What Self in Self-Organisation?

Engaging Varela's Epistemology for the Co-Embodied Self

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Abstract

I focus on an early article by Francisco Varela, "Not one, not two", to argue that his non-dualistic epistemology entails a paradigm shift towards a fundamentally co-embodied, and thus social view of self. Varela argued that the mind-body duality could be resolved by understanding the mind as embodied. Both Varela and Thompson have later elaborated on this and suggested an enactive, essentially embodied view of the self in terms of self-organized, organismic autonomy. I will argue that the enactive view of the self remains ambiguous with regards to the role of social interactions: are they constitutive for the minimal self-organization of the self or do they only play a shaping, secondary factor ? I rely on Varela's epistemology in "Not one, not two" to support my argument that the minimal self-organizational network that is the human self entails both individual bodily and joint co-embodied processes so that the self is already and constitutively social.

Introduction

In this paper I argue for the continued fundamental importance of Francisco Varela's work for understanding and studying the embodied self and the bodily sense of self. Varela provided the conceptual foundations for an enactive view of the self, according to which the self (in the sense of diachronic and synchronic personal identity) continuously emerges from various types of intertwined organismic activities (Varela, 1991, Thompson, 2005, Thompson, 2007, Kyselo, 2014). Taken together these ground an experienced, bodily sense of coherence of the living organism as a bounded unity in biophysical space. But while the enactive view clearly suggests that agents' selves are (bodily) unified, this unity must be understood as processual, not substantial in nature (Varela, 1991, p. 97). This is one of the key assumptions of the enactive

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approach. The self-world distinction is a process-based entity and in constant flux. It begins to emerge in terms of patterns of dynamically interacting processes, through a process called self-organization (Kelso, 1995). Self-organization can be observed in various systems, alive or not. For a self-organized system to qualify as being a self, special conditions need to be met, namely a) that the processes making up the network "recursively depend on each other", b) that they "constitute the system as a unity" and c) that they "determine a domain of possible interactions with the environment" (Varela, 1979, p. 55). In this way, they generate an organisational, rather than ontological difference between the organism and the world (Thompson, 2007. p. 45). Since the laws according to which this self-maintenance takes place are dictated by the activity of the very processes underlying the maintenance (instead of being externally given), such self-organized systems are also called autonomous (Thompson, 2007, p. 37). On this "self-less self" view, there is no separate self or agent that would enable or control the self-organizing dynamics (Varela, 1991, p. 95). Rather, the self *is* the sum of the autonomous network's invariant self-organising activities (Thompson, 2007, p. 61).

An important issue in applying the idea of autonomous self-organization to an embodied view of self and subjectivity is the problem of *intersubjectivity* and how we are to understand and study the role of interactions with other agents. There are two different and contrasting views of the role of sociality for the self, depending on whether sociality is thought to play a causal role for it (weak view) or to be constitutive of the self-other distinction (strong view).

In this paper I will focus on a rather idiosyncratic, early article by Varela, called "Not one, not two" (Varela, 1976) to defend the stronger thesis that sociality figures already in the prereflective, minimal self-other distinction such that the core self would be undermined by considerations of individual bodily activity alone.

"Not one, not two" (Varela, 1976) is a position paper that Varela wrote in response to an invitation to the "Mind-body conference" organised by Gregory Bateson and Stewart Brand in 1976. The goal of this conference was to move past what Brand had called "the pathology of Cartesian mind/body dualism"— an endeavour that also looked to spiritual and religious sources to further this end.[2] Varela's goal in the paper was to outline a solution to the "philosophical *ur-question* of cognition" (Varela and Poerksen, 2006), i.e. the mind-body

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[2] Stewart Brand published this and other position papers of this conference in issue 11 of his *Co-Evolution Quartely 1976.*

problem. His non-dualistic epistemology would eventually become the foundation of today's field of embodied cognition, as well as of the enactive approach.

I think the radicality of Varela's solution still awaits its fullest disclosure. My main argument in this paper is this: when we apply Varela's dialectic method outlined in the "Not one, not two" paper to ourselves and our boundary with others, it will lead to nothing less than a paradigm shift from thinking of the self as individually embodied to the self as a *co*-embodied, thoroughly social process. On this view, the self-other distinction results co-constitutively from both individual bodily *and* joint, inter-bodily activity.

The paper is structured as follows. In the first part I will briefly outline Varela's "Not one, not two" dialectical logic as a general way of overcoming thinking in dualities and explain how Varela applied his dialectics to make progress in resolving the mind-body problem. In the second part, I discuss Thompson's body-body problem (Thompson, 2007, pp. 235-237) and introduce Varela's and Thompson's view of the self as an *organismic* autonomous self-organized network. I will argue that the body-body problem entails a problem of intersubjectivity in that to understand how lived and living embodiment go together, we need to first address what I have called the body-social problem (Kyselo, 2014, Maiese, 2019).

In part three, I will come back to Varela's "Not one, not two" dialectics to identify some conceptual steppingstones for resolving the body-social problem. This entails a transformative perspective on the self's own constitution, placing emphasis on its changing nature and its necessarily intersubjectively open and interconnected nature. I will draw on a discussion of Albahari's Buddhist no-self view (Albahari, 2006, 2011) and some objections to this raised by Henry and Thompson (2011) and propose that pure consciousness is co-embodied consciousness. This is a view of the self that defies a typically (Western) individualistic outlook according to which subjectivity entails a clear self-other distinction grounded in the single organism.

1. Dialectics - Non-Dual Thinking

Simply put, "Not one, not two" is a three-step game plan for a radical renewal for understanding the mind and a solution to the mind-body problem. The first step is to adopt a new logic to make sense of different, usually opposed (dualistic) points of views. The second step is to apply this logic in order to extend our concept of the mind from a brain-centred to an embodied and world-involving process (basically the view of the embodied mind) (Varela, 1976, p. 65). The third step is a call to consider the role of experience and to question limited specific cultural

(Western) conceptions of the mind. In this section I will explain step 1 and 2; step 3 will be subject of the remaining sections of this paper.

1.1 Everybody wins: The General Logic of "Not One, Not Two"

Dualities help simplify complexities. If a thing is not this, then it certainly must be its exact opposite. Accordingly, the opposite of inside is outside (or not inside), and so forth. One way of dealing with dualities is to side with one of their poles and to get busy with producing ever more detailed descriptions of it. In this style of analysis, we tend to remain in an oppositional mode to that which we chose not to explain. An alternative to this would be to argue that the terms of a duality can somehow be synthesized into something third. Varela calls this the *Hegelian* way of dealing with dualities, which entails a logic of negation. Dualities are "A/not-A" relations that stand in direct contrast to one another, creating a "polarity, a clash of opposites" (Varela, 1976, p. 65). Resolving such dual relations requires synthesising them such that something new is generated while something old is added or removed. In contrast to this – and being critical of Hegel's dialectics, Varela proposes an alternative cybernetic logic where we are asked to consider the "ways in which pairs…are related and yet remain distinct" (ibid. p. 64) and to think in terms of trinities, rather than in terms of contrasting pairs. Any given phenomenon is analysed *as a whole* ("the it") and simultaneously also in terms of the *processes leading to it* (the phenomenon as a whole). On this view, the dual terms of a pair of contrasting positions become constituting, complementary components of the process and thus of the phenomenon (p. 62). Varela denotes this formally as "trinity = the it/the processes leading to it." Any such triadic statement is called a "Star *". The slash "/" indicates the basic idea that in order to remove the duality, one is required to look at it – the phenomenon as a whole – and also at the constituents (making up the process) leading to the whole (ibid.).

Since Hegel and Varela both propose a strategy to overcome dualities by reference to something third, a bit of nuance is required. On the face of it, it is perhaps not so obvious that Varela's cybernetic alternative is so different from Hegel's view. Some defenders of Hegel's philosophy might worry that Varela is using him as a straw man.[3] First, it is worth noting that Varela is not alone in his criticism of Hegel. Hegel's dialectic has classically been characterized as being grounded in contradictions and negations. An example for this is Popper (1940), who took Hegel to defend a dialectical form of rationalism, for which negation is the driving force (Popper, 1940, p. 417). Hegel believed that reality itself needs to be understood in terms of

[3] Thanks to one of my reviewers for having pointed this out to me.

contradictions, which is not problematic, if we apply a progress-oriented outlook where contradictions are simply viewed as part of the *development* of reason (and of the world, correspondingly).

Forster (1993) has defended Hegel against committing this "original sin" of affirming contradictions. In the end, contradictions are for Hegel only steps towards achieving ever more knowledge of an absolute idea, which importantly is itself *non*-contradictory and complete (Forster, 1993, p. 135). This might suggest that Varela's view is not that different from Hegel's since for both contrasting pairs might simply be aspects of a higher-order affirmative statement.

Clarifying the difference between these two thought systems in more detail is probably worth its own separate paper (or book). Still, I think we can identify a contrast clear enough to sufficiently warrant Varela's fundamental opposition to Hegel. Simply said, the difference between Varela's and Hegel's dialectics lies in the *starting point* of their analysis: Varela begins with considerations of the whole, while for Hegel the whole is assumed to be the ultimate and ideal endpoint of the analysis (Hegel, 1830/1991). Hegel's starting point is the consideration of contradicting pairs that are synthesised into a third term that is again conceived in terms of a contradiction with a further term and so forth, until finally all contradiction is removed through synthesis within one absolute whole (Schäfer, 2002). I take it that this is precisely what Varela was concerned with, because for him the analysis does not build up toward one final whole. In contrast, non-dualistic dialectics requires thinking in terms of wholes "all the way down" (and up, if you will), in a way that preserves the meaning of the dual terms. Varela's dialectics, in contrast, entails a logic of "self-reference" as he puts it (p. 64).

To illustrate this, consider the dual relation "network/trees constituting the network" (Varela, 1976, p. 63). It is quite possible to take out some of the trees (the components of the network) and analyse them sequentially in their own right. However, every component/tree of the network is on its own a reflection of the network as a whole (Varela, 1976, p. 62). To understand the properties of the whole, we need a different kind of move, namely the simultaneous consideration of *all* possible components and trees of the network. This is done through abstraction: if we were to write down all possible trees and their interrelation to other trees of the network we would end up with a description of the network as a whole. The whole thus comprises those parts of the network that are observable as stable patterns and together constitute the network as an observable entity.

1.2 Resolving the Mind-Body Problem - Mind as Conversational Pattern

Having outlined his general "Not one, not two" dialectics, Varela proceeds to apply it to resolving the mind-body duality. To do so, he asks the reader to draw attention to herself, the human observer. We often take ourselves to be distinct from the objects of our awareness when, in fact, we are ourselves already part of several (unwarranted) Hegelian pairs, for example within terms such as "subject/object" (Varela, 1976, p. 65).

According to Varela, rather than seeing subject and object as contrasting pairs, we should conceive of them as complementary viewpoints and constituting parts of a larger whole (Varela and Poerksen, 2006, p. 39). The question is what is that larger whole? To answer this, we are required to follow Varela's heuristics of thinking in trinities outlined above and conduct an abstraction over all the relations and interactions that we humans could possibly be engaged in, be they with "ourselves, with each other, with nature, society or what have you" as he specifies (p. 65). The result is the sum of all human behaviour, which Varela calls (after Bateson, 1979) the "conversational domain". Importantly, this conversational domain refers to nothing but life itself. Within life, we can then determine a subset of relations and interactions that are observable as stable patterns of human behavior – so-called "conversational patterns" (Varela, 1976, p. 65).

We humans are already part of such conversational patterns. We are not chuted down out of thin air, onto the earth as our landing pad, as Varela, Thompson and Rosch would later write (Varela et al., 2017, p. 199). Together with the environment in and through which we already exist, we are participating elements in the conversations of life itself.

Our minds must thus be seen as a relatively stable net of relations of observable behaviour within the larger domain of life. In this view, bodies (and brains) are not opposed to minds but rather seen as its constituting components, such that they become the processors of the mind (Varela, 1976, p. 66). Simply put, our mind is an *embodied mind*.

Let me now come back to the main question of this paper, namely how the "Not one, not two" dialectics helps make sense of the embodied self and, using Varela' term, the conversational pattern that I call the body-social problem, i.e. the question how embodiment and sociality interrelate in the individuation of the self.

2. Varieties of the Mind-Body Problem or "What Self in Self-Organisation"?

Self and mind are closely related for Varela, since every mind necessarily is a self (Varela, 1991). Research on the embodied mind remains incomplete if we do not fully include

ourselves, that is, our own existence as cognitive selves and agents (Thompson, 2005). By including ourselves into his solution to the mind-body problem, Varela made a very important point, namely, that the mind-body duality really is a question about how we human beings view ourselves and our relation to the environment that we are embedded in.

For Descartes humans were dual beings and at once a mental, thinking self but also a material body belonging to the material, objective environment. Since he was convinced that mind and matter are substantially different, we are left to wonder how to bridge the gap between ourselves as mental beings and the physical world to which we belong qua our material bodies.

One way to integrate the mental and material aspects of our self could be William James's approach (James, 1890/1950). James's theory of the self is quite complex and involves multiple selves (e.g. material, social and spiritual self) and he also seems to adopt various metaphysical positions. His account of the stream of consciousness, however, presupposed a neutral monist position which argued against the dualistic view of mind and matter as an "irreducible psycho-physic couple" (James, 1890/1950, p. 109). In further contrast to Descartes, for James, the self is not a separately existing entity, but present through each instance of experience or thought within the stream of consciousness. Importantly, James also suggested that the "only states of consciousness that we naturally deal with are found in personal consciousnesses, minds, selves, concrete particular I's and you's" (James, 1890-1950, p. 140) and that there is a bodily "feeling of this central active self" (ibid., p. 187), an affective core me that is (mostly) present in each of these instances (Barresi, 2002).

In rejecting the idea of the self as a separate entity, James' approach was was continuous with Hume, who argued before him that there is no separate thing that could be called a self. The true nature of consciousness is a succession of ontologically separable instances of impressions (Hume, 1739). What gives rise to the sense of personal identity is the result of an abstraction over the actual discontinuity of singular instances of perception from which we simply "feign the continued existence" of a substantial self.

From an embodied perspective of the self, James's reference to a core sense of bodily, personal presence in each instance of the stream of consciousness must be seen as key. Indeed, as modern phenomenologists Gallagher and Zahavi (2008) argue, this is precisely what Hume has overlooked, namely that in the steady succession of changing impressions, we find that there *is* something persistent: the *bodily* sense that all my experiences are given to me in certain way – as *mine*. One could thus argue that this bodily sense of mineness, overlooked by Hume but clearly already hinted at in James, provides a minimal, subjective core self.

2.1 The Body-Body Problem

The view of the minimal self argues for an embodied, preflective view of subjectivity. A consequence of Varela's ideas is that the body does not only play a role for our subjective sense of self but also for grounding the self-other distinction ontologically. Evan Thompson, who for Varela was both a colleague and a close family friend, made this point especially clear. His work can be seen as instrumental for developing a fully embodied view of the self, both from a first- and from a third-person perspective. Thompson argued that the mind-body problem could be reconceptualized in terms of the *body-body problem* (Thompson, 2005, Hanna and Thompson, 2003, Thompson, 2007). According to this, the main issue with the mind-body problem lies with body-term of the duality. There is, as it were a *body-problem*, because we do not have a true theory of the physical and only a poor understanding of what we mean by "the body".

Together with Hanna, Thompson suggests adopting a theory of the body that is grounded in biology. The first term of the body-body problem then refers to the organism or to the "individual animal that one is" (Hanna and Thompson, 2003. p 28). It needs to be understood in a two-fold manner, namely in terms of the lived body (subjectively experienced) and the living body as the organism. The second body-term refers to the body as physical, material thing, which can be explained from the viewpoint of science. This provides, as Thompson argues, a relatively straightforward way to bridge the gap between living and physical body, namely by understanding the living body in terms of its (physical) structural morphology (Thompson, 2007, p. 236). Bridging the gap between the body as experienced and as physical/living is the actual challenge. Yet by reformulating the mind-body duality in terms of the body-body problem, the gap is no longer "absolute," but becomes tractable. While the mind-body problem implied two separate ontologies, in the body-body problem we are dealing with a single ontology, namely embodiment. The problem consists in interrelating two aspects of the same metaphysically more basic entity, i.e. the *Leib* or animal as a whole, and to understand how the "organizational and dynamic processes of a living body can become constitutive of a subjective point of view, so that there is something it is like to be that body" (Thompson, 2007, p. 237). In other words, how can our biological bodies bring about a subjective sense of self?

From an enactive perspective, this question can be resolved by reference to "life or living being" and involves two steps. The first is to adopt an essentially embodied view of the

self. The second is to understand the body in terms of the enactive concepts of self-organisation and autonomy (Thompson, ibid.).

Let us consider essential embodiment first. Thompson proposed to distinguish between a weak (embodied) and a strong (bodily) view of the self's relation to the body. He refers to Descartes to explain the weak view: in Descartes' view the relationship between the conscious subject and its body is seen as quite close (Thompson, 2005, p. 3), but because of his dualism, the subject is still different from the body and remains an "essentially mental being" (Henry and Thompson, 2011, p. 235). A stronger *bodily* view of the relation between body and self is to adopt an organism-centred view of the self. According to this, rather than experiencing its body as an object, the subject literally *is* the body (Legrand, 2006). As Merleau-Ponty puts it "… I am not in front of my body, I am in it, or rather I am it" (Merleau-Ponty, 2002/1945, p. 173). Following Maiese, we can call this the essentially embodied view of the self (Maiese, 2019).

This brings me to the second step and therewith back to Varela and the enactive specification of this essentially embodied self in terms of autonomous self-organisation. Varela clarified that while the self needs to be understood as grounded in organismic activity, it is not a substantial entity. Instead, it is a network that is made up of further different sub-networks as its constituting components, a "selfless self" as he puts it (Varela, 1991). The sub-networks ("regional selves") each refer to different levels of organismic activities that taken together make up the organism as a whole (ibid., p. 80). Importantly, there is a common principle underlying the unity of these regional networks and this principle also explains how enactive thinkers generally conceive of the self. This principle is autonomous self-organisation.

The idea for it originates in work by Varela, Maturana and Uribe (1974) on so-called autopoietic theory, which already accounts for the most minimal organization of living systems. According to this, living beings are self-producing and self-constituting systems (Maturana and Varela, 1980, 1987). The paradigm example for this is the single cell, which maintains itself (within a cellular membrane) through continuously exchanging matter and energy with its environment. In doing so the cell brings about several biochemical processes that in turn ensure that it sustains its identity as a cell. Living systems thus self-produce the conditions for the maintenance of their identity as living systems. They are also called *autonomous* in that the laws of their operation are determined by themselves, rather than being described externally (Thompson, 2007, pp. 43-47). Enactive thinkers take it that here lies the foundation for thinking about the nature of self and identity as fundamentally relational: when the processes

contributing to a system's self-organisation become operationally closed, they also generate a basic form of identity, an invariance in how the processes maintaining the system work together (Thompson, 2007, 48-49). Simply put, in operationally closed systems, the processes making up the system are organised such that they both enable and are enabled by other processes within the same system. Through being interconnected in this operationally closed manner, they also exclude other processes that are not part of that interconnection. These processes become the self's environment, an environment that exists *for* the self, and can only be understood from its viewpoint. For enactive researchers, the idea of autonomous self-organization is applicable at several levels of complexity (Di Paolo et al., 2010, p. 50). The single cell is merely the minimal case of autonomy (Thompson, 2007, p. 140). To repeat, the human self is situated at the organismic scale of self-organization – it is the network that constitutes the organism as a whole.

Following the logic of autonomous operational closure, the self is understood as a processual entity emerging as an organisational, not ontological, distinction to the environment. Here lies the beginning of the end of thinking of the self-other distinction as a given. Despite its constructed nature, the enactive self is identifiable as a unified, individualised whole. What this means when it comes to the role of sociality requires further specification, as I will explain now.

2.3 The Body-Social Problem

In this section I elaborate on the body-body problem and argue that it entails a body-*social* problem (Kyselo, 2014). While most scholars of self and subjectivity, including those following Varela's non-substantialist enactive view, will agree that the self involves social engagements, this claim remains underspecified. There seems to be one last line of self-givenness that even enactive researchers have trouble giving up, namely the assumption of a clear-cut distinction between self and other. Fully resolving the body-body problem requires addressing this issue first.

Recall Varela, Thompson and Rosch's seminal diagnosis of Western philosophy as being driven by "Cartesian anxiety," the dilemma that "either there is an absolute ground or foundation, or everything falls apart" (Varela et al. 2017, p. 140). As they explain, the anxiety arises because humans crave for an "absolute ground" ("either for an outer ground in the world or an inner ground in the mind", ibid., p. 141). The alternative to having an absolute ground is

its opposite, illusion, "nihilism or anarchy". To avoid this, philosophers endlessly oscillate back and forth between subject and object.

I think that when it comes to the relation between self and other, researchers are driven by a close cousin of Cartesian anxiety, namely *Social Cartesian Anxiety*. Social Cartesian Anxiety manifests as an uncertainty concerning the stability of one's self in relation to others. It is a fear of immersion with others, which would be paramount to the loss of both, of the self and of others. Where in Cartesian anxiety the need for a stable ground shows up as a continuous oscillation between "subjective and objective poles," (Varela et al. 1991/2017, p. 141) in its social variation the oscillation is between the perfectly distinguishable self and other. Dan Zahavi's defence of the minimal self continues to offer particularly clear examples for this. Zahavi argues against what he calls the "anonymity objection", the view that subjectivity "is so completely and fully immersed in the world that it remains oblivious to itself". (Zahavi, 2014, p.xi, p. 26). As he explains this position is problematic since "there is neither individuation nor selfhood, but nor is there any differentiation, otherness… and there is consequently room for neither subjectivity nor intersubjectivity" (Zahavi, 2014, p. 189).

In earlier work Zahavi quotes Husserl to support the same point: "the individuality of souls implies an unbridgeable separation…this separation does not prevent but is the condition of enabling monads to…be in community with one another (Zahavi, 1994, Hua XV 576-77, my translation from German). If self was not from the beginning that by which we already are distinguished from others, there could never be a self nor others to whom we could relate. We thus need a certain "commitment to an egological account of consciousness" (Zahavi, 2014, p. 189) and save the subject from disappearing into an anonymous mass of being with others.

Social Cartesian Anxiety sits at the core of what I have previously called the *body-social problem*. In its original conception, it is the question how embodiment and sociality figure in the individuation of the human self-other distinction (Kyselo, 2014). In the debates on self and other, researchers engage in an endless *either/or* oscillation between two contrasting positions. When they do not construe the self as egological, they tend to either over-emphasize the role of sociality at the risk of losing the individual in group dynamics or they target sociality at the already more complex level of linguistic and cultural processes, which usually already presupposes the existence of distinct selves. As I have argued elsewhere, this either/or tendency amounts to a retained *social* form of dualism, leaving out a viable middle way, namely that sociality already matters for the self at a bodily, pre-reflective level (Kyselo, 2020).

The body-social problem specifies the body-body problem discussed above in that we not only lack a good theory of the natural body, but we also lack a good theory of the *social body.*

One way of specifying this point is by reference to what feminist philosophers call the *universalist assumption,* the implicit certitude that all bodies are the same. What is overlooked in the Cartesian mind-body duality is the factual diversity of human subjectivity and that qua being embodied, a person's mind is also bodily specific, i.e. distinctively shaped by different cultural and social contexts (McWeeny, 2021). In other words, the question of embodied subjectivity is essentially also a question of how bodies are transformed by social conduct and thus become subjectively different and distinguishing in the first place. Crucially, as feminist phenomenologists following De Beauvoir (2011), such as Young (1980) and Ahmed (2020) argue, this process must be seen as fundamentally bodily and prereflective.

Defenders of essential embodied subjectivity risk to disregard not only their own historicity (the fact that their very theory is shaped through their own bodily specificity), but they also assume that their own perspective applies to everyone else's. Importantly, this universalist attitude is often tied to an individualistic outlook on the relation of self and others (Kyselo, 2020). Here, I should clarify that by "individualism" I do not mean solipsism. Solipsism exaggerates claims about the independence of self from the social environment to the degree that *any* role for others to play for the self is denied. The more relevant form of individualism is an offspring of Social Cartesian Anxiety, according to which sociality is a mere secondary factor for an already safely established minimal subject.

In "Not one, not two" Varela seems to have anticipated this less obvious form of individualism about the self. Even when humans understand their bodies as belonging to the larger conversational domain that is social life, they still tend to "chop themselves out to detach from the wholes and become isolated, rigid participants" (Varela, 1976, p. 66). Varela believed this to be a consequence of our biological need for stability. Our brains construct a reality which creates the impression of being a bounded, separate bodily being. What were before "non-yet-individualised" bodies *became* separated individual bodies so that we now speak of "*my mind/my body*" (Varela, 1976, p. 66, original italics).

Yet here, I believe more nuanced attention is required. When it comes to understanding the relation between self and other, enactive views of the self (including Varela's) seem to be ambiguous. There are two contrasting views, each with a different understanding of the role of social interactions for the core/minimal self.

According to the first and individualistic, *weak* view, the organismic self, *in its core*, can do without sociality. The self emerges based on biophysical properties and can be explained in terms of an individual's bodily activity and by the logic of autonomous self-organisation. Following this, social engagements are secondary in that we are first distinct organismic selves, who then engage with others (as equally already distinct) selves. This interpretation is in keeping with the commonly adopted distinction between the minimal and the narrative self (Gallagher, 2000). The minimal self corresponds to the bodily, pre-social self, while the narrative self is the social, linguistic self. The burden of the self-other distinction is already carried entirely by the minimal, non-social self.

Varela and Thompson could be interpreted as adopting a similar view. Both authors argue for a difference between a social, intersubjective self and a purely embodied, animal self. For example, Varela proposed that there is a genuinely social, linguistic self, which emerges in interaction between several bodies, in contrast to a purely bodily, cognitive self that emerges based on the activity of the *individual organism* (Varela, 1991, p. 101). Similarly, Thompson suggested to differentiate between the core (cognitive) self and the personal self. According to this, the self/no-self-distinction only concerns the emergence of the animal core self and emerges on the basis of biological processes alone (Thompson, 2014, p. 344). The personal self, in contrast, involves being able to understand itself *as a self*, from a perspective of another person's viewpoint, and is constitutively intersubjective. On this weak view, while clearly being the result of a construction (out of a biological need for stability), the basic self-other distinction does not require sociality. This might mean that Social Cartesian Anxiety is at work not only within the more obviously individualistic phenomenological renditions but also in the more dynamicist, constructed enactive view of the self.

It is important to acknowledge the need behind Social Cartesian Anxiety: not to lose our ability to distinguish individual subjects. Yet in as much as we should question that individual subjects are substantial, unconstructed entities, must we ask whether such construction really is achieved on individual (organismic) grounds? This leads us to the second, *strong* view, according to which the self, *in its core*, is constituted through sociality.

In response to one of my reviewers, I would like to clarify that this does not re-introduce a new dualism between embodiment and sociality. I argue that to the contrary, humans, even when considered from a biological and bodily perspective, are already social all the way down and vice versa. The crucial point is, that even when adopting an essentially non-dualistic view

about the constitution of bodily selfhood, there is a tendency to think embodiment in terms of the single body, rather than as a project of joint, co-embodied comportment.

I think it is possible to also interpret Thompson and Varela as pointing towards this stronger view. They specify intersubjective engagements (i.e. the ability of human beings and greater apes for social cognition) as one of three cycles of bodily activity (the other two are regulatory and sensorimotor cycles) that make up the self-organizing autonomous network that is the embodied human mind (Thompson and Varela, 2001, p. 424). In earlier writings, Varela, Thompson and Rosch rely on Merleau-Ponty who argued that we "must see the organism and environment as bound together in reciprocal specification and selection" (Varela et al. 2017, p. 174). If organismic life was considered "in toto" (Weber and Varela, 2002, p. 116) then this would necessarily have to include sociality and therefore also other organisms (human or not). The idea of "reciprocal specification" could then be seen as supporting a radically social view in that organisms constitute one another's environment and thus do not only affect but also mutually *co*-specify one another. From this perspective, the constitutive basis of the core self might not be limited to the single individual's organismic activity, but also involves co-embodied conduct and engagements with others, from the start. I provide further support for this interpretation in the remainder of the paper.

3. Recovering Social Ground/lessness

To apply the middle way of "Not one, not two" to ourselves and resolve the retained *social* duality between self and other we need a better grasp of the greater whole that is human life. For Varela understanding mind-at-large requires looking at *experience*. Experience is a form of direct knowledge which refers to the *being* dimension of our mind. Since being always transcends knowledge, it is therefore vital that we always strive for a balance between knowledge and experience.

We have already established that mind at large is grounded in life. But what does this mean from a phenomenological and experiential perspective? The answer to this question will have to lead us beyond individualistic accounts of subjectivity. It requires us to deconstruct our own experiential biases because "as long as we experience us mainly as *individuality,* this knowledge is not forthcoming" (Varela, 1976, p. my italics). We must appreciate the transformative and changing nature of experience and thus consider other, transpersonal forms of experience. Varela remains somewhat mysterious on the whereabouts of such experiential

insights, but he is sure that it is available in different cultures and that, in principle, everyone can have an "experience of the mind as the "conversational domain of the biosphere" (p. 67). I think there are many different avenues for arriving at the kind of non-individualistic experiential insight that Varela is hinting at. In the final parts of this paper, I will consider a discussion of the Buddhist no-self theory as one possibility to argue for this point theoretically. While it is not clear that Buddhist meditation practice had already influenced his "Not one, not two" article, his later co-authored work *The Embodied* (Varela et al., 2007) makes it clear that Varela though that a transpersonal understanding of mind-at-large could be found here. As he puts it: "studying the brain and behavior requires…the exploration of experience itself... Buddhism stands as an outstanding source of observations concerning human mind and experience …" (Varela, 2010).

3.2 Closing in on "Mind-at-Large"

Miri Albahari draws on Buddhism to propose a no-self theory, according to which the bounded and distinct self is an illusion, and all there really is, is a pure, ego-less stream of witnessing consciousness. The source for this is found in advanced meditation practice and the "extraordinary" state of consciousness *nirvana* (Albahari, 2011, p. 80).

To explain, Albahari distinguishes between two senses of experiential ownership, *perspectival* and *personal* ownership. *Perspectival ownership* is the sense that experiences will appear as "mine or as part of me." However, mine or me means something different here than in the view of the minimal self. For Albahiri these experiences are part of a more basic type of perspectivalness, namely of pure witnessing consciousness. At this fundamental level, there is no ego for whom experiences appear to be subjectively grounded as their own. *Personal ownership* is different, because it entails a sense of distinction between subject and object and therewith also between self and other. While perspectival ownership as a property of witness consciousness is real, personal ownership results from a "two-tiered illusion" (Albahari, 2006, pp. 193-194).

The first tier is to argue that the nature of subjective awareness is egological. The second is to import onto this constructed, bound subject properties that are characteristic of the actually existing, underlying, stream of pure, witness consciousness, namely that it is "intrinsically unified, invariant and unbroken" (Albahiri, 2011, p. 108). Importantly, these features are in themselves not illusionary, but become part of an illusion once they are associated with the egologically constructed subject. We construct this two-fold illusion by use of so-called

perspective lending objects (*khandhās*), which we use to assimilate with the features of witness consciousness. One of these objects is typically the body: we identify ourselves with it and take "the body to be self, a single entity in which subject and body are fused" (Albahari, 2006, p. 58). As Albahiri explains, personal ownership "transforms the impersonal subject of experience into…a self" (ibid, p. 102), eventually leading to the impression of there being a bounded and distinct embodied subject, with an egological me-perspective.

Henry and Thompson (2011) take issue with Albahari's argument. As we have learned above, they endorse an essentially embodied view of the self, according to which the subject coincides with the body. A consequence of this is that the body cannot merely be an object among others. The bodily sense of the self as subject is non-object-directed (intransitive) and characterized in terms of prereflective bodily self-awareness. In other words, to possess the very ability to perceive a world of objects (including of the body-as-object), one must already be a bodily subject. The body is itself the very subject which constitutes the perspective from which other objects are encountered in the first place.

Albahari claims (quite in line with Varela above) that the impression of the body as perspective-lending subject is merely a construction and thus an illusion. Yet because she also holds that pure consciousness entails a perspectival ownership, Henry and Thompson argue that her account must be contradictory. The reason is that speaking of the body as a perspective-lending object already presupposes that one must have had some acquaintance with this perspective. Perspectivalness is "experientially anchored to the body" and therefore necessarily adopted by a bodily subject (Henry and Thompson, 2011, p. 242). For that reason, one must reject Albahari's idea that the bodily bounded self is a mere illusion.

I agree with the authors' verdict that the sense of self as bounded is not an illusion and that it might be real despite being constructed. Complementarily to saying that a self-organisational difference is still an observable difference (as a processual and temporally extended entity), I would claim that the experienced sense of self as bounded is real, even though it is constructed (Kyselo, 2020, p. 7).

What I take to be problematic, however, is to forget that this particular construction might not be the same for all human beings and that it is, in Varela's terms, only a "chopped out" part of a larger realm of all sorts of alternative embodied experiences to be had. It seems to me that arguing that any perspectivalness must necessarily entail a bodily subject presupposes the answer to what is precisely the question at hand: does the self essentially

coincide with the single body and must perspectivalness necessarily entail an *ego*-logical viewpoint? My answer to both questions is "No."

3.3 Perspectivalness without a Personal Owner

I think there is a middle way between Albahari's and Henry and Thompson's positions. It requires to bring Albahari's notion of perspectival ownership together with some additional insights on autonomous self-organisation. Recall that the core idea of autopoiesis is that the difference between living and non-living system lies in the generation of a self-organised unity, based on which the living being comes into existence as a distinguishable unity. An important aspect of this difference is that it entails, as Varela put it later, an "interpretative dimension" (Varela, 1997). By self-producing its autonomous identity, a living system also establishes a basic, subjective viewpoint from which interactions are evaluated as relevant (or not) for the maintenance of this identity. Enactive researchers later call this *sense-making*, a fundamental concern with the "continuity of the self-generated identity" (Di Paolo et al., 2010, p. 9). Varela suggests that this perspectivalness counts as a naturalized form of intentionality (Varela, 1997, p. 80).

Here is the idea: what if by the perspectival ownership of pure consciousness we simply mean the basic intentional perspective that enactive researchers take to arise qua being alive? It is the viewpoint of a living being concerned with staying alive (or continuously escaping death). Importantly, it is an entirely different (and open) question whether the concern with the continuation of autopoietic identity also requires the establishing of a difference towards other subjects (or objects). Another way of defending the idea that pure consciousness is ownerless, unified and unbroken, as Albahari had proposed, could be to use Varela's heuristic outlined above for arriving at a view of life as a whole: pure consciousness would then refer to the abstracted sum over all possible, autopoietically generated perspectives of *life* itself, rather than of any of its individual instantiations. This basic perspectivalness is common to all living beings, human or not. Importantly, and in contrast to Henry and Thompson, the relevant distinction here will then initially not be between several, concrete bodily instantiations of life, i.e. between distinct animals or subjects, but instead between life and no-life.

4. Toward Co-Embodiment

If we follow this idea of an essential non-distinction at the level of pure consciousness, we are only steps away from a possible solution to the body-social problem. In a nutshell, I think that

the lack of personal ownership at the level of pure consciousness, of life, could be translated to a fundamental sense of openness towards others. Since, in the enactive view, subjectivity is a function of the generation of the autonomous self and vice versa (Di Paolo, 2009), the sense of openness towards others could be seen as the reflection of the fundamentally social and *co-embodied* ontology of the human self.

At the end of "Not one, not two" Varela makes the point that the mind-body problem contains an irreducible core, namely that experience always transcends knowledge (Varela, 1976, p. 67). Resolving the body-social problem puts this point into a new perspective. The evasiveness and uncertain nature of our experiences that Varela alludes to is, I suggest, not only due to unpredictability in our own individual making, but more likely because we are, from the time spend in the womb and for as long as we are alive, fundamentally co-embodied beings. Varela had already said that we are participating bodies that constitute mind-at-large. I think we can elaborate on this by saying that through co-embodied activity human organisms jointly constitute the background for an infinity of other, transformative experiences to be had. Part of *our* perspective on the world is that we are intrinsically directed at and connected with others, because only together are we in fact able to create the very "material" for any experiences to be had (including that of being a distinct individual vis-à-vis others, I should add). To be able to participate in the conversational domain that is our life, subjectivity must thus necessarily entail a fundamental bodily openness. As Krueger and Legrand argued, our biological body is not just organically open but also an "openly intersubjective" body (Krueger and Legrand, 2009). We do not come to the world as separate selves simply because we have a body, rather, our bodies prereflectively and continuously connect us with each other. This does not introduce a new duality between embodiment and sociality but rather resolves it by understanding sociality in prereflective and co-embodied terms, i.e. as a process of joint, organismic co-specification.

The most basic mode of human consciousness entails a not-yet-personal concern with others, and therefore translates not just to basic intentionality but to an already fundamentally *social* intentionality. The reason is that our life (i.e. the part of life we are able to apprehend qua being human) is *social* life and thus to put it with Heidegger, *Mitdasein,* being-there-with-others (Heidegger, 1927/2001, p. 120). Being alive thus entails a pre-reflective and embodied

ultra-readiness for social interaction, a primary concern for affecting and being affected by others.[4] We all do know of it.

What view of the bodily self and its relation to others emerges from this? Recall that the body-body problem was assumed to be resolvable by reference to an animalist background ontology. Resolving the body-*social* problem specifies this background in terms of an intrinsically *co*-embodied ontology. The task at hand then follows Thompson's endeavour of understanding how the living body can bring about the lived body and sense of self by considering the self in terms of enactive autonomous self-organisation (Thompson, 2005).

Following Varela's "Not one, not two" logic, the human individual self is, at the core, a conversational pattern, i.e. a net of stable behavioural patterns. I suggest that this pattern comprises both individual bodily and inter-bodily activity. The basic human self-other distinction is then a function of a complementarity between independence and interdependence from others, rather than of individual organismic embodiment.

If this idea activates your Social Cartesian Anxiety, do not fret. It is still possible to speak of individuals. The individual subject is a network whose boundaries result from a continuous, co-embodied conduct that structure the space of interconnectedness that organisms create simply by being there. Selves are individuated in terms of differences in the various habitual negotiation practices of the interaction dynamics, in which bodies participate and through which they are continuously co-specified and transformed.

Conclusion

In this paper I went back to the very roots of the enactive approach and explored the implications of Varela's original non-dualistic dialectics as well as the ensuing enactive elaborations for understanding the human self, both in its living and lived dimension.

When mind and body are seen as grounded in life, some deeply held convictions about our self and our relation to others will have to be adjusted too. One of these convictions is that being a self is to adopt a fixed starting point, a perspective from which the world and others are encountered. The other conviction is complementary to this, namely the deeply-rooted

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[4] Following a comment by one of my reviewers, I wish to add that it is an important question to discuss whether these considerations apply to other, non-human living beings as well. I do not see why they should not. Other animals might also co-specify their identities as living beings. Similarly, I would take it that being alive connects us not only to one another, but also to other beings in the world. In this regard, an important question to investigate is the extent to which our sense of openness also extends to supernatural, artificial, or inanimate beings.

belief that at least the distinction between self and other – however minimally construed – must be a given.

The implications of thinking otherwise call for a dramatic change in the scientific investigations of self and subjectivity and future interdisciplinary research efforts toward a truly *co-embodied* science of consciousness. Varela's vision cumulated in the so-called neurophenomenological method, a research program for investigating both subjective experience and the neuroscientific mechanisms of consciousness (Lutz and Thompson, 2003).[5] Bringing the science of consciousness to the next, co-embodied level requires to thoroughly break with the previous, individualistic paradigm and focus our investigations on interacting dyads and polyads, and on how bodily and inter-bodily (including inter-brain activity) factors jointly contribute to bringing it about.

One important consequence of this is that different interaction dynamics can lead to very different forms of self-other differentiation. Understanding the relation between experience and mechanism must then also involve investigating how humans co-organise subjectivity and thereby bring forth the various and changing forms of human embodiment, understood as different tendencies of co-enacting the self. Phenomenologically speaking, such a change would also entail that we account for the fact that our sense of self changes in dependence of the socio-cultural context and of the concrete interpersonal affordances available.

As Varela put it: "We must push on with self-exploration (Varela, in Varela and Poerkser, 2006, p. 52).

References

Ahmed, S. (2020) *Queer Phenomenology: Orientations, Objects, Others*, Durham, DC: Duke University Press.

Albahari, Miri (2011). Nirvana and ownerless consciousness in Siderits, M., Thompson, E., Zahavi. D. (eds.) *Self, No Self?: Perspectives From Analytical, Phenomenological and Indian Sciences*, Oxford/New York: Oxford University Press.

Albahari, M. (2006). *Analytical Buddhism: The Two-Tiered Illusion of Self*. New York: Palgrave Macmillan.

Barandiaran, X. E., Di Paolo, E., and Rohde, M. (2009). Defining agency: Individuality, normativity, asymmetry, and spatio- temporality in action. *Adaptive Behavior* 17(5), 367– 86.

Barresi, J. (2002). From the Thought is the Thinker 'to the Voice is the Speaker' William James and the Dialogical Self. *Theory & Psychology*, *12*(2), 237-250.

Bateson, G. (1979). *Mind and nature*. Dutton: New York

Beauvoir, Simone de. 2011. *The Second Sex*. Translated by Constance Borde and Sheila Malovany-Chevallier. New York: Vintage Books.

Di Paolo, E. (2009). Extended life. *Topoi*, 28, pp. 9-21

Di Paolo, E., Rohde, M., and De Jaegher, H. (2010). Horizons for the enactive mind: values, social interaction and play, in Stewart J., Gapenne, O., and Di Paolo, E. A. (eds.), *Enaction: Towards a New Paradigm for Cognitive Science*, pp. 33–87, Cambridge, MA: MIT Press.

Forster, M. (1993). Hegel's dialectical method. In F. Beiser (Ed.), *The Cambridge Companion to Hegel* (Cambridge Companions to Philosophy, pp. 130-170). Cambridge: Cambridge University Press. doi:10.1017/CCOL0521382742.006

Gallagher, S. (2000) Philosophical conceptions of the self: implications for cognitive science. *Trends in Cognitive Science* 4, pp. 14–21. doi: 10.1016/S1364-6613(99)01417-5

Gallagher, S. & Zahavi, D. (2008) *The Phenomenological Mind: An Introduction to Philosophy of Mind and Cognitive Science*, London: Routledge.

Hanna, R., & Thompson, E. (2003) The mind-body-body problem. *Theoria et Historia Scientiarum*, **7**(1), 23-42.

Hegel, G.W.F. (1830/1991) *Enzyklopädie der philosophischen Wissenschaften im Grundrisse,* Erster Teil. Die Wissenschaft der Logik § 25, Hamburg: Felix Meiner Verlag

Heidegger, M. 1927/2001 *Sein und Zeit*. Tübingen: Niemeyer.

Henry, A., & Thompson, E. (2011)Witnessing from Here. In Gallagher, S. (Ed.) *The Oxford Handbook of the Self* (pp. 228-251). Oxford: Oxford University Press.

Hume, D., 1739. *A Treatise of Human Nature*, ed. L. A. Selby Bigge. Oxford: Clarendon Press, 1975.

James, W., 1890. *The Principles of Psychology*, New York: Dover, 1950.

Kelso, J. S. (1995) *Dynamic patterns: The self-organization of brain and behavior*. Cambridge, MA: MIT press.

Kyselo, M. (2014). The body social: an enactive approach to the self. *Frontiers in Psychology*, *5*, 986. doi: 10.3389/fpsyg.2014.00986

Kyselo, M. (2020). More than our body: minimal and enactive selfhood in global paralysis. *Neuroethics*, *13* (2), 203-220.

Krueger, J. & Legrand, D. (2009) The open body, in Carassa, A., Morganti, F., and Riva, G. (eds.), *Enacting Intersubjectivity: Paving the Way for a Dialogue Between Cognitive Science, Social Cognition, and Neuroscience*, pp. 109–128, Lugano: Universita della Svizzera Italiana.

Legrand, D. (2006) The bodily self: The sensori-motor roots of pre-reflective self-consciousness. *Phenomenology and the cognitive sciences*, **5** (1), 89-118

Lutz, A., & Thompson, E. (2003) Neurophenomenology integrating subjective experience and brain dynamics in the neuroscience of consciousness. *Journal of Consciousness Studies*, **10** (9-10), pp. 31-52.

Maiese, M. (2019) Embodiment, sociality and the life shaping thesis, *Phenomenology and the Cognitive Sciences*, 18(2), pp. 353–374. https://doi.org/10.1007/s11097-018-9565-z

McWeeny, J. (2021) Feminist philosophy of mind, in Hall, Kim Q. and Ásta (eds.), *The Oxford Handbook of Feminist Philosophy*, Oxford: Oxford University Press.

Merleau-Ponty (2002/1945). *Phenomenology of Perception*. London: Routledge

Popper, K. (1940). What is Dialectic? *Mind*, **49**, 196, pp. 403-426

Schäfer, R. (2002). Ideenlehre und die dialektische Methode, in Koch, A.F. und Schick, F. (eds.), *G. W. F. Hegel. Wissenschaft der Logik*, pp. 243-264, Berlin: Akadamie Verlag GmbH.

Taylor, C. (1992). *Sources of the self: The making of the modern identity*. Harvard University Press.

Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Harvard University Press.

Thompson, E., & Varela, F. J. (2001) Radical embodiment: Neural dynamics and consciousness. *Trends in Cognitive Sciences*, **5** (10), pp. 418–425.

Thompson, E. (2005) Sensorimotor subjectivity and the enactive approach to experience. *Phenomenology and the cognitive sciences*, **4** (4), pp. 407-427.

Thompson, E. (2014) *Waking, Dreaming, Being: Self and Consciousness in Neuroscience, Meditation, and Philosophy*, New York: Columbia University Press.

Young, I. M. (1980). Throwing like a girl: A phenomenology of feminine body comportment motility and spatiality. *Human studies*, **3** (1), 137-156.

Varela, F. G., Maturana, H. R., & Uribe, R. (1974). Autopoiesis: The organization of living systems, its characterization and a model. *Biosystems*, **5**(4), 187-196.

Varela, F. J. (1976) Not one, not two. *Coevolution quarterly*, **12**, pp. 62-67.

Varela, F. J. (1979) *Principles of Biological Autonomy*, New York: Elsevier North Holland.

Varela, F.J. (1991) Organism: A meshwork of selfless selves, Tauber, A. I. (ed.), *Organism and the Origins of Self*, pp. 79–107, Dordrecht; Boston: Kluwer Academic Publishers.

Varela, F. J. (1997) Patterns of life: Intertwining identity and cognition. *Brain and cognition*, **34** (1), 72-87.

Varela, F. J., & Poerksen, B. (2006) Truth is what works: Francisco J. Varela on cognitive science, Buddhism, the inseparability of subject and object, and the exaggerations of constructivism--a conversation. *The Journal of Aesthetic Education*, **40** (1), pp. 35-53.

Varela, F.J. (2010). Buddhism and Modern Science. Retrieved July, 2023, from https://www.mindandlife.org/media/buddhism-modern-science/

Varela, F. J., Thompson, E., & Rosch, E. (2017) *The embodied mind, revised edition: Cognitive science and human experience*. MIT press.

Weber, A. and Varela, F. (2002). Life after Kant: natural purposes and the autopoietic foundations of biological individuality. *Phenomenology and the Cognitive Sciences* 1, 97–125. doi: 10.1023/A:1020368120174.

Zahavi, D. (1994). The Self-pluralisation of the primal life. A problem in Fink's Husserl-interpretation. *Recherches Husserliennes* **2**:3-18.

Zahavi, D. (2014) *Self and other: Exploring subjectivity, empathy, and shame*. Oxford University Press, USA.

Zahavi, D. (2022). Individuality and community: The limits of social constructivism. *Ethos*, **50** (4), 392-409.