some ECTs do strive toward this organizational model over the organismic one. For example, see Wilson (2002), in which the conception of constituents of cognition includes what "are affected by their participation in the system. Thus, the various parts of an automobile can be considered as a system because the action of the spark plugs affects the behavior of the pistons, the pistons affect the drive shaft, and so on" (2002: 630). Functional relations that are integral must be durable. This focuses attention on the relation of the parts and the relative degree of closure of the system.

46 In this light, Abel reads Nietzsche's naturalism (BGE 230) as involving "naturalizing beyond the dichotomy of transcendent metaphysics and reductionist physicalism" (2015: 5).

guage of painters?" (BGE 34). This idea of "degrees of apparentness," for Nietzsche, applies as much to our sense of what exists as it does to what we hold to be true and good. An advantage of the continuum model is how it diminishes the "explanatory gap" by bridging relationships between separate areas of inquiry (Abel 2001: 8; 2015: 1–2, 21–22), and such a bridge could prove particularly useful for theorists of embodied cognition who are striving to explain how something that we might recognize as cognitive activity emerges and becomes apparent from the overlapping domains of the mental and the physical. We view its structure and the relationships that comprise its organization retrospectively, as emergent and arising from out of these relations. Nietzsche's emphases on the scalar and spectral potentially facilitate the development and advancement of concepts that will allow us to more adequately capture *what* cognitive activity is and *how* it is continuous with the many different activities that constitute the phenomenon of human living.

Conclusion

What difference do these alternative characterizations make, just how philosophically relevant are these descriptive metaphors—replacing *things* with *processes*, *organisms* with *organizations*, and so forth? I have argued that they are relevant because they open the possibility for developing the ideas in different directions, raising different questions, identifying different salient features and concerns. This is not to suggest that Nietzsche's philosophy will, or could, be used to vindicate theories of embodied cognition. Some argue that body consciousness is clearly not an either/or situation: it is neither all in the head (i.e., brain) nor *out of the head* and distributed elsewhere in the body or, even more problematically, in the environment and *not* also in the brain! More conciliatory views, combining ECT and brain-based views, might be possible, and a number of theorists of embodied cognition recognize precisely that, and that the way forward might not be simply abandoning brain-based views but rather drawing on the resources of both views.

Recall that pioneers of the extended mind thesis, Clark and Chalmers, claim that one of the more important contributions of their work, even if it should turn out to be false, is that it reorients and reframes key questions and concerns about the nature of cognition and human existence more generally. A parallel point could be made with respect to what Nietzsche suggests about the richness and variety that opens for us when we overcome the radical opposition of good/evil to replace it with a spectrum of values between good and bad (evident in BGE and GM), or with an alternative conception of soul (BGE 12). In this case, then, more and different conceptual possibilities are open to us as well as different possibilities for characterizing and analyzing the relevant relations, some of which have momentous implications and real-world applications.

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ISBN 978-3-11-024652-0
ISSN 1862-1260