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THE HORIZONS OF EMBODIMENT
Corporeality in Humans, Animals, and Beyond

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THE HORIZONS OF EMBODIMENT:

Introduction to the Special Issue

1. Enter the body: The corporeal turn in cognitive science

The notion of "embodiment" has been quickly gaining currency in cognitive science and philosophy of mind. Although almost completely absent up until three decades ago, it has now become a staple term in contemporary discussions of the mind, cognition, and consciousness. However, one is immediately confronted with a seemingly obvious question: why has this "corporeal turn" (Sheets-Johnstone 2009) stirred up so much commotion? After all, were not all predominant schools of thought in philosophy of mind and cognitive science in the 20th century decidedly materialist/physicalist, loyally echoing the daring words of the infamous materialist philosopher La Mettrie (18th century): "Let us then conclude boldly that man is a machine, and that in the whole universe there is but a single [material] substance differently modified (La Mettrie 1912: 148)"? Were they not all united in the fierce resistance to the dualist idea of the "ghost in the machine" (Ryle 1949/2000), arguing that mind, cognition, and consciousness are all reducible to, or instantiated in, *our brains* and are therefore ultimately *bodily* states and/or processes? And if this is indeed the case, what is so extraordinary about the idea of the "embodied [conscious] mind" (Varela et al. 1991)?

There are probably several routes one might take in addressing this issue. Here, we intend to explore just two of them. The first, and more "superficial", reason the corporeal turn seems to represent a unique contribution to contemporary debates is that, unlike its predecessors, it puts the body, alongside

with its embeddedness in, and interactions with, its environment, at the very center of its explanatory framework. While most of the classical physicalist approaches (be they of eliminativist, reductionist, or functionalist flavor) paid lip service to the body, they usually conceived it as an un- or underthematized vehicle for the brain, a vehicle that, although admittedly indispensable for the proper functioning of the central nervous system, had, in itself, no crucial role in accounting for the nature and functioning of the mind. To be sure, the brain is "just" a part of the body; but when it comes to the matter of the mind (pun intended), it is said to be *the* part of the body: if my nail gets clipped off , I may feel some pressure or nothing at all; if I hurt my leg, I may experience some pain and discomfort; but if I sustain an injury to my brain, my cognitive capacities, mental states, and qualitative experiences are likely to change (fairly) distinctly and predictably (depending on the nature, severity, location, etc. of the injury).

It was only in the 1990's, with the advent of what is now often collectively called the *4E approach* to cognition, that the classical image of the body gradually started to deteriorate. The 4E approach is a motley of more or less complementary models and theories[1] and is nowadays believed to be the main contender to take on the *classical cognitivist* and *connectionist approaches*, which dominated cognitive science throughout the second part of the 20th century (see, e.g., Thompson 2007: 3–15). The main distinction between the 4E and classical approaches can be summarized as follows: Whereas the latter conceive of cognition primarily as a disembodied, abstract, and "brainy" affair, the former emphasize its corporeal, situated, and dynamic character. More specifically, according to the 4E approach, cognition is no longer construed as (i) (*pace* cognitivism) computational manipulation of mental tokens (*symbolic* neurally instantiated representations of entities in the "outside" world); or (ii) (*pace* connectionism) formation of stable activity patterns among distributed units of multilayered neural networks (*sub-symbolic* neurally instantiated representations of entities in the "outside" world). Instead, it is said to be

1 Lately, it has become increasingly evident that the main protagonists in the "4E revolution" (Menary 2010) form a rather loose coalition, and that the epistemological and metaphysical tenets they endorse are much less congruous as is sometimes believed, which casts doubts on the current talk of the emerging (uniform) scientific paradigm (for an extended discussion of the topic see Vörös et al. 2015).

extended (encompassing processes traversing the brain/body/environment boundaries); *embedded* (situated in the organism's environmental context); *enactive* (dependent on the organism's ongoing interactions with the environment); and – *embodied* (constitutively determined by the organism's corporeality) (Ward & Stapleton 2012). Put differently, cognition is no longer limited to *intra*cranial processes, but involves *extra*cranial dynamics in terms of the on-going, back-and-forth interactions between the brain, the (rest of the) body, and the (natural and social) environment they are embedded in.

Thus, the body, after being relegated to conceptual obscurity for so long, has been finally brought into the limelight again and now forms one of the main pillars of the arguably most promising research program within contemporary cognitive science. However, there is an even deeper reason that embodiment has received so much attention in the past few years, a reason that, as we will see shortly, does not always fully coincide with what has been said so far. To get a better insight into what is at stake here, it might be reasonable to retrace the trajectory of the corporeal turn back to its origins (at least in the domain of cognitive science), which inevitably takes us back to the now classical account of embodied cognition put forward by Varela, Thompson, and Rosch in *The Embodied Mind* (1991).

At the heart of this ground-breaking book lies the same song of discontent: deep dissatisfaction with the prevailing trends in contemporary cognitive science. However, this dissatisfaction is not directed primarily at specific models and theories proposed, but at the *overall attitude* with which they were constructed. Specifically, and most pressingly, the authors feel that cognitive science, in its traditional guise, has been robbed of one of the central features of human existence: the *lived experience* (*Erlebnis*). The term "lived experience", to immediately dispel the fears of a more hard-nosed physicalist, does not denote anything esoteric or otherworldly – it is not some "fluffy stuff", as Varela puts it in a somewhat different context (1996). Instead, it designates the ordinary, lived-through experience that constitutes the distinct, continually changing texture of my ongoing, day-to-day engagements with myself, the world, and other people.

Varela et al. maintain that, by focusing exclusively on *sub*personal and *sub*conscious cognitive processes (Varela et al. 1991: 48–49) enfolding in our

biochemical and neural depths, cognitivist and connectionist approaches have fostered an insurmountable rift between what Ray Jackendoff (1987) termed the *computational* and the *phenomenological* mind (Varela et al. 1991: 52–57), between a mind construed as a plethora of cognitive *subconscious* processes and a mind conceived as a locus of everyday *conscious* experience. In order to bridge this unfortunate gap, they suggest that cognitive science needs to reclaim the now-forgotten domain of lived experience and develop systematic ways of investigating it (ibid.: xv). This, however, does not entail adopting an anti-scientific stance and renouncing methods, norms, and standards of scientific practice. Quite the contrary: What Varela et al. seek to establish, is a theoretical and pragmatic platform for an *ongoing circulation* between "lived experience" and "scientific understanding", i.e. a framework that would enable a continual back-and-forth exchange between *first-person* (phenomenological) and *third-person* (scientific) approaches to mind, cognition, and consciousness (ibid.: 9–14):

> "[T]he new sciences of the mind *need to enlarge their horizon* to encompass both lived human experience and the possibilities for transformation inherent in human experience. Ordinary, everyday experience, on the other hand, *must enlarge its horizon* to benefit from the insights and analyses that are distinctly wrought by the sciences of the mind. (ibid.: xv; our emphasis)"

It is in this context that the notions of *body* and *embodiment* make their appearance. In the 20th century, philosophy of mind and cognitive science were under the strong spell of *analytic philosophy* which, for the most part, harbored a rather dismissive attitude towards both lived experience and the

body, ignoring the former and trivializing the latter (Crane 1999).[2] However, these topics, shunned by the prevailing trends in Anglo-American philosophy, have formed an integral part of, and have received extensive treatment in, the *phenomenological tradition*. Thus, and as attested to by a virtual explosion of studies on the subject in the past two decades, works by classical phenomenological authors, particularly Edmund Husserl (1989) and Maurice Merleau-Ponty (2002), provide a wealth of resources for the study of these two topics. It is this rich wellspring[3] that Varela et al. tap into when attempting to break the shackles of what they feel is an age-old rut in studies of the conscious mind.

2. Phenomenology of embodiment: from lived body to object-body, and back again

How and why can phenomenology be of assistance here? To begin with, it equips us with means for rigorously investigating lived experience. If I

2 Some might object that such a claim is too harsh, as attested by a vast body of literature on the *qualitative aspects* of experience (so-called *qualia*), which has been accumulating in the analytic tradition ever since the pioneering work on the topic by Thomas Nagel (1974) and Frank Jackson (1982). It is undoubtedly true that the analytic philosophy of mind, by loosening the exclusivist grip of the eliminativist, reductionist, and functionalist conceptions of the conscious mind, has made important strides in putting consciousness and (lived) experience back on the exploratory map. However, it should be noted that the conception of qualia, as usually understood in the analytic tradition, differs significantly from "lived experience" as construed in phenomenology. *Qualia* are conceptual descendants of *sense-data*, which means that, for the most part, they tend to be conceived as *quasi-things* with specific *properties* (i.e. they are accessible, atomic, ineffable, etc.) (see e.g. Morris 2012: 19). As such, they *engender* a very specific *attitude* towards experience, coupled with an (implicit) set of *preconceptions* that are normally associated with it, which is, as we will see shortly, precisely what phenomenology calls into question by means of *epoché* and phenomenological reduction.

3 Note that phenomenology is not the only philosophical tradition that Varela et al. turn to when seeking novel (disciplined) ways of investigating lived experience. Another tradition that looms large in their discussion is *Buddhist philosophy* with its rich repertoire of systematic theoretical and practical methods of analysing consciousness. Due to the space allotted, we will not be able to discuss this matter further, but see Thompson (2015) for an interesting exploration into this line of (cross-cultural and interdisciplinary) research.

want to study the contours and contents of my experiential landscape it is important that I have at my disposal some means of differentiating between how phenomena give themselves to me in my experience and what my own presuppositions of, and beliefs about, these phenomena are. Say I want to undertake a phenomenological investigation into how I perceive an apple that I am currently holding in my hand. In doing so, it will not suffice to simply "look and see" what I experience, as my experience of an apple is nuanced and complex (e.g. what I see is a discrete object with a distinct set of properties existing independently of me in the outside world, set against the background of other objects such as books, papers, a coffee mug, etc.), and I need to be able to recognize those aspects of the phenomenon that are motivated by the experienced object itself and those aspects that are the result of numerous unthematized beliefs about, and theory-laden attitudes towards, this particular phenomenon.

The first thing I realize is that, for the most part, my experience does not consist of atomic qualitative (semi)entities, i.e. of private and unspeakable qualia or sense-data, but has a distinct structure: *my* experience is, typically, an experience *of something* (e.g. an apple, tree, unicorn, love, number), and is determined by a specific *mode of intending* (being directed at) that something (e.g. perception, recollection, imagination). This is known as *intentionality* or 'object-directedness', a topic that, traditionally, Husserlian phenomenology has probably been most famous for: in my experience I am intending something in a particular way. Thus, phenomenological investigation is not primarily about hunting after the elusive experiential atoms, but tries to analyze *intentional structures* in and through which experienced objects are given to me. According to the famous "principle of all principles":

> "Enough now of absurd theories. No conceivable theory can make us err with respect to the *principle of all principles: that every originary presentive intuition is a legitimizing source of cognition*, that *everything originarily* (so to speak, in its 'personal' actuality) *offered* to us *in 'intuition' is to be accepted simply as what it is presented as being*, but also *only within the limits in which it is presented there*. (Husserl 1983: 44)"

This is also the crux of the famous phenomenological maxim: "Back to the 'things themselves'!" ("[A]uf die 'Sachen selbst' zurückgehen", Husserl 2001: 168), i.e. back to the way things (phenomena) give themselves to me in my experience.

In its quest to investigate lived experience, phenomenology thus starts by emphasizing the necessity for thematizing our implicitly adopted *attitudes* towards the phenomena of inquiry. More specifically, phenomenological methodology, as envisioned by Husserl,[4] is founded on so-called *epoché*, a procedure that entails the "bracketing" (*Einklammerung*), "suspension" (*Ausschaltung*), or "putting out of play" (*außer Spiel setzen*) of all presuppositions and judgements with which we (in)advertently invest our investigations of phenomena. The most important of these presuppositions, according to Husserl, is the idea of a *mind*- and *experience-independent world* existing "out there" and consisting of entities with predetermined properties that simply wait to be discovered by conscious (human?) beings. Husserl calls this attitude, which pervades both scientific and everyday life, the "natural attitude", and claims that, despite the taken-for-granted status we invest it with, it must be (at least temporarily) *suspended* (not disbanded) in order for us to get to the appropriate understanding of phenomena.

Epoché understood as a means of "bracketing" the "natural attitude" is thus a "gate of entry" (Husserl 1970: 257) into *phenomenological reduction*. By loosening the grip of the naturalist prejudice of an experience-independent world, one becomes aware that a given phenomenon encompasses a rich texture to be further investigated in that it is, as we have said earlier, typically a phenomenon-*of*-something-*for*-someone. This, in turn, moves us away from an unreflective (naïve) way of looking at things through the lens of the "natural attitude" and towards a reflective (phenomenological) way of looking at things through the lens of the "transcendental attitude": away from the (naturalist)

4 What follows is, of course, a rather simplistic rendition of *epoché* and phenomenological reduction. Both have been subject to much debate and close scholarly scrutiny, especially in relation to issues such as what is it precisely they consist of, how they are mutually interrelated, etc. These questions, although highly relevant, will, due to space constraints, have to be bypassed in this paper. For a good introductory overview see Luft 2012, Moran 2000: 124–162, and Zahavi 2003: 45–68.

way of conceiving "things" and "conscious minds" as two separate *types of things* – as objects "out there" and a subjectivity "in here" – towards the (phenomenological/transcendental) way of conceiving "things" and "conscious minds" as fundamentally interrelated and co-constituted. *Epoché* and phenomenological reduction are a means of accessing an epistemically non-dualist *transcendental domain*, whence the epistemically dualist experience that is uncritically endorsed by naturalist approaches is ultimately derived.

Now, how is all this relevant to embodiment?[5] Let us return to our original example, my perception of an apple. Two things seem especially pertinent: the first is that the apple is always given to me *perspectivally*, i.e., it is not given to me in "one fell swoop", but in a series of profiles or, in Husserl's original term, "adumbrations" (*Abschattungen*). The second thing is that, although the apple is given to me perspectivally, I do not perceive it as a series of discrete profiles, but as a *unified object*. The classical Husserlian analysis of perception thus posits a distinction between the *appearance(s)* (the multitude(s) of profiles of the apple) and *that which appears* (the apple). Two further conclusions can be drawn from this: first, in analyzing my experience of the apple one must take into account the *constitutive activity* of my subjectivity, i.e. the activity that somehow construes these different profiles as one (unified) object. The perceived apple is an apple for someone, and this *someone* is not a passive receptacle taking in the qualities of pregiven (external) objects, but has an *active* role in the sense that he/she *(co)constitutes* what he/she experiences.[6] Second, the fact that the apple is given to me perspectivally presupposes that I occupy a given *position in space*. The apple is *not* perceived from *no*where, but from *some*where. However, since perspectivity-cum-spatiality depends on embodiment, spatio-temporal objects (apple included) can appear only to

5 The following account draws from, and owes a lot to, Zahavi's concise and lucid expositions in Zahavi 1994 and 2003 (esp. 98–109).

6 To immediately ward off accusations proclaiming that this smacks too much of classical Kantianism: "Passive" and "active" here should not be confused with how Husserl sometimes uses the two terms (see, e.g., Husserl 2001). That is to say, what we wanted to emphasize is merely that a *subjective element* is involved in the appearance of a (unified) object, even if that constitutive element is *pre*-predicative (''passive'' in the Husserlian sense), and is therefore not the end result of some judgmental activity on behalf of a (transcendental) ego (''active'' in the Husserlian sense).

a *corporeal field of sensitivity*: the constituting activity is *not* the provenance of an abstract, incorporeal, otherworldly Self, but of an *embodied subjectivity*. But how are these two aspects – constitution and embodied subjectivity – interrelated? In other words, what is it that motivates the embodied subject to perceive different profiles as belonging to the same object? The answer is – *movement*. A particular profile of the apple – one that I am currently seeing – corresponds with a specific position of my body; but the *horizon of possible profiles* – profiles that are currently absent but *could* be present *if* I were to turn the apple in different directions – corresponds with a *horizon of possible movements* that I am able to undertake. For every set of (possible) perceptual appearances there is a functionally corresponding set of (possible) kinesthetic sensations: if I move my hand in a certain way, I will see a certain profile of the apple.

As this simple phenomenological analysis suggests, perception of an apple presupposes that I am a situated, thus embodied, thus moving subjectivity. But what can we say about this corporeal field of sensitivity and activity, which constitutes my originary sense of embodiment? Let us try to spell out what has been implicit in our discussion so far. First, this corporeal field is what Husserl calls a "zero point" (*Nullpunkt*) (Husserl 1989: 166), an orientation center of my experiential coordinate system. It is an absolute "here", around which all the 'theres' (other appearances) are arranged. Unlike from other objects, I am unable to distance myself from my body, for it is precisely in and through my body that I am poised towards, and engage with, all other phenomena. Second, my body is a "bearer of sensations" (ibid.: 168). As I trace my fingers along the apple, what I experience is not only the sensed qualities of an apple, e.g., its roundness, smoothness, etc. (sensations; *Empfindungen*), but also the corresponding 'tugs-and-pulls' that are localized in my body, e.g. motion-sensations, touch-sensations, etc. (sensings; *Empfindnisse*). These pre-reflective tugs-and-pulls trace the contours of my body, giving it thickness, form, and depth. Finally, my body is the potentiality for mobility: it is the "I can" and "I do" (ibid.: 159, 228), the complex system of interrelated kinesthetic experiences.

The body as *originally* given to me in my experience – as *that by means of which* I perceive – thus differs significantly from the body as it is normally

construed in natural sciences – as *that which* is perceived (an object among other objects in the world). From the phenomenological perspective, a *lived* body (*Leib*) – conceived as a pre-reflective structure of sensitivity and activity – becomes an *objectified* body (*Körper*) – conceived as a milieu of various physiological processes – only when the *prethematic kinesthetic sensations* are brought to the reflective light of *thematized movements*. It is only when I perceive that certain movements which I can visually perceive correspond with certain kinesthetic sensations which I have when I perform those movements that I start experiencing my body as an object in the world.[7]

However, how does this switch occur? What motivates me to see visual experiences of a certain movement (say, of wiggling with my fingers) and specific kinesthetic experiences (a unique plethora of sensed tensions, tugs, and pulls) as belonging to the same body? For Husserl, as well as for Merleau-Ponty, the key here is the phenomenon of "double-sensation", of two hands touching each other. When my left hand touches my right hand, it is *the same body* that is both *touching* and *being touched*, the same body that is the field of touching sensations (or "sensings") and the sensed object of touch. Moreover, the roles of the two hands are *reversible*: the right hand can assume the role of the touching organ, and the left hand can become the corresponding object of touch. So, if I were to rub my *right* hand against my left hand, the very source of sensation and activity (right hand as *a field of sensings*), the temporary background of my experiential field, could turn into that which is sensed and acted upon (right hand *as a sensed object*) if I decided to rub my *left* hand against my right hand. It is because of this initial self-objectification through touching that what I *visually* perceive as an object involved in a specific arrangement of movements can correspond to what I *tactually* feel as a specific arrangement of kinesthetic experiences: both are two different (external and internal) manifestations of the same action (e.g., of my wiggling with the fingers).

7 Note that this is only the *initial* step in the process of the body's objectification, as it does not entail a full integration into the world of objects; a full-blown reification occurs only by my appropriating another subject's third-person perspective, which regards my body as yet another object among other objects in the world (Zahavi 1994: 72, 2002: 105).

The phenomenon of double sensation discloses the *double-faced nature* of the body: its interiority (*Innenleiblichkeit*) and exteriority (*Aussenleiblichkeit*) are two sides of the same coin. The body conceived as what Husserl calls *Leibkörper* is a "turning point" (*Umschlagspunkt*) (Husserl 1989: 168) between relations that hold among ("external") material objects and relations that hold among ("internal") psychophysical experiences. More precisely, it is a *corporeal betwixt* where causal relations of *Körper* are interrelated with, and transformed into, conditional relations of *Leib*. The body thus provides one way of conceptualizing the elusive *in-between* that precedes and surpasses the subject-object, inside-outside split (Vörös 2014; Vörös & Gaitsch 2015).

Note that this second aspect of the corporeal turn – taking embodiment as a sensorimotor texture of our experience – cuts much deeper than the first one we explored above – taking embodiment as a mere extension of the set of factors that are relevant to explaining the mind and cognition. For whereas the former has profound epistemological and metaphysical consequences in that it radically modifies the overall attitude in which one pursues philosophy and science, the latter stays within the confines of firmly entrenched frameworks and practices, and merely reshuffles the elements that are already contained within them. In other words, the former is on a par to moving from poker to weightlifting, while the latter is more akin to moving from poker to bridge: the type of the game stays the same, only the rules change. However, the two aspects are *not* necessarily *in opposition* to one another: they can be, but need not be. In fact, the first ("top-down"[8]) aspect is what ultimately motivates and justifies the second aspect in that, through a disciplined study of lived experience, it discloses why it is that the classical (skull-encased) accounts of the mind and cognition are problematic. The second ("bottom-up") aspect, in turn, provides the first aspect with concrete content in the form of theoretical models and empirical findings, which can enrich its breadth and

8 The terminological distinction between "top-down/bottom-up" approaches is taken from Welton (2011). Specifically, Welton juxtaposes "top-down" approaches, which start off from phenomenological accounts of experiential structures ("phenomenology of intentional consciousness"), and "bottom-up" approaches, which are phenomenologically-inspired approaches that start off from the analysis of biological systems (as exemplified by e.g. Thompson 2007).

depth. Thus, the two aspects can *effectively complement* each other. On the one hand, the approaches modeled in the top-down attitude are, in a sense, more fundamental and provide the basic "form" for methodologically grounded investigations, but they can easily drift into empty-handed and repetitive conceptual meanderings. The approaches modelled on the bottom-up attitude, on the other hand, are brimming with "content", but they can easily lose their methodological and epistemic grounding.

It is precisely this *mutual enlightenment* (Gallagher 1997) that Varela et al. (1991) had in mind when they put forward their project of the on-going back-and-forth circulation between the 3rd-person (scientific) studies of cognitive processes and 1st-person (phenomenological) analyses of lived experience. To begin with, we have seen that taking lived experience seriously very quickly leads to the disclosure of its *corporeal texture*: *lived* experience is *embodied (corporeal)* experience. Further, because of its amphibious status, spanning the body as a lived, experiential structure (*Leib*) and the body as a milieu of cognitive mechanisms (*Körper*), our embodiment seems to be the preferable "venue" for the posited circulation. The Janus-faced nature of *Leibkörper* cuts through the typical mind-body duality, as it anchors *experience in materiality* and *materiality in experience*: the human being "is a body" (*Leibsein*) and "has a body" (*Körperhaben*), its fundamental mode of being is shot through by vectors of corporeality. Thus, according to Varela et al., it is important to thematize embodiment from both *structural/organizational* ("bottom-up") and *phenomenological* ("top-down") perspectives. As expressed by Colombetti and Thompson:

> "Cognition is thus embodied in both a structural and a phenomenological sense. Cognition is *structurally embodied* in the sense that it is subsumed by neural, bodily, and environmental processes (including other embodied agents). […] Cognition is *phenomenologically embodied*, because cognition – as a subjectively experienced mental activity – involves one's experience of oneself as a bodily subject situated in the world. (Colombetti & Thompson 2008: 57; our emphasis)"

The goal, again, is to find a balanced and synergistic way of approaching the study of the conscious mind by incorporating the methods and findings of both approaches. However, one cannot but wonder: although admirable in theory, with what, if any, success has this goal been implemented in practice?

3. Traps and pitfalls: Of bodifiers, body-snatchers, and body-skeptics

It is probably safe to say that the proposal put forward by Varela et al. has met with *som*e success: while the suggested reconceptualization of the mind in terms of embodiment and embodied action seems to have fallen on fertile ground and has borne some theoretical and empirical fruit (Noë 2004, Shapiro 2011, Stewart et al. 2010, Thompson 2007), its pragmatic counterpart known as neurophenomenology (Bitbol 2012, Thompson et al. 2005, Varela 1996) never really gained widespread acceptance. Our aim here is not to provide an in-depth account of various adaptations, alterations, and attenuations the proposal has undergone since its inception (for a closer scrutiny of these and similar topics see Vörös et al. 2016); instead, we intend to limit our focus on two issues that threaten to dampen and/or undermine its original incentive. The first issue is less challenging, and pertains to empirical matters of how embodied (cognitive) science is predominantly practiced. The second issue is more threatening, and poses an in-principle challenge to the idea of embodiment as such.

Let us start with the first, and less substantive, concern. As already mentioned at the beginning of the paper, the notion of "embodiment" has been slowly seeping out of "the ivory tower [of academia]" and setting up "residence in popular consciousness" (Rowlands 2010: 1). However, it would seem that this *increase in popularity* has found a rather unfortunate correlate in the *decrease* not only *in clarity*, but also *in scope and intensity*. In other words, not only is the meaning of the term "embodiment" becoming progressively vaguer, but its far-reaching implications also seem to have been significantly weakened, if not altogether discarded. On the one hand, one finds approaches that have moved away from *embodiment* as envisioned by Varela et al. towards what we propose to call *bodification*. Ignoring the postulated circulation between

scientific (bottom-up) investigations of *Körper* and phenomenological (top-down) investigation of *Leib*, such approaches focus solely on the *first* part of the equation. Thus, instead of looking for ways that would enable us to implement a radically different attitude towards the (study of) conscious mind, so that we may begin to unearth the *flesh-and-blood* texture of embodied experience, such accounts settle for more *anemic* conceptions, in which paying heed to the body more or less means extending the abstract explanatory substratum that has been at work in classical cognitive science. The *bodified* mind is thus a pale cousin of the *embodied* mind. In words of Vörös et al.:

> "If a brief historical analogy be permitted, it might be claimed that the majority of contemporary 'radical' approaches to [embodiment] are 'radical' in the same sense that this applied to the liberal parties of the 18th and 19th century. That is to say, just as the latter were willing to fight for the more equal redistribution of political power, but not for the modification of the background (social, economic, etc.) conditions that gave rise to inequalities in the first place, so the former are willing to experiment with novel conceptual approaches to the mind and cognition, but do not genuinely seem interested in reflecting upon, and possibly altering, their metaphysical and epistemological presuppositions. (ibid. 2016: 196–7)"

However, the story does not end here. As Gallagher (2015) points out, some theorists have gone even further, and have come up with versions of embodied cognition that seem to leave the body out of the picture entirely! In addition to bodification, there is thus also what Gallagher terms *body snatching*, a phenomenon where bodies have been replaced with "'sanitised' body-formatted […] representations in the brain" (ibid.: 98). In other words, unlike bodified approaches that, even if cut off from their experiential grounding, still entrust the explanatory power to the *body as such*, the body snatching approaches relegate all relevant explanatory force to the *body-formatted representations* instantiated in the specific neural circuits of the brain. In other words, it is *in the brain* that all *the action* lies.

Now, there may be good reasons to believe that such "distortions" are contingent on the socio-historical context of contemporary scientific practice,

and could therefore be easily remedied if the scientific community were suitably motivated to do so. Again, in the final analysis, this is an empirical matter. However, we believe that their prevalence and significance are quite telling, which leads us directly to our second concern, one whose implications may be much more grievous for the whole embodiment movement (at least for its most radical, and thereby philosophically most interesting, currents). To get to the crux of the matter, it may prove worthwhile to consider one of the reasons Heidegger may have been reluctant to deal with the question of embodiment in his philosophical work.

According to one prominent interpretation,[9] the answer goes as follows. We have seen above that the Husserlian *epoché* enables us to get a fresh view of phenomena as they give themselves to us in experience. It 'puts eyes in our head', as Heidegger, who in general was not the one to shy away from criticizing his mentor, once said approvingly of Husserl's phenomenology (in Overgaard 2003: 167). However, if we then try to pour this *new* experiential wine into *old* terminological and conceptual wineskins, serious misconstruals may ensue. The situation is somewhat analogous to attempts at communication between advocates of two different scientific paradigms in the Kuhnian model of science. To use a common example: although an advocate of the phlogiston theory (e.g. Joseph Priestley) and an advocate of the oxygen theory (e.g. Antoine Lavoisier) may use the same word (e.g. "air"), they come from such staggeringly different methodological, conceptual, and theoretical frameworks that any attempt at communication is likely to end up *not* in their *disagreeing*, but in their talking *past* each other. They both assume to know what the other is saying, but are in fact using the same word in radically different (incommensurable) ways. Similarly, Heidegger feels that, when choosing terminology that would authentically convey what was gained by means of *epoché* and transcendental reduction, we must exert utmost caution so that not only we are not misunderstood *by others* but, perhaps even more importantly, that *we ourselves* do not fall into old habits of thinking and speaking.

9 It should be emphasized that the exact reason for said reluctance on Heidegger's part has been a matter of some dispute, and that, in what follows, we focus only on one possible, if quite compelling, interpretation of this observation, as propounded by Søren Overgaard (2003, 2004, 2005).

Now, the main problem with most of the terms that figure largely in Husserlian phenomenology, e.g. "consciousness", "subjectivity", "ego", and – most importantly for our context – "body" and "embodiment", is that they are strongly infused with specific *ontological presuppositions*. That is, they were adopted from the older metaphysical traditions, and are therefore likely to further a particular conception of how we see ourselves and our relationship to the world and others. Overgaard refers to this inherited conception as an 'analytic' conception (Overgaard 2004: 124), because it advances the view of ourselves as composed of different components, layers, and attributes which are all founded on a "pre-given *thing*" (Overgaard 2003: 164). Basically, what this means is that, instead of drawing sustenance from the fresh wellspring opened up by the *epoché* and transcendental reduction we, inadvertently, slide back into the old *reifying* way of looking at phenomena. Thus, the body, instead of being conceived as a metaphysically elusive "turning point", as a *Leibkörper*, is likely to lose its *lived* dimension and become misconstrued as *corps machine* of natural sciences:

> "It is Heidegger's contention that the terminology of 'body' furthers conceptions of the human being as *composed* of a number of different types of entities. Notions such as 'body', 'embodiment', 'corporeality', tend to bring other notions such as 'mind', 'soul', and the 'mental' with themselves. To speak of the human 'body' is already to invoke the complementary notion of the human 'mind' or 'soul'; the notions of 'embodiment' and 'incarnation' seem to suggest that something is embodied or incarnated, and so forth. At least the way we usually speak of the body, it is understood as one side or component of ourselves, referring already to other sides or components. (Overgaard 2004: 124)"

Despite all the talk of the dual nature of our corporeality, of the importance of *Leib*, etc., the notion of "body", on account of its being rooted in our everyday, firmly-entrenched practices of signification, is open to radical misconstrual and may therefore result in the profuse watering down of its original impetus (as attested to by the bodifying and body snatching trends in the present embodiment movement).

So, what Heidegger seems to be suggesting is that, in addition to the Husserlian *epoché*, what we need is another, complementary "epoché-like" move – a conceptual or terminological *epoché* (Overgaard 2002: 170). In fact, it would seem that this is something he himself has tried to develop and implement under the title of "formal indication" (*formale Anzeige*). The central point of this methodological tool, which may be said to lay the foundations for the Heideggerian unique, and sometimes frustrating, terminological and conceptual edifice, is to find concepts that would be appropriate for a genuinely novel philosophical investigation. In other words, the main idea is to find terms that would be new or sufficiently "empty" of content so that they may perform a twofold function:

> "The method of formal indication, then, is supposed [i] to keep undesired connotations at bay, and at the same time [ii] indicate the itinerary we must follow in order to reach the right phenomenological description of the matter at hand. (Overgaard 2005: 152)"

This is why, instead of reverting (*pace* Husserl) to the interpretative recycling of old philosophical terms – trying to modify and broaden their scope of signification –, Heidegger uses terms that are either completely new (e.g. being-in-the-world) or ones that are fairly common but are not impregnated with the unnecessary metaphysical ballast (e.g. *Dasein*), so that he may ward off false interpretations and pave the way towards new (unimpeded) modes of seeing and thinking.

Now, all this seems to put considerable strain on the embodiment movement: is what started out as a revolutionary enterprise bound to end up as *mere rehashing of the same*? Is the notion of embodiment destined to fossilize into a yet another version of the Cartesian body-machine? Or to put it bluntly: were Varela et al. trying to make a silk purse of a sow's ear? Not necessarily. First of all, it should be noted that Varela et al. were not oblivious to the pitfalls that Heidegger seemed to warn against. For instance, they point out that "[c]oncepts such as embodiment […] are concepts and as such always historical"; they do not denote *how things really are* (whatever that may mean), but are *socio-historically pertinent signposts* – i.e. signposts that are meaningful within the specific socio-cultural context in which they appear – that are meant to

lead the inquiry in an appropriate direction (Varela et al. 1991: 228). This, they suggest, holds equally true for their notion of "cognition as embodied action (enaction)" as it does for other (more traditional) concepts such as "consciousness", "subjectivity", and "world". When discussing embodiment as a flesh-and-blood realization of the inescapable "interdependence of mind and world", they do not want to give the impression that, in contrast to the metaphysicians of old who (falsely) argued that mind and/or world themselves exist, it is now "the *relationship* between [them] (the interaction, the action, the enaction)" that is supposed to carry "some form of *independent actual existence*" (ibid.; our emphasis). Quite the contrary: although all conceptual positions tend to gravitate towards becoming a metaphysical "ground (a resting point, a nest)" (why this may be so is something we cannot go into in this paper), it is their hope that concepts such as embodiment and enaction "could, at least for some cognitive scientists and perhaps even for the more general milieu of scientific thought, *point beyond [themselves]* to a truer understanding of [metaphysical] groundlessness" (ibid.; our emphasis), of that which we have termed the "vital betwixt" (Vörös and Gaitsch 2015: 120) that precedes and underlies metaphysical and epistemological dualisms of various types.

In other words, if taken provisionally, i.e. as tools with a certain evocative force within a certain socio-historical framework, the notion of embodiment not only could, but actually *has,* proven to be of use in conveying the elusive "vital betwixt". In fact, it may be said that this was the main reason why Heideggerian terminology very seldom made it out of the narrow bounds of philosophy, and why, perhaps somewhat ironically, it was precisely *through the notion of embodiment* that renewed interest in Heidegger's philosophy has been sparked among many scientists and analytical philosophers. Namely, just as one might argue that words like "consciousness" and "body" are too suffused with metaphysical preconceptions to be useful for getting out of the old philosophical stalemate and initiating a genuine phenomenological investigation, so one may also argue that terms like *Dasein* and *In-der-Welt-sein* are too shadowy, too vague and elusive to be able to truly resonate with the members of the socio-historical context in which they emerged. In other words, it could be maintained that, although perhaps dodging the metaphysical bullet, such terms are not *fleshy* enough to grasp the attention of relevant

research communities (both within sciences and humanities) and therefore fail to do what they were intended to do, and that is open up a fresh path for phenomenological inquiry. What is more, given the (semi-)sacred status of the Heideggerian terminology within certain philosophical circles, one is entitled to wonder whether Heideggerian *Dasein* has truly fared any better than, say, Husserlian "subjectivity" or Merleau-Pontyean "body", i.e. whether it has not fallen victim of the same process of objectification and fetishization that other concepts have been subjected to.

However, we feel that it is not necessary to embrace such a grim, black-and-white view of the situation. On the one hand, we believe that it can be legitimately said that, despite the bodifying and body-snatching tendencies in certain strands of the embodiment movement, the idea of "embodiment" *did* bring a breath of fresh air into philosophy of mind and cognitive science: It not only made some analytically trained philosophers and natural scientists more aware of metaphysical and epistemological presuppositions of certain "common sense" ways of positing what are often termed as the most fundamental questions (relationships between body and mind, mind and world, etc.), but it also made the field of cognitive (neuro)science more open to alternative approaches and models that, for most of the 20th century, were considered by many as useless side effects of unbridled philosophical verbosity. On the other hand, the Heideggerian criticism does make a valid point: We must be more careful in how we use the notion of embodiment, while at the same time keeping an eye on, and experimenting with, other ways of trying to express the elusive "in-between" of being. It is particularly important to be mindful of various tendencies that try to mellow down the far-reaching impetus of the corporeal turn (as originally construed) and drift back into the old unreflective, but cozy, patterns of thinking about the body (mind, consciousness, etc.).

4. Horizons of embodiment: Outline of the special issue and individual contributions

The main idea behind this special issue, which grew out of a small, yet productive conference entitled *Corporeal Animals, Embodied Mind*, organized by Martin Huth and Peter Kaiser in December 2015 at the University of Vienna, is firmly anchored in the preceding deliberations. Its central focus – to analyze, evaluate, and critically reflect upon so-called "horizons of embodiment" – must be understood in a twofold manner. First, in taking the Heideggerian qualms seriously, it purports to examine the scope and applicability of the notion of embodiment in general (De Jesus) and as pertaining to the human (Garstenauer, Demšar, Strle), animal (Huth, Kaiser, Zaietta), vegetative (Gaitsch and Vörös), and even inanimate world (Marder) in particular. Specifically, it aims to investigate to what extent different construals of embodiment might contribute to a better understanding of various life forms – of their unique, if tentative, modes of being, cognizing, and experiencing – and what, if any, are the outer bounds of their epistemic significance. Second, and in line with the Varelian proposal of the on-going back-and-forth circulation between bottom-up and top-down approaches, the special issue purports to examine, by bringing together authors from different fields and backgrounds, various possibilities for engendering a "fusion of horizons" (*Horizontverschmelzung*) between structural and phenomenological approaches to embodiment: How can objective (third-person) and experiential (first-person) aspects of corporeality be combined so as to provide efficient means for studying the living? By following these two lines of thought, it was our intention to strengthen and further the fruitful dialogue between different philosophical traditions in the hope that it may help us shed more light on the intricate questions of life, body, and consciousness.

Our special issue takes off with "Making Sense of (Autopoietic) Enactive Embodiment: A Gentle Appraisal" by Paulo De Jesus. The paper presents the "embodiment revolution" in cognitive science through the lens of *autopoietic enactivism*, which conceives of the living body not only as an autonomous system, but also, in line with phenomenology, as a sense-making agent. In his critical evaluation of this general account of the living body, De Jesus purports

to show that the "sense-making" dimension of embodiment is not well-equipped to meet the challenge of anthropocentrism and anthropomorphism. Furthermore, in his plea against the dyadic picture of the body and for an ontological, yet at the same time sociocultural multiplicity of embodiment, the author criticizes the epistemic notion of "sense-making" for being too abstract and narrow.

This general discussion of embodied cognition is followed by various investigations into a wide range of specific aspects of embodiment, whose different results reflect back on the opening question as to whether phenomenological accounts are well-suited for the study of life. In "Taking Bodily Self-Awareness in Animals Seriously", Peter Kaiser turns our attention to the bodily grounds of self-awareness and its fundamental importance for conceiving of animal life. The author gives a brief overview of the debate about the possibility of prelinguistic and nonconceptual self-awareness in analytic philosophy, emphasizing a considerable convergence with phenomenological insights on the topic. More specifically, Kaiser argues that the notion of bodily self-awareness must be elaborated further with the help of Dan Zahavi and Shaun Gallagher's phenomenological analysis of pre-reflective self-awareness: Every type of consciousness, animal consciousness included, is said to entail a primitive form of bodily self-awareness that must be spelled out as the "for-me-ness" character of experience.

The next paper, "Embodied, Enacted, and Experienced Decision-Making" by Toma Strle, tries to lay new grounds in cognitive science for a more accurate and in-depth understanding of human decision-making. According to the author, decision-making, as conceived in cognitivism, is usually misconstrued as a kind of "calculation" about an objectively given reality, which leaves the sense of decision-making *for the decision-maker* completely out of the picture. As a remedy for this and similar shortcomings, Strle argues for the indispensability of a phenomenological first-person analysis of the dynamics of the decision-making process, and for an enactivist re-interpretation of the phenomenon in question that would creatively incorporate its embodied and experiential dimensions.

Similarly, in "I understand you because I know you: The influence of past embodied encounters on social understanding", Ema Demšar discloses another

serious shortcoming induced by cognitivist presuppositions in cognitive science, this time pertaining to interhuman social understanding, which is often misconstrued as "mindreading". As a more promising alternative, the author presents social understanding as supported by a shared social world established through the unfolding of embodied interaction, which leads Demšar to adopt a modified version of the enactive account of "participatory sense-making". On this ground, the author then goes on to focus on the importance of the pre-reflective character of social understanding, as exemplified by the crucial role of body memory and the feeling of familiarity in establishing and sustaining face-to-face interactions.

The next paper entitled "Temporalization of Touch and its Consequences for Embodiment" by Julia Garstenauer, focuses on an unexpected shortcoming (given Husserl's extensive work on time-consciousness) that seems to haunt the established phenomenological analysis of embodiment: the lack of a more thorough examination of the specific *temporal horizon* of embodiment. Through her critical reflections on Husserl's analysis of touch, Garstenauer argues that the original *tactual* constitution of the lived body as a "bearer of sensations" must be understood not only in terms of localization, but also, and no less importantly, in terms of temporalization. More specifically, Garstenauer reinterprets the notion of embodiment as a temporal manifold of touching and being touched, arguing that, due to the inescapability of time deferral in the constitution of embodiment, the relation between lived body and physical body is not to be understood as "co-presence", but rather as an ineliminable "non-coincidence".

In "Interanimality and Animal Encounters: The Phenomenology of Human-Animal Relations" Martin Huth takes us back to problems faced by phenomenological accounts of nonhuman embodiment when confronted with the nonhuman horizon of animality. The author opts for a relational analysis of our pre-reflective and embodied "inter-animality" with animal beings, which, he claims, is shaped by the social processes of habituation. More specifically, Huth purports to show that human perception of animals is molded by embodied structures of "tacit recognizability", which result in a selective social recognition of different kinds of animals. However, according to the author, this does not mean that these social patterns of normality are

immutable, as they are always at the risk of being undermined and disrupted by frontal, face-to-face encounters with an individual animal (in the vein of Levinasian encounters with the face of the other human being).

The next paper, "Humanity is another corporeity: Animal and human bodies in the philosophy of Merleau-Ponty" by Lucia Zaietta, is also situated in the field of human-animal studies, with a special emphasis on the methodological and ontological strengths of Merleau-Ponty's original contribution to the field. Zaietta argues that the analyses of shared embodiment, as proffered by Merleau-Ponty, reveal a common ontological ground of human and animal life, thereby providing phenomenological support to the view that human embodiment is not exceptional, but rather constitutes one specific gestalt among others. This change of perspective on the matter of embodiment entails a re-conceptualization of some central notions such as "organism", "behavior", "body", and "expression", whose main features Zaietta traces back to Merleau-Ponty, but also to Kurt Goldstein and Viktor von Weizsäcker, two notable influences on Merleau-Ponty's thinking.

The next paper, "Husserl's somatology reconsidered: *Leib* as a methodological guide for the explication of (plant) life" by Peter Gaitsch and Sebastjan Vörös, takes the discussion of embodiment one step further by examining the possibilities of our embodied "empathizing" not with *animal*, but *vegetal* life. The authors feel that, in order to investigate the scope and limits of the phenomenological conception of life, it is essential to get a better view of the full horizon of embodiment. It is on this ground that Gaitsch and Vörös argue that the account of "somatological empathy", as delineated by Husserl in his later writings and work notes, opens up a rich texture of empathy that functions not as a projective mechanism but rather as a "contrast foil", and thus does not succumb easily to the accusations of anthropomorphism.

The final paper, "The Vertical and the Vertiginous: A Phenomenology of the Mountains" by Michael Marder, takes the idea of embodiment to its farthest reaches by engaging in a phenomenological analysis of our embodied relation to the inanimate world of mountains. However, for the author, this analysis is also an occasion to come back to the fundamental issue of human embodiment, which so up to this point remained unaddressed in our special

issue, namely the *verticality of the body*. According to Marder, mountains tend to induce a specific kind of vertical experience, which, alongside the corresponding experience of vertigo, establishes an interesting resonance with spiritual tendencies in human verticality. Thus, in concluding this short introduction to the special issue, we might take Marder's last suggestion as a reminder that the focus on different horizons of embodiment should also leave room for the possible disruptions of corporeality with unforeseeable and existentially vertiginous verticalities.

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Paulo De Jesus

MAKING SENSE OF (AUTOPOIETIC) ENACTIVE EMBODIMENT: A GENTLE APPRAISAL

1. Introduction

With the advent of the cognitive revolution in the 1950s the intuitive idea that cognition is exclusively a brain process gained considerable scientific plausibility and credence. The last three decades, however, have seen various researchers challenge this idea and argue that cognition is not just "embrained", but also *embodied* and *embedded*. As a consequence the notion of *embodiment* has come to acquire special significance. So much so that some have argued that we are currently witnessing a "corporeal turn" (Sheets-Johnstone 2009) akin to the linguistic turn that took place in philosophy in the first half of the last century.

Embodiment or embodied cognition is a thesis which can be summarized as follows: cognition cannot be understood by studying the brain alone, we also need to appeal to the whole body (see Calvo and Gomila, 2008). As many theorists have recognized, this thesis is as ambiguous as it is important. Naturally, what one makes of the thesis will depend on one's understanding of its two key concepts, the *body* and *cognition*. It should then come as no surprise to find that currently there is no one unified embodied approach but rather a number of loosely connected and partially overlapping, partially incompatible,

perspectives. Hence, what was once more uniformly called "embodied cognitive science", now goes by the name of 4E – *embodied, embedded, enactive, extended* – approaches to cognition (Menary 2010; Vörös, Froese, and Riegler 2016).

Within the 4E community *enactivism* (Varela et al. 1991) has unquestionably been at the forefront of this corporeal turn. Over the last few decades a particular strand of enactivism, so-called "autopoietic enactivism" (AE) (Hutto and Myin 2013), has been developing a very unique account of the body, which it argues can and should serve as the basis for a unified non-cognitivist cognitive science (Di Paolo and Thompson 2014). This is because, unlike cognitivists and other non-cognitivists accounts of embodiment, AE foregrounds the role of the body in the emergence of *meaning*.

The main aim of this paper is twofold; to introduce AE's account of the body and then take a close critical look at it. In the first section of the paper I present a schematic overview of what I term the "mechanistic" approach to embodiment in order to provide a general background for the discussion of the rest of the paper. Section two then introduces AE's account of the body while the following sections take a critical look at it. These sections introduce two difficulties for the AE account: (i) that it could be regarded as anthropocentric and anthropomorphic, and (ii) that it is too abstract, synchronic, and does not pay sufficient attention to the historical, sociocultural dimension of embodiment. The paper concludes by drawing liberally from recent work in the anthropology and sociology of the body (Mol 2002; Mol and Law 2004) in order to both support this reading of AE and as a possible means of improving it.

2. Embodiment in Cognitivist and Non-Cognitivist Cognitive Science

For much of the early part of the so-called "cognitive revolution" the body played a minor explanatory role within cognitive science. The central tenets of this revolution, which are still dominant in current theorizing about cognition, were *computationalism*, *functionalism*, and *representationalism*, all of which, in one sense or another, contributed to the obfuscation of the body. From the perspective of computational cognitivism cognition amounts to nothing more than computational processes *in* the head (Chemero 2009).

These internal computational operations, defined over symbolic representations, are argued to be *implementation neutral* and thus not tied to a particular substrate. It was this functionalist tenet of traditional cognitivism that relegated the body to a merely accidental and ultimately non-essential property of cognition. Cognition was thus "embodied", but only insofar as it was *physically instantiated* in a manner capable of supporting the requirements of a particular cognitive (computational) architecture. However, by the late 1980s and early 1990s, a number of theorists within cognitive science and closely related fields began challenging the central tenets of computational cognitivism. It is within this context of dissatisfaction that an alternative approach to cognition began to take shape.

Inspired in large part by both phenomenology and pragmatism (Dreyfus 1992; Wheeler 2005) a move towards a more embodied understanding of cognition began to slowly emerge. This embodied view gradually coalesced into what has been termed "Embodied Cognitive Science" or "4E" (embodied, embedded, enactive and extended) approaches to cognition. In contrast to computationalism, 4E approaches shift the focus from passive and disengaged inner brain processes to the *active engagement of embodied agents*. As a consequence the body went from being an accidental property to a crucial requirement for cognition.

However, while it is now generally accepted that cognition is in some sense embodied, it remains unclear what exactly this entails (Anderson 2003; Di Paolo and Thompson 2014; Wilson 2002; Wilson and Golonka 2013). It certainly does not help that such concepts as body, embodiment, and embodied cognition are commonly used interchangeably within cognitive science (cf. Wilson 2002). This can make it difficult to accurately disentangle these notions and clarify their respective meanings, similarities, and differences. It should then come as no surprise to see researchers come up with varying numbers of meanings related to the concept of embodiment.

To add to this confusion, the two central concepts – *body* and *cognition* – are not only interpreted in a number of different ways but are often conflated (Di Paolo and Thompson 2014). This is clearly evident from the number of conflicting ways the concept of embodiment has been used over the years by different theorists. These range from the fairly "conservative" views of

embodiment, such as those that regard the body as a part of a computational circuit (Clark 2008) or as providing a format for neural mental representations (Goldman 2012), to the more "radical" views that see sensorimotor know-how (O'Regan and Noë 2001) or bodily-life regulations (Di Paolo and Thompson 2014) as a constitutive element of perception and cognition. Furthermore, evidence of the conflation of the concepts can be seen in the fact that a great majority of these accounts in actual fact do not have an account of the body.

These issues notwithstanding, it is however possible to roughly identify two broad approaches to embodiment loosely clustered around a *conservative* and *radical* nexus. Following Sharkey and Ziemke (2001) I will call conservative approaches *mechanistic*, and radical approaches *phenomenal* accounts of embodiment respectively (see also Kiverstein (2012) for a similar broad taxonomy of embodiment).

3. The Mechanistic Approach

Mechanistic approaches to embodiment are varied, complex, and often straddle the line between a total rejection of internal computations and symbolic representations (Chemero 2009; Pfeifer and Scheier 1999) and a mere re-tweaking of these traditional cognitivist concepts (Clark 2008; Harnad 1990; Wheeler 2005). These approaches are nonetheless united by the fact that they are all informed/constrained, either implicitly or explicitly, by functionalism. That is, functionalism provides the theoretical foundation for how embodiment and the body are understood.

It is here that we see that computationalism and functionalism can exist perfectly without each other. Like traditional cognitivist approaches the central concern of the mechanistic approach is with the implementation of cognitive processes. But unlike traditional approaches the mechanistic approach does not regard these processes as solely encased in the head nor the product of a centralized controller but as processes that cut across brain, body, and world. Nonetheless, whether cognition is understood in terms of computational processes which are realized by brain, body, and world or non-computational processes involving an hierarchical set of behavioral routines and reflexes, embodiment amounts to nothing more than the *substrate* upon which these processes are realized.

As a consequence, just like in traditional cognitivist accounts, the living body itself plays a very minimal explanatory role. Mechanistic accounts are thus by and large mostly interested in promoting a particular account of *cognition* rather than attempting to understand embodiment or the body as such. This is succinctly expressed by Wilson and Golonka (2013) definition of embodiment as "the surprisingly radical hypothesis that the brain is not the sole cognitive resource we have available to us to solve problems" (2013: 1).

This is also evident in Chemero's influential "radical embodied cognition thesis". Chemero defines radical embodied cognitive science as the "scientific study of perception, cognition, and action as necessarily embodied phenomenon, using explanatory tools that do not posit mental representations" (2009: 29). The main impetus for this approach is clearly to reject traditional computational representationalism and replace it with dynamic systems theory and ecological psychology, respectively, not to provide an account of embodiment or the body. The nod to "embodied phenomenon" functions merely to emphasis that cognition is not exclusively a brain process. But the body as a historical, living, gendered, sociocultural entity remains underdeveloped, under-theorized, and utterly neglected.

This account of embodiment is not too dissimilar to the one defended by Andy Clark (2008).[1] According to Clark, "the body, insofar as it is cognitively significant, turns out to be itself defined by a certain complex functional role" (Clark 2008: 56). Clark insists that the body is special, "[b]ut we should understand its specialness through the familiar lens of our best information processing models of mind and cognition" (ibid.: 58). While brains must be embodied and embedded, they nonetheless, according to Clark, are computational and representational devices. Accordingly, an embodied cognitive science needs to recognize that the brain simply does not care where the computational processes take place, sometimes they are in the head while at other times they recruit external artefacts and bodily structures. What is at stake here then is not embodiment or the body but *how best to understand and explain cognition*. For Chemero we must abandon representational

1 Note that the point being made here is that Chemero and Clark's account of *embodiment* are similar, not their account of *cognition*.

computationalism, while for Clark we must merely re-tweak our traditional understanding of these notions.

To sum up, mechanistic approaches to embodiment are (a) grounded on functionalism and (b) concerned with developing non-traditional accounts of cognition rather than providing accounts of embodiment or the body. In the next section we will present the AE alternative to this approach.

4. Embodiment in Enactive Cognitive Science

AE has over the past few decades developed and promoted an account of embodiment that is distinctively different from the more conservative mechanistic 4E approach presented above. Its distinctive feature is its concern with the phenomena of *meaning*, understood in terms of *signification,* something it argues has been neglected by both traditional cognitivists and mechanistic accounts. To distinguish this account from the mechanistic approach I will call it the *phenomenal* approach to embodiment.

Central to AE and indeed most varieties of enactivism is the view that cognition is, at various levels of complexity, an embodied sensorimotor coupling between living organism and environment. However, there are several fundamental differences between AE and other 4E approaches, two of which are particularly important in this context: according to AE cognitive systems are (i) constituted through adaptive biological autonomy and, as a consequence, (ii) are sense-making agents whose engagements with the world are inherently meaningful for the agent itself (Colombetti 2014; Di Paolo 2005; Thompson 2004, 2007). These two key ideas provide the foundations for the AE conception of the body.

Like other 4E approaches to embodied cognition AE's conception of the body and embodiment is intimately tied to its understanding of cognition more generally. However, unlike these approaches, AE also provides an actual account of the body. So what exactly is the body for AE? As Kiverstein (2012) observes, for AE the body can ultimately be understood as "the source of meaning" (2012: 5). To get a feel for this idea it will be helpful to consider one of AE's central criticisms against cognitivist and mechanistic accounts.

AE theorists argue that a central problem for computational cognitivism is

that its posited symbolic representations mean nothing to the system to which they belong, but they only mean something to an outside observer of the system. Meaning is *ascribed* to the system *from the outside* and is thus *not intrinsic* to it. Moreover, the same applies equally to systems operating on non-computational/non-representational principles, such as a robot picking up empty cans. In both cases the systems are doing something which has been enforced by a designer *from the outside* (Nasuto and Bishop 2013). For this reason these systems have no *intrinsic goals* and subsequently no intrinsic criteria for success or failure hence no value and signification.[2] In order to understand the emergence of intrinsic meaning one needs to begin with an appropriate account of the body. This is because, in the words of Di Paolo et al. "the body is the ultimate *source* of significance" (2010: 42). According to AE, body and mind emerge from the inherently precarious, dynamically active, and meaningfully normative processes of adaptively autonomous living systems. From this perspective the body is not a passive vehicle for the brain and its purported computational architect, but rather a self-constituting and self-organizing animate dynamic complex system deeply immersed in a meaningful world (Colombetti 2014; Di Paolo 2005; Di Paolo and Thompson 2014; Kyselo and Di Paolo 2015; Thompson 2007, Varela et al. 1991). Therefore, in order to understand how the body becomes the source of signification, we must first understand what "adaptive autonomy" is.

According to AE, living systems are a special sub-class of self-organizing dynamic systems, which are autonomous, or operationally closed, and adaptive. Autonomy is the property of a system that enables it to be self-organizing and self-constituting in order to maintain its identity as an individual entity. This self-individuating identity is argued to be a "dynamic network of precarious processes where each process is enabled by other processes in the network and also contributes to enable other processes in the network" (Kyselo and Di Paolo 2015: 529). In order to preserve its identity an autonomous system must be able to regulate its behavior in relation to perturbations from the environment.

2 As Kiverstein (2012: 6) points out, the issue here has a superficial similarity to the symbol-grounding problem, but is ultimately more fundamental, since it also applies to non-representational systems.

It must act in such a manner as to support self-constitution whilst at the same time attempting to avoid that which may threaten its integrity. This capacity is called adaptive behavior or *adaptivity* (Di Paolo 2005; Thompson 2007).

As Di Paolo (2005) argues, given their inherent fragility, autonomous systems continuously maintain themselves under "precarious conditions". As the system is under constant threat from the environment it must affirm its existence through interactive processes. Adaptivity thus not only enables self-monitoring and self-regulating in relation to its own conditions of viability but also allows for various degrees of concern and signification to emerge for the system itself. It is this "concern" for self-preservation and self-interest which leads to *normativity* and allows adaptively autonomous systems to develop a *unique teleological point of view* on the world, from which environmental properties and interactions are evaluated, pursued, and acquire meaning and value (Barandiaran, Di Paolo, and Rohde 2009). These interactive processes are what AE theorists call the system's "sense-making" activities (Thompson 2007: 152).

We must note at this point, as this will be crucially important in the next section, that for AE cognition is the direct result of the system's sense-making activities as it "enacts" or "brings forth" its own world of meaning and significance. These sense-making processes are further argued to be goal-directed and the product of an intrinsic teleology that, as we just saw, springs from the system's autonomous adaptive organization. As alluded to above the most general purpose of such systems is the striving to maintain systemic integrity and stability while more specific purposes are the result of structural and environmental differences (Colombetti 2014).

From the AE perspective, then, the body is understood to be a self-individuating entity that generates and maintains itself through constant engagement with the world. As Kyselo and Di Paolo point out, "the body can be associated with the living organism as a whole and to its appropriation of non-organic structures and processes as they are integrated into the autonomous self-sustaining network that makes up its identity. It is a self-individuating, dynamic and precarious unity of organic and non-organic processes that contribute to the conservation of life" (2015: 530).

However, as Evan Thompson suggests, the body is also a "special kind of autonomous system, one whose sense-making brings forth, enacts, or constitutes a phenomenal world" (Thompson 2007: 237). The body is thus not only a self-individuating/self-maintaining biological mechanism but is also "intimately tied to that of interiority and subjective experience, so that the living organism is not only considered from a mechanistic perspective, i.e. as an entity in the world but also always understood as a centre of subjectivity" (Kyselo and Di Paolo 2015: 530). Lived experiences, hence meaning and signification, are thus grounded in but are not reducible to the self-regulating processes of the living body.

This presents what we might call a *dyadic picture* of the body[3] comprised of an *objective* biological body and the *subjective* phenomenological body. The AE framework thus allows for both a first and third-person *perspective* on the body. The living body is both an object and a subject that can be explained from these two distinct yet tightly interconnected perspectives: from an organizational/biological perspective the body is an objective living system, and from a subjective perspective the body is an experiential subject. The body is not simply an "objective" body, a *Körper,* but as the phenomenological tradition points out, it is also at the same time a *living experiential* body, or a *Leib.*

Furthermore, adaptive autonomy provides a framework within which to understand and explain the emergence of the living subjective body from the objective biological body. It explains, in other words, how the objective body becomes the source of meaning. As Kyselo and Di Paolo argue, it is by virtue of being constituted as a precarious autonomous network of constructive

3 Lest I be accused of deliberate provocation, I will refrain from referring to AE's endorsement of a subject/object dichotomy, and instead, simply call it AE's *dyadic picture of the body.* Nonetheless, it is worth bearing in mind that AE is concerned with acknowledging the "subjective experiences" of living subjects, which should enrich and perhaps complement theoretical perspectives that are only concerned with the objective properties of the body. Bruno Latour (2004), correctly in my opinion, argues that in persisting with this distinction we are simply reproducing yet another dichotomy not unlike the entrenched set of dichotomies pervasive throughout intellectual history: subject-object, mind-body, mind-world, perception-reality. See the following sections for further discussion on this issue.

processes that the body emerges as a natural sense-maker with intrinsic self-generated norms, which enable its meaningful engagement with the world (ibid: 530). Or, to put in a manner that will be further clarified below, for AE *embodiment equals sense-making.*

AE sees in this approach a promising way of accounting not only for embodiment but also for some fundamental difficulties brought about by cognitivism, which according to AE, 4E approaches have thus far been unable to adequately answer. According to AE, it is only if 4E approaches adopt its notion of autonomy that it can provide a genuine alternative to traditional cognitivism (Di Paolo and Thompson 2014).

To sum up this section, the AE approach to embodiment starts by acknowledging the fundamental importance of meaning and develops a scientifically informed account which can fruitfully account for it. The body is conceived as an autonomous network of precarious self-individuating/self-creating processes which are in constant adaptive interaction with the world. These adaptive interactions, AE argues, not only allow the system to maintain itself in the face of constant threats but in so doing endows it with a point of view. This allows AE to conceive of the body in dyadic terms as something which can be explained both from objective and subjective perspectives.

After this brief exposition of AE's account of the body we will in the next section turn our attention to critically evaluating it.

5. Taking a Critical Look at AE's Account of the Body

In this section I will critically evaluate AE's account of the body. My intention here is not to undermine this account, but rather to tease out certain conceptual ambiguities and tacit theoretical commitments and incongruences that, understood in particular ways, could undermine the broader AE framework. Thus the rather modest aim here is to highlight that this account of the body remains critically underdeveloped and so in need of further elaboration.

6. From Body to Embodiment

Let us begin by recapping what the body is and what cognition is for AE. The body refers to the "living organism as a whole and to its appropriations of non-organic structures and processes as they are integrated into the *autonomous self-sustaining network*" (Kyselo and Di Paolo 2015: 531 *emphasis added*), while cognition is the *active sense-making of the organism*. For AE the body is an adaptive autonomous system and embodied cognition is the system's situated sense-making abilities. As we saw above, certain organizational features allow for the system's direct engagements with its environment to be intrinsically teleological and meaningful for the system.

The question that now presents itself is: what exactly is it that connects particular organizational properties, mechanisms if you will, to subjectivity, meaning, and value? Or, to put it slightly differently, what is it about the body that allows it to be the source of meaning? This question is made possible because, as we noted above, AE's conceptual framework leads to a dyadic conception of the body, where the body is both an autonomous network and a sense-making subject.

It is by drawing from the existential bio-philosopher Hans Jonas that AE connects the dots between *the body* and *embodiment*.[4] According to Jonas (1966) scientific biology is incapable of accounting for the inner subjectivity of living organisms because it is only concerned with "biological facts" (Jonas 1966: ix). But in adopting this stance it falls into a self-contradictory position, which ultimately results in the negation of not only the subjectivity of other living organisms but of human beings too. However, Jonas argues that if we take Darwin's theory of evolution seriously and at the same time simply acknowledge our own undeniable inner subjectivity, it would be incorrect to deny that subjectivity is a natural property of all living organisms. But how exactly does this particular insight relate to embodiment?

4 For the purpose of this section I will maintain the dyadic distinction implicit in the AE account and will refer to the autonomous system as "the body" and the enactment of the sense-making subject as its "embodiment".

To answer this question we first need to understand how this insight is deployed by AE. For AE, Jonas's critical insight can be usefully deployed to argue for a *strong* continuity between life and mind (SLMC). That is, cognition should not be seen as a property of human beings alone but of living creatures in general, thus forming a continuity between the processes of living and those of cognition (Thompson 2007: 128). Moreover, this continuity is not merely an organizational/structural one, but a subjective (experiential) phenomenal one as well. It is within the context of SLMC that the idea of the body as the source of meaning acquires its true significance. For, according to Jonas, we are justified in regarding other living organisms as goal-directed phenomenological subjects because we ourselves are such subjects. We are not mere passive mechanical objects, but embodied beings that strive and struggle to stay in existence.

According to Weber and Varela (2002), who were the first to explicitly suggest that autonomous systems can productively be linked to Jonas's phenomenological approach to biology,

> "it is actually by experience of *our* teleology – our wish to exist further on as a subject, not our imputation of purposes on objects – that teleology becomes a real rather than an intellectual principle […]. In observing other creatures struggling to continue their existence – starting from simple bacteria that actively swim away from a chemical repellent – we can, by *our own evidence,* understand teleology as the governing force of the realm of the living. (Weber and Varela 2002: 110, *emphasis added*)"

Similarly Evan Thompson tells us that "to make the link from matter to life and mind, from physics to biology, one needs concepts like organism and autopoiesis, but such concepts are available only to an embodied mind with firsthand experience of its own living body" (Thompson 2004: 90). As Jonas points out, if we were disembodied intellects, embodied subjectivity would make no sense, and for this reason the concepts of organism and body would not have any grounding. Thus it is that life can only be known by life (Jonas 1966).

According to AE we are thus justified in regarding the body as the source of meaning because *we ourselves are embodied beings* whose existence is a continual meaningful striving and this, in turn, enables us to recognize other living organisms as equally phenomenal embodied beings in their own right. It is not, as the previous section suggests, by virtue of the body's structural/functional properties. Drawing on some recent work in enactivism, which has raised the issue of anthropocentrism and anthropomorphism within the AE approach to cognition, I will, in the next section, explore whether these arguments could also apply to its account of embodiment.

7. Anthropocentric and Anthropomorphic Embodiment

The aim of this subsection is to try and establish whether AE's account of embodiment could be accused of anthropocentrism and anthropomorphism. Recent work within enactivism (De Jesus 2016a, 2016b, 2016c; Ward and Villalobos 2016) has argued that AE's conception of cognition is implicitly anthropocentric and anthropomorphic, and here I would like to explore if this could also apply to embodiment.

The general argument is that by drawing from the phenomenology of Hans Jonas to justify a SLMC, AE inadvertently prioritizes human experience, and as a consequence, negates the distinctive, nonhuman experiences and cognition of other living organisms. The experiences of other organisms are said to be negated by AE because it casts the idea of life-mind continuity in anthropocentrically phenomenological terms, which leads to a tacit anthropomorphic conception of other living organisms. The finer details of the arguments need not concern us here,[5] since all we are interested in is in establishing whether its main points could also apply to AE's account of embodiment. I think they could, and the reasons to support this stance shall be enumerated in the following.

5 For a more in-depth argument regarding the inherent anthropocentrism and anthropomorphism within the AE framework see De Jesus (2016a). See also Ward and Villalobos (2016) for a similar, but subtly different, critique.

The central reason becomes evident once we recognize that AE, like other 4E approaches, also conflates embodiment with cognition, which in turn leaves its account of embodiment wide open to the criticism of anthropocentrism and anthropomorphism. Recall that, for AE, the body is a sense-maker, meaning that *embodiment is sense-making* and s*ense-making is cognition* by another name. As we saw above, embodiment equals sense-making and sense-making equals cognition. Thus, regardless of one's views on the validity of the argument, the point is that if the criticisms apply to AE's account of cognition they will equally apply to its account of embodiment. Therefore, if cognition is anthropocentric and anthropomorphic, then so is embodiment.

But we need to tread carefully at this point, and bear in mind the dyadic nature of the AE body. Because "the body" is first conceived in *mechanistic* terms, as a self-organizing, self-individuating complex dynamic network, it steers clear from anthropocentrism and anthropomorphism. However, when the focus is shifted from an objective body towards a phenomenal one, from the body as autonomous adaptive system to the *body as sense-making system,* it then arguably lapses into anthropocentrism and anthropomorphism.

In this instance anthropocentrism and anthropomorphism stems, it could be argued, from AE's reliance on what Ward and Villalobos (2016) have aptly dubbed a "Jonasian inference" (2016: 228). Recall that the objective body of another is understood (inferred) to also be a subjective sense-making body *only because of my direct access* to *my own embodied experiences*. That is, I take my own embodied experience as grounds for (a) granting embodied experiences to other living organisms, and (b) for the ability to understand and make sense of those experiences. The problem, however, is that AE proposes SLMC, but provides no adequate justification for it other than Jonas's take on the matter. As a consequence, AE simply runs the risk of tacitly casting all forms of organic embodiment in human-specific terms. Thus, *embodiment* cannot help but be *human embodiment*. It is my embodied experience that serves as the benchmark (anthropocentrism) and template (anthropomorphism) for the embodiment of other living organisms.

But, if *human* embodiment is all we are interested in, are accusations of anthropomorphism not misplaced? Yes and no. The problem is that AE places SLMC at the core of its framework and is therefore not only concerned with

human embodiment alone. Indeed, its framework centers on accounting for mind *in life* (i.e., for mind *in all living beings*). At the same time, one could argue that, insofar as human embodiment is concerned, the AE approach currently provides the best possible account. A researcher could simply leave out the life-mind continuity aspect of AE and merely concentrate on human embodiment. So let us put aside these particular concerns and turn our attention to how the AE account fairs in accounting for human embodiment.

8. An Abstract Body is no Body at all

Can the AE account adequately explain human embodiment? I believe that, as it is currently developed, the AE account faces some significant difficulties in explaining human embodiment. The main difficulty is that this account could be regarded as (a) too abstract and universalist, and (b) ahistorical and asocial. This means that the AE body could be understood as a singular, ahistorical, asocial phenomenon which fails to shed light on, or even recognize, the concrete embodied realities of human beings. In this and the following section it will be argued that these difficulties emerge from two interrelated and mutual supporting issues: (i) the *equation of embodiment with sense-making*, and (ii) the active *endorsement of a dyadic account of the body*. Let us explore (i) first.

We have already seen in the previous section that equating embodiment to sense-making has left the AE account open to accusations of anthropomorphism and anthropocentrism. Here, I want to highlight a further consequence of these equations, namely that it leads to the unnecessary abstraction and universalization of embodiment.

In order to illustrate the abstract and universalist nature of AE embodiment, we merely need to ask *what type of embodiment* is involved in (human) embodied cognition. For AE, embodiment is the consequence of a sense-making subject who acts and experiences the world in an intrinsically meaningful manner. The AE account is developed and structured precisely in order to account for this. However, on closer inspection, it is far from clear *who* or *what* this sense-making subject actually is. The "subject" itself remains grossly under-developed, under-explored, and generally under-thematized. It is a subject that appears as an abstract entity, without a history, ethnicity, gender, social status, and much more besides. All "subjects" seemingly have

the same body, act in similar ways across different "environments", and generally appear to share an untold number of common bodily characteristics.

This might, at first glance at least, strike many as something of an exaggeration. But to see that this is not the case one simply needs to bear in mind that the notion of sense-making is applied across the phylogenetic scale without further qualification. Sense-making is thus said to apply equally to a single-celled bacterium, just as it does to a toddler, a disabled middle-class white male, and the Queen. Moreover, because embodiment – sense-making – is so closely tied to the here-and-now (synchronic) *subjective meaning* generated by the underspecified, under-thematized subject, the AE account seems to imply that subjective firsthand embodied experiences themselves, can serve as the basis for our more general understanding of embodiment.[6]

However, our firsthand experiences as embodied beings *cannot* serve as the only grounds to account for embodiment in general. It would be problematic, to say the least, to regard *my* subjective experience as an embodied adult with *my* particular ethnicity, historical background, medical history, social standing, and so on as the *only* grounds for understanding and explaining the idiosyncratic embodiment of others. How can *my* experience of my own embodiment – my sense-making – serve as the grounds for understanding the embodiment of a 18th century French woman, for example? What this suggests is that sense-making on its own, by being synchronic and too subject-centered, will struggle to adequately account for the rich particularities of concrete embodiment such as ethnicity, gender, historical background, medical history, sexuality, social standing, etc.

This is partly because sense-making, the "bringing forth" of a world, can only occur within the broader background of sociocultural norms and practices, otherwise it simply collapses into an abstract, synchronic, single-sided construction disconnected from those very practices that enable it. AE might be correct in claiming that the body is in essence a sense-maker, but the sense made here must clearly be understood in the larger context of the enactment of cultural practices. Ultimately, sense-making must be anchored on something *beyond the body and its immediate experience*. Indeed, as Cowley

6 As we saw above, AE relies on a Jonasian inference, which involves a generalization from my own embodied experience to the embodied experience of other living organisms.

and Gahrn-Anderson (2015) point out, "the impact of cultural life cannot be understood synchronically, or, in short, by appeal to sense-making" (2015: 55). This issue will be further explored in the next section. Before doing so, however, we must first take a closer look at this notion of *my subjective embodied experiences,* routinely used by AE theorists. On closer inspection two issues becomes apparent from the outset. The first is that the locution "my subjective embodied experiences" is, despite what AE generally suggests, rather ambiguous, highly abstract, and trades excessively in a homogenized and simplistic conception of what these experiences involve. The second issue is that the AE account strongly suggests, or could be read as strongly suggesting, that these lived experiences are intrinsic, immediate, directly given, and self-evident, which would place them directly outside culture and history. This is certainly a reading that AE would do well to avoid.

Lived experience itself, or rather our own subjective understanding of these experiences, including affective experiences, are not intrinsic universal givens. As Latour (2004) observes, not even our own phenomenological experience of our bodies can be regarded as immediate, directly given or self-evident, or independent of history, cultural practices, and specific technologies. Rather, even embodied experiences are already inherently saturated by a host of complex historical, technological, and sociocultural practices. This is not to deny personally lived experiences, but rather to highlight that these experiences are themselves enabled by a larger sociocultural nexus and context-specific circumstances and not pure, uninterpreted givens. AE's account of embodiment seemingly glosses over these issues.

Let us pause here to take stock. We have argued thus far that AE's account of embodiment, in being structured towards the synchronic, subjective, and intentional side of embodiment, has led to an overly abstract and universalist conception of embodiment. We traced the root of this issue to AE's equation of embodiment to sense-making and then highlighted further reasons for why sense-making on its own cannot fully account for embodiment. These considerations suggest that the AE account threatens to collapse the notion of embodiment into a singular homogenized abstraction which not only obscures the inherent idiosyncratic complexity of what it is to be an embodied being but also fails to account for the inherent *historicity* and *sociality* of embodiment (cf. Cummins and De Jesus 2016; De Jesus 2016b). In

the next section we will explore the issue of history and sociality further by drawing more closely from work in anthropology and the sociology of the body.

9. From Sense-Making to Enactment

In this final section I want to explore, as proposed above, in what way AE's dyadic conception of the body is problematic. Recall that AE conceives of the body in dyadic terms and actively endorses the perspectival implications of such a view. However, as Mol points out, this sort of "perspectivalism" is tacitly grounded on a problematic epistemic position that implies that there is a single entity "out there", a static universal "essence" or reality, which is being observed and is unaffected by history, context, or those who study it (Mol 2002: 10-12). In this view scientists and theoreticians become *observers* constructing various knowledges of the object itself by virtue of the perspective they take. Perspectivalism thus embraces what we might call *epistemic multiplicity*. It is interested in acquiring knowledge of objects from different perspectives but consequently leaves the object itself untouched.

The metaphysical commitments and implications of AE are varied, complex, and still very much open to debate (see Vörös, Froese and Riegler 2016). Nonetheless, as we saw above with regards to embodiment, AE clearly does endorse some form of perspectivalism. Recall that from the perspective of the scientist the body was understood as a complex dynamic self-organizing/self-creating system, while from the phenomenological perspective the body (embodiment) was understood as a teleological agent with a meaningful point of view on its world. Presented in this manner, AE is concerned with *knowledge* of the body, rather than with *the body itself*. The *ontological status* of the body is seemingly passed over for the sake of its perspectival epistemic constructions. Insofar as this is the case, the body remains a sole static ontological entity, researched, contemplated, and studied from multiple perspectives by several researchers.

This will certainly seem like a questionable implication. After all, AE has always explicitly argued against the idea of a pre-given world out there ready to

be encountered by an agent (Varela et al. 1991).[7] It is not the aim of this paper to explore this potential tension further, but rather to tease out an altogether different implication of perspectivalism for AE's account of the body. More specifically, what I want to show here is that, even though AE clearly takes history and sociality seriously, it nonetheless, by virtue of its commitment to a dyadic conception of the body, ends up regarding them as secondary.[8] My suggestion will be that, in order to foreground the *intrinsic* (to embodiment) nature of culture, sociality, and history, AE needs to abandon its dyadic conception of the body. I will now draw from recent work on the sociology and anthropology of the body to help illustrate this point.

The Dutch anthropologist Annemarie Mol (2002) rejects epistemic perspectivalism and in its place presents an alternative *ontological* proposal for understanding embodiment. This ontological proposal requires a shift of focus from knowledge of the body to the *practices of embodiment*. According to Mol, this shift of focus will enable us to recognize that there is no singular body but rather *multiple bodies*, the "body multiple" as she calls it, which are sets of multiple relations brought into being through diachronic complex practices of self-production. For Mol, the living body – embodiment – is an unfinished process of *becoming* and as such is always a *uniquely enacted process*, continuously shaped and reshaped, made and remade, within a diachronic, context-specific, sociocultural practical nexus. The body is thus

7 It seems clear that there is an underlying tension here between the metaphysical "middle path" between realism and idealism for which AE is well-known and the perspectivalism identified within its account of the body. Clearly, the AE notion of "bringing forth a world", the creation of a path in walking, seem to suggest ontological rather than epistemic multiplicity. I will, however, leave the question of how these divergent aspects of the account relate for future work, and merely highlight that there are several other aspects of the AE paradigm which openly endorse some sort of perspectivalism. For example, Thompson (2007: 50) argues that "autonomy" and "heteronomy" are "heuristic notions", and hence *perspectives* which scientists can take on target phenomena, while neurophenomenology proposes that there should be a "constant back-and-forth exchange between lived experience and scientific endeavour" (Vörös, Froese, and Riegler 2016: 192).

8 This is perhaps also not helped by the fact that within the AE literature there is a tendency to argue for an *asymmetry* between subject and world, between insides and outsides and as a consequence endow insides with *ontological priority* over outsides (see Di Paolo 2005; Thompson 2007).

conceived as *ontologically* rather than *epistemically* multiple. But what exactly does this mean?

The general idea is that, rather than seeing the body, the-body-we-*have*, as an entity to be observed from different perspectives, we should regard it as the-body-we-*do,* as enacted and so brought into being by virtue of being enmeshed in a historical, context-specific, and sociocultural practical nexus. According to Mol:

> "If the practices are foregrounded there is no longer a single passive object in the middle, waiting to be seen from the point of view of seemingly endless series of perspectives. Instead, objects come into being—and disappear—with the practices in which they are manipulated. And since the object of manipulation tends to differ from one practice to another, reality multiplies. The body, the patient, the disease, the doctor, the technician, the technology: all of these are more than one. More than singular. (Mol 2002: 4)"

To illustrate and clarify this further, consider the example of hypoglycemia, a condition often associated with diabetes and abnormally low blood sugar levels (Mol and Law 2004). It might be tempting to see hypoglycemia as a condition of the objective body related to hormonal effects of insulin, for example, or perhaps as a condition, again of the objective body, but related to dietary intake and lack of physical exercise. This would be the most common understanding of hypoglycemia and one that aligns perfectly with biomedical understandings of diabetes. Here, the body is the object and target of medical knowledge and practices. Hypoglycemia is seen to be "contained" within this objective singular body and is regarded as a consequence of blood sugar levels dropping below 3.5 mmol/l.

Mol and Law approach this condition, however, not by asking *"what"* hypoglycemia *is*, but by asking *how* it is *done*, how is it performed or enacted. In the view of Mol and Law, "we also do (our) bodies. In practice we enact them" (2004: 45). Drawing on their ethnographical work, Mol and Law proceed by showing the various ways – *the modes of enactment* – in which hypoglycemia is done. These modes of enactment vary from the pricking of a

finger, through drawing of one's blood, to self-monitoring by being sensitive to changes in one's body. In contrast to perspectivalism, these various practices are not merely different epistemic ways of getting at a singular static entity; rather, they all constitute an *ontologically different* entity that is given the label "hypoglycemia". The focus is no longer on the many ways an entity can be known, but rather on the many ways it is *enacted*.

This analysis highlights two important points for our current discussion: (i) specific modes of enactment stand or fall only by virtue of the active presence of other agents, medical devices, context-specific practices, modes of self-monitoring, and so forth. This means that organisms do not only enact practices but are themselves enacted by them. Further (ii) by virtue of the many ways that hypoglycemia is enacted in diverse settings, various medical practices and settings enact *different versions* of this "entity". Mol and Law are at pains to stress that, while they record blood samples, sugar levels, and accounts of lifestyles, these do not refer to any one specific stable "entity".

Hypoglycemia is not divided into objective or subjective layers, it is not taken to be some static entity within biological bodies nor a particular set of embodied phenomenal experiences of a subjective body. Rather, it involves both as it is enacted through the practice of measuring blood sugar levels, the devices and technologies that enable it, the staff who take the readings and documentation, and so forth. The point is that only in the multiple interrelation of these entities that a specific hypoglycemic body emerges. As this case of hypoglycemia illustrates, particular bodies are "brought into being" and the production and enactment of these bodies is intimately connected to the sociocultural practices, techniques, and artefacts that make different bodies possible.

To conclude our discussion, we can now see that sense-making is clearly distinct from enactment. The essential difference, as we have seen, is that the notion of enactment is an *ontological* concept, while sense-making and hence embodiment, according to our analysis above, turns out to be an *epistemic* concept. The body and embodiment turn out to be specific epistemic perspectives taken by the AE theorists on "the body". As such, history and sociality are epistemic "layers" added to an unexplored ontological core. In contrast, the notion of enactment as introduced here shifts the focus

from knowledge of the body to the concrete practical nexus which enables various versions of the body to emerge. It also takes history and sociality to be intrinsic to the emergence of these multiple versions of embodiment (Mol 2002). Moreover, we have also seen that these versions of the body are neither physical or social, nor subjective or objective, but all of these *at the same time*. Finally, enactment enables us to collapse both the dyadic picture of the body and nature/culture distinction, seemingly upheld by the AE account.

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Peter Kaiser

TAKING BODILY SELF-AWARENESS IN ANIMALS SERIOUSLY

1. Introduction

The current debates on embodiment, consciousness, and bodily self-/awareness are partly characterized by insightful convergences of analytically and phenomenologically influenced approaches, therefore allowing for a better, refined understanding of the phenomena themselves.[1] After far too long a period of the unfortunate division of analytic and so-called continental philosophy, the contributions of an ever increasing "intradisciplinary" philosophical debate have possibly been as important as the interdisciplinary exchange within the cognitive sciences and philosophy (Depraz/Gallagher 2002, Gallagher/Zahavi 2008).

In recent years there has also been a growing interest in philosophy of animal minds and animal cognition, "one of the most exciting areas in the cognitive sciences" (Shettleworth 2010: v). Yet, the role of embodiment and bodily awareness, let alone bodily *self*-awareness in nonhuman animals has

1 Since almost all authors are using the terms "self-awareness" and "self-consciousness" interchangeably, I will follow this convention throughout the paper, giving some preference to the former concept.

been rather underappreciated.[2] Far too often only admittedly higher forms of self-awareness have been the focus of cognitive as well as philosophical debates: reflective or introspective self-awareness which requires complex linguistic and conceptual abilities; metacognition and possession of a theory of mind, the ability to attribute mental states to oneself and others (Andrews 2015).

In the 1970s, Donald Griffin, who made his reputation proving that bats use echolocation, coined the term "cognitive ethology".[3] His new research program was based in naturalistic observations of animal behavior with a focus on animal awareness in the context of evolution (Griffin 1976, 2001). Griffin also was one of the first scientists to emphasize that "there is no part of the universe that is closer and more important to an animal than its own body. If animals are capable of perceptual awareness, denying them some level of self-awareness would seem to be an arbitrary and unjustified restriction" (Griffin 2001: 274). Unsurprisingly, his deliberate use of concepts of consciousness and self-awareness has routinely been dismissed as "unscientific" and anthropomorphic. For, it took the mainstream of the behavioral and cognitive sciences a long time before recognizing not only that many animals are in possession of consciousness *per se*, but also that conscious intentional states like beliefs and desires ought to play a pivotal role in interpreting, explaining and predicting animal behavior. It was not until July 2012, when a group of scientists signed *The Cambridge Declaration of Consciousness in Non-human Animals*, according to which "the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures, including

2 Unless otherwise indicated, I shall use the term "animal" to refer to all sentient nonhuman animals.

3 Cognitive ethology "can be defined as the comparative, evolutionary, and ecological study of nonhuman animal minds, including thought processes, beliefs, rationality, information processing, intentionality, and consciousness" (Allen/Bekoff 2013: 42). By now it is a well-established discipline, but its findings are rarely beyond controversy (ibid.: 47).

octopuses, also possess these neurological substrates" (cit. in Andrews 2015: 51).[4]

Just briefly considering this background, *pace* Griffin, it comes as no surprise that David DeGrazia, an outspoken proponent of bodily self-awareness in "most or all sentient animals", assesses his own account as being "somewhat radical" (DeGrazia 2009: 201–202).[5] However, what is radical in the context of one tradition surely is not in another. Having a rich history of phenomenology in mind, Shaun Gallagher and Dan Zahavi recall that, "even if phenomenologists disagree on important questions concerning methods and focus, they are in nearly unanimous agreement when it concerns the relation between consciousness and self-consciousness. Literally all of the major figures in phenomenology defend the view that a minimal form of self-consciousness is a constant structural feature of conscious experience" (Gallagher/Zahavi 2008: 45–46). Hence, "an implication of this is obviously that the self-consciousness in question can be ascribed to all creatures that are phenomenally conscious, including various non-human animals" (Gallagher/Zahavi 2015: section 1, paragraph 4).

The aim of this paper is therefore to strengthen the case for the role of bodily self-awareness in animals by bringing DeGrazia's account of self-awareness in animals into dialogue with contemporary phenomenology, thereby highlighting significant overlaps, and identifying several points of agreement.

First, subsequent to a short sketch of the debate over the possibility of nonlinguistic/nonconceptual self-awareness, I discuss DeGrazia's account of bodily self-awareness. DeGrazia argues that higher forms of self-awareness such as social and reflective/introspective self-awareness (e.g. demonstrated in mirror self-recognition tasks) presuppose bodily self-awareness, i.e. proprioception, sensation, and agency. Drawing on various empirical data and conceptual considerations, DeGrazia's *(Bodily) Self-Awareness Arguments*, as I shall term them, are illuminating in their own right. But his conception of self-awareness remains somewhat underdetermined.

4 Fortunately, significantly prior to the *Declaration*, modern animal protection acts were already relying on scientific evidence for sentience in all vertebrates and cephalopods; see e.g. Directive 2010/63/EU, preamble (8), http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0063.
The Austrian Federal Act on the Protection of Animals also acknowledges sentience in decapods (*Tierschutzgesetz* § 3.2).
5 DeGrazia discusses Griffin in DeGrazia (1996: 85–86, 172–173).

Therefore, second, I argue that DeGrazia's case for bodily self-awareness in animals faces a serious challenge, the *Consciousness Challenge*: It has been claimed that the most basic types of self-awareness in question are instances of mere *consciousness* and not self-awareness; prominently advocated in Lynne Rudder Baker's account of the first-person perspective.

Third, I shall argue, this challenge can be met by complementing DeGrazia's account of bodily self-awareness with Zahavi's and Gallagher's phenomenological analysis of pre-reflective self-awareness. Emphasizing the subjective aspect of for-me-ness of any first-personal given experience is precisely what it means to take bodily self-awareness seriously – in human and nonhuman animals.

2. Self-Awareness without Words?

Just like their contemporaries in the natural sciences, very few philosophers would deny animals consciousness in general. Peter Carruthers, the most discussed "neo-/neuro-Cartesian"[6] is an exception to the rule and someone who explicitly defends such a position. He claims that even basic, respectively first-order mental states such as bodily sensations and perceptions require higher-order mental states in order to be (phenomenally) conscious. This is the main point of his higher-order thought theory (Carruthers 2000). Arguably, most animals lack this kind of consciousness. They do not possess the so-called ability of metacognition to form mental states about their mental states. Therefore, according to Carruthers' reasoning, they lack conscious experiences *per se*. He consequently draws the conclusion that this also holds for humans who lack metacognitive abilities, as, for instance, prelinguistic infants and autistic persons (ibid.: 202). However, since his conclusion is equally counterintuitive as well as in opposition to well-established empirical findings (Rochat 2001, Frith 2003, Gallagher 2005), for current purposes it can be reasonably dismissed "as a *reductio ad absurdum* of his own account of

6 That's what John Dupré called Carruthers (Dupré 2005: 320).

consciousness" (Zahavi 2005: 194).[7]

There is another controversial, albeit far less counterintuitive claim that has been very widely held, at least among analytical philosophers of mind and language. Namely, granting the Darwinian-inspired insight that animals' and humans' capacities, prominently including consciousness, differ largely in degree and not in kind, it has been claimed that self-consciousness is "a very different beast", so to speak. Some have established a *tertium-non-datur* position by intrinsically linking self-consciousness with conceptual and/or linguistic abilities. In such an account a creature is either self-conscious by conceptual/linguistic abilities or not self-conscious at all: "It is the spontaneity of the understanding, the power of conceptual thinking, that brings both the world and the self into view. Creatures without conceptual capacities lack self-consciousness [...]" (McDowell 1994: 114).

But McDowell's unequivocally Kantian-flavored claim is likely to provoke DeGrazia's (almost) Schopenhauerian vigor and rigor against strong anthropological differences: "Self-awareness is not all-or-nothing but comes in degrees and in different forms. This conclusion is important because it opposes a long tradition of speaking and theorizing about self-awareness as if it were all-or-nothing. Often this thesis was used in the service of defending a thick ontological line between humans and other animals" (DeGrazia 1996: 182), between self-conscious beings as concept-bearing language users and autonomous agents, in short this means *persons* on the one side, and nonconceptual, nonlinguistic, merely conscious beings on the other.[8]

In addition to McDowell's strong conceptualism, the claim that self-awareness requires conceptual capacities can be expressed as a special case of the more general and at length controversially-discussed claim that (rational)

7 Higher-Order thought (HOT) and higher-order perception (HOP) theories of consciousness in general have to face more or less the same compelling circularity objections like reflection models of self-consciousness. For detailed discussions see DeGrazia (1996: 112–115), Zahavi (2005: 17–20, 192–194).

8 The distinction between mere sentient beings and persons has had tremendous implications for animal ethics. DeGrazia, for example, criticizes Peter Singer "because he takes personhood to be based on rationality and self-consciousness, and he apparently takes self-consciousness to be all-or-nothing (or nearly so)" (DeGrazia 1996: 242).

thought requires concepts that in turn require language. I term this the *Concept-Language Argument against self-awareness in animals*:

(1) In order for x to be self-aware, x must have I-thoughts.

(2) In order for x to have I-thoughts, x must have the concept of a self/an *I*.

(3) In order for x to have the concept of a self/an *I*, x must have the linguistic ability for reflexive self-reference; canonically expressed by means of the first person pronoun "I".

(4) Animals do not have the linguistic ability for reflexive self-reference.

(5) Therefore, animals are not self-aware.[9]

There are at least two well-established ways to rebut the conclusion of this argument. Some philosophers have denied the necessary connection between concepts and language and argue that concepts can be had by animals who lack language – therefore refusing premise (3). There can be nonlinguistic concepts that serve as basic discrimination abilities for "systematically discriminat[ing] some *X*s from some non-*X*s" (Allen 1999: 37). While it could turn out that the very concept of a self may not reasonably be attributed to an individual, this would not rule out the possibility that the animal possesses *some* other concepts.

Another response is to challenge premises (2) and (3). José Luis Bermúdez, one of the most important analytical proponents of self-awareness in nonlinguistic beings, has raised two circularity objections. The first against "any account of self-consciousness that tries to *explain* what is distinctive about self-conscious thoughts in terms of mastery of the first-person pronoun [...] because mastery of the semantics of the first-person pronoun *involves* the capacity to think first-person thoughts" (Bermúdez 1998: 16–17, emphasis added). This is what Bermúdez calls *explanatory circularity*. The second, closely related type is *capacity circularity*: "The point here is that the capacity for reflexive self-reference by means of the first-person pronoun *presupposes* the capacity to think thoughts with first-person contents, and

9 This argument is a specification of what Markus Wild has termed *Simple Language Argument* against nonlinguistic thought in animals (Wild 2008: 22–23). It also draws from Bermúdez's discussion of his "Paradox of Self-Consciousness" (Bermúdez 1998: 1–25).

hence cannot be deployed to explain that capacity. In other words, a degree of self-consciousness is required to master the use of the first-person pronoun" (ibid.: 18, emphasis added). Hence, ontologically speaking, self-awareness *per se* is not an exclusively linguistic capacity. And methodologically, a semantic analysis of the first-person pronoun is neither necessary nor sufficient for a proper understanding of the phenomenon.

Contrary to strong as well as weaker conceptualistic claims, Bermúdez has developed an elaborate account of nonconceptual content/thought, since "animal behavior and the behavior of prelinguistic infants paradigmatically raise the problems for which, so I believe, theoretical appeal to states with nonconceptual contents is the only solution (or at least the best so far available)" (ibid.: 47). Drawing primarily from developmental psychology, Bermúdez considers infants as *pre*-linguistic self-aware beings who, "in a very important sense", "are born into the first-person perspective. It is not something that they have to acquire ab initio" (ibid.: 128). However, following his line of argumentation, the same could be said of any sentient being, of any experiential subject, and hence widens "the scope of what might be termed the [self-aware] first-person perspective far beyond the domain of humans, and even the higher mammals" (ibid.: 162).

With regard to affinities with phenomenological accounts, Bermúdez himself has recognized the significant phenomenological distinction between body as *objective body*, "a physical object in the world", and body as *lived body*, "the fact that the body is (at least from a first-person perspective) quite unlike any other physical object" (ibid.: 150). Zahavi, in turn, has stressed several important points of agreement with Bermúdez's theses: (1) a criticism of the idea that self-awareness is merely a question of linguistic self-reference; (2) a useful distinction between linguistic full-fledged self-awareness and primitive forms of self-awareness that do not presuppose any linguistic or conceptual mastery; (3) an argument to the effect that (a) exteroception as well as (b) proprioception involves a weak form of prelinguistic self-awareness, and (c) social interaction can give rise to more developed forms of prelinguistic self-

awareness (Zahavi 2002: 12).[10]

3. DeGrazia's Bodily Self-Awareness Argument

Zahavi is definitely not the only author who agrees with Bermúdez's main theses. DeGrazia similarly claims that "many animals are self-aware" (DeGrazia 2009: 201) and "that most or all sentient animals" (ibid.: 202) have bodily self-awareness. His illuminating account of (bodily) self-awareness in animals deserves closer attention.[11]

> "The most primitive type of self-awareness is *bodily self-awareness*, an awareness of one's own body as importantly different from the rest of the environment – as directly connected with certain feelings and subject to one's direct control. Because of bodily self-awareness, one does not eat oneself. And one pursues certain goals. Bodily self-awareness includes *proprioception*: an awareness of body parts, their position, their movement, and overall body position. It also involves various

10 However, there is serious disagreement as to whether a theory of nonlinguistic, nonconceptual experience has to be a representationalist theory of content. Representationalism is either explicitly embraced (Bermúdez 1998, Tye 2000, Kriegel 2009, Wild 2008) or implicitly assumed (DeGrazia 2009) by most philosophers of mind in the analytic tradition, while phenomenological and enactive accounts of embodiment are opposed to it.
Moreover, Gallagher and Zahavi have objected to Bermúdez's claim that proprioception, correctly understood as a genuine form of immediate bodily self-awareness, is a form of *perception* that yields information "of the body as a spatially extended and bounded physical *object*" (Bermúdez 1998: 150; Zahavi 2002: 22; Gallagher 2003, Gallagher 2005). For a "non-self-representationalist" critique of Bermúdez's conception of proprioceptive awareness as genuine self-awareness see Musholt (2015). As for the following discussion, I suppose, this presumptive points of disagreement can be put aside.
11 DeGrazia refers to Bermúdez's discussion of proprioception as bodily self-awareness (DeGrazia 2009: 201). His somewhat hilarious but apt "autophagy restriction" – "because of bodily self-awareness, one does not eat oneself" – is a direct implication of the insight that "somatic proprioception provides a way, perhaps the most primitive [conscious!] way, of registering the distinction between self and nonself" (Bermúdez 1998: 149). Accordingly, Daniel Dennett's notorious example of the sea squirt, which eats its own brain, is about a non-conscious invertebrate animal (Dennett 1991: 177).

> *sensations* that are informative about what is happening to the body: pain, itches, tickles, hunger, as well as sensations of warmth, cold, and tactile pressure. These forms of awareness are essential to any creature that can feel features of its body and environment and act appropriately in response. In sum, bodily self-awareness includes both an awareness of one's own bodily condition and an awareness of one's *agency*, of moving around and acting in the world. (ibid.: 201–202)"

DeGrazia distinguishes between introspective, social, and bodily self-awareness. Whereas he does not claim that these are the only types of self-awareness (DeGrazia 1996: 182),[12] he makes the *prima facie* plausible case that introspective and social self-awareness presuppose bodily self-awareness. I term this DeGrazia's *basic bodily self-awareness thesis* and it can be construed as the conclusion of his *Bodily Self-Awareness Argument*:

(1) There are importantly different sorts of self-awareness, namely introspective, social and bodily self-awareness.

(2) Higher types presuppose more basic types of self-awareness.

(3) Introspective and social self-awareness are higher types than bodily self-awareness (being the most basic type).

(4) Therefore, introspective and social self-awareness presuppose bodily self-awareness.

Social self-awareness identifies a subject's awareness "as part of a social unit with differing expectations attaching to different positions" (DeGrazia 2009: 202). It enables the effective interactions of group members through their awareness of their position in relation to the behaviors of conspecifics, e.g. recognizing changing social rankings. "Social self-awareness presupposes bodily self-awareness insofar as deliberate social navigation is possible only in creatures aware of their own agency" (ibid.).

12 However, this tripartite classification has proven to be useful among philosophers working on animal minds and animal ethics despite varying theoretical backgrounds. E.g., Christine Korsgaard is in perfect agreement with this classification by advancing her "Kantian account" of considering all sentient beings as self-aware ends in themselves "*for whom* things can be naturally good or bad" (Korsgaard 2011: 108).

Introspective self-awareness is an "awareness of (some of) one's own mental states such as feelings, desires, and beliefs" (ibid.). In order for a subject to have introspective awareness it is not sufficient to simply *have* (conscious) mental states. The subject actually has to be aware *of* its mental states. It is precisely this reflective, higher-order capacity that has been both the single most important phenomenon related to self-awareness in the focus of prevalent philosophical debates, and therefore the only form of consciousness to which the term "self-consciousness" has been exclusively assigned. And still, many contemporary philosophers of mind are quick in establishing mutually excluding definitions like "phenomenal consciousness is to be distinguished from self-consciousness, which refers to our ability to reflect upon our conscious experiences and thoughts" (Andrews 2015: 52).[13] This conceptual or terminological choice is obviously one reason for underestimating the case for more basic forms of self-awareness in animals.

In order to underpin the *basic bodily self-awareness thesis*, DeGrazia considers several representative examples from animal cognition studies: tool use and tool making in chimpanzees (McGrew 1992, Stanford 2001), problem-solving and tool use in dolphins (White 2007) and New Caledonia crows (Anderson/Kacelnik 2004), episodic memory in scrub jays (Kort/Dickinson/Clayton 2005), complex social understanding in vervet monkeys (Cheney/Seyfarth 2002), uncertainty monitoring and metacognition in rhesus monkeys (Smith/Washburn 2005), et cetera. DeGrazia's prevailing strategy is to interpret those examples of various cognitive complexities in light of his main thesis. Whether attribution of the higher-conscious capacities in question is likely or not, it would at least seem to implicate the warranted ascription of more basic types of self-awareness, hence (indirectly) demonstrating or indicating bodily self-awareness in individuals of certain species.

13 The fact that introspection is *per definitionem* a form of self-awareness is also reflected in DeGrazia's use of the term, speaking of "introspective awareness" instead of "self-awareness".

4. Self-Recognition presupposes Bodily Self-Awareness

Although just briefly outlined by DeGrazia, no such discussion can miss out on one of the most famous experiments generally regarded to be a clear indicator of self-awareness: the mirror test. "Although it is silly to maintain, as some commentators have, that mirror self-recognition is the only valid indication of self-awareness in animals, it is surely one relevant consideration in the case for bodily self-awareness" (DeGrazia 2009: 211). Human infants prior to the age of 15 to 18 months and most animals respond to their images in mirrors as if they were seeing another child or conspecific – thereby, arguably, already exhibiting some degree of social self-awareness. Older infants as well as some individuals of particular species, like all great apes (Gallup/Anderson/Shillito 2002), dolphins (Reiss/Marino 2001), elephants (Plotnik/de Waal/Reiss 2006), and magpies (Prior/Schwarz/Güntürkün 2008), are able to recognize themselves *as* themselves, or more precisely, their specular images *as* images of their own bodies.

In the 1970s Gordon Gallup "started a cottage industry of mirror experiments with primates and young humans" (Baker 2012: 22). Chimpanzees who had become acquainted with mirrors began using them to respond to themselves "by engaging in mirror-mediated facial and bodily movements and self-directed responses such as grooming parts of the body only visible in the mirror" (Gallup/Anderson/Shillito 2002: 325). In order to assess the possibility of *self-aware* self-recognition, the chimpanzees were anesthetized and painted with nonodorous red marks in their faces. Upon recovery they would have no knowledge of their new facial features without mirrors. But using the mirrors again, looking at their reflection, the chimpanzees guided their fingers to the new marks on their faces. Since the confrontation with the mirror motivates this kind of self-directed behavior, Gallup et al. infer that the chimpanzees now recognized what they saw in the mirror *as* their own reflections.

Now, on the one hand, it is rather clear that mastering the mirror test cannot be a *requisite* for identifying self-awareness in general; a non-display of self-awareness as an ability of self-recognition does not necessarily show that a given subject does not have this ability at all. Dogs would rather identify themselves by olfaction than vision; other species may not pay particular

attention to reflecting surfaces for various reasons. On the other hand, giving Gallup et al. the benefit of the doubt that mirror self-recognition is a *sufficient* indicator of self-awareness, they correctly notice a presupposed sense of self: "The ability to correctly infer the identity of the image in the mirror requires a preexisting sense of self on the part of the organism making that inference. Without a sense of self, how would you know who you were seeing when confronted with your reflection in a mirror" (ibid.: 329)? But, recognizing this, how could it be claimed in the same breath that "in its most rudimentary form, self-awareness is the ability to become the object of your own attention" (ibid.)?

Mirror self-recognition is a paradigmatical case of (self-as-)object-awareness which requires (self-)identification. Identification allows for the possibility of misidentification, not only in animals and infants but also in mature but somewhat scatterbrained philosophers and scientists, as Ernst Mach's notorious experience has effectively demonstrated. Mach once got on a bus in Vienna and, upon seeing a peculiar image in the bus mirror, thought, "What a shabby pedagogue that is, that has just entered" – not recognizing himself *as* himself (Mach 2012: 4). Thus, one can be aware that *somebody* is in a certain bodily state and fail to think that that somebody is oneself. In order to either succeed or fail in identifying oneself as oneself, one must have prior awareness of certain features or properties by which one can identify oneself as oneself. Therefore, on pain of infinite regress, this prior awareness cannot be another form of (self-as-)object-awareness in demand of another self-identification. Contrary to the object-awareness in reflection, this kind of, literally, *pre*-reflective self-awareness must be *immune to error through misidentification*.[14] The subject cannot be aware of somebody to be in certain bodily states and erroneously think that it is not itself. There is no gap between the experiencing subject and the de facto experienced subject which *just happens* to be itself.

Thus, mirror self-recognition demonstrates that the required "preexisting sense of self in its most rudimentary form" is pre-reflective bodily self-

14 For a discussion of nonconceptual bodily self-awareness being immune to error through misidentification as opposed to *judgments only* based upon such awareness see Bermúdez (1998), Bermúdez (2011), Legrand (2006), Musholt (2015).

awareness, and, as far as the subject's awareness of bodily movements is concerned, this basic awareness is not based on vision but on "the sixth sense", the non-observational proprioceptive/kinaesthetic awareness of the bodily subject in action (Gallagher/Zahavi 2008: 143).

5. Some Conceptual Considerations

In considering the implications of the mirror test scenario, the case for bodily self-awareness in certain animals has been confirmed to a strong degree. The conclusion that basic bodily self-awareness must be immune to error through misidentification is also a very important point of agreement between phenomenologists and analytical philosophers. As was mentioned in the introduction, contrary to mainstream analytical philosophy of mind, DeGrazia's basic bodily self-awareness thesis is likely to get some *prima facie* support from contemporary phenomenologists and their accounts of pre-reflective self-awareness:

> "[P]henomenologists would typically argue that it is legitimate to speak of a primitive form of self-experience or self-awareness whenever we are phenomenally conscious. This weak self-awareness does not exist apart from the ordinary conscious perception, feeling, or thought, as an additional mental act; it is not brought about by some kind of reflection or introspection, but it is rather an intrinsic feature of the experience. If this view is correct, it has obvious consequences for the ascription of self-awareness to infants. (Zahavi 2005: 197)"

Consequently, this primitive form of pre-reflective self-awareness is not limited to human prelinguistic beings. As Zahavi proceeds in a remarkable footnote:

> "If this is true, it has some rather obvious consequences for the attribution of both self and self-consciousness to animals. It is also obvious, of course, that there are higher and more complex forms of self-consciousness that most, if not all, nonhuman animals lack. As for

> the question of where to draw the line, i.e., whether it also makes sense to ascribe a sense of self to lower organisms such as birds, amphibians, fish, beetles, worms, etc., this is a question that I will leave for others to decide. All I will say is that *if* a certain organism is in possession of phenomenal consciousness, *then* it must also be in possession of both a primitive form of self-consciousness and a core self. (Zahavi 2005: 235–236).[15]"

The empirical and methodological questions of ascribing self-awareness to particular species have to be answered by cognitive ethology, comparative cognition, behavioral neuroscience, et cetera. Admittedly, climbing down the phylogenetic scale, trying to solve "the problem of simple minds" (Tye 2000: 171–185) of where to draw the line among invertebrates seems to be an extraordinarily tricky challenge. However, the conceptual question of which concepts of self-awareness should be under discussion regarding animals is predominantly a philosophical task. At first glance, the phenomenological proposal might indeed seem to offer an "acceptable but also quite trivial" (Zahavi 2005: 127) solution at the conceptual level. "Every conscious state […] has a certain subjective character, a certain phenomenal quality of 'what it is like' to live through or undergo this state. This is what makes the mental state in question *conscious*" (ibid.: 119). If all forms of conscious states entail a minimal form of self-awareness, and if bodily states like sensations (the typical examples of phenomenal states) and proprioceptively gained information on body parts, their position, and their movement are consciously experienced, then it follows that bodily awareness also entails a form of self-awareness.

Now, is this straightforward conclusion, hence the minimal definition of minimal self-awareness, "entirely too broad" and does it "include(s) too much," as Zahavi has forestalled a possible objection (Zahavi 2005: 16)? As we will see, this is rather the starting point for the phenomenological analysis of self-awareness and subjectivity.

However, returning to DeGrazia's line of thought, it could be argued that he precisely shares these kinds of worries, and this may be why he has not considered

15 With an emphatic nod to Jeremy Bentham, I may say that some of the most remarkable starting points for new discussions can be found in footnotes.

phenomenological approaches to self-awareness. If "the issue of justifying the ascription of self-consciousness is already addressed on the conceptual level" (Strasser 2012: 49), then DeGrazia's claim that "most or all sentient animals" are – at least bodily – self-aware (DeGrazia 2009: 202), ends up, far from being radical, as a rather terminological question.

There is, however, more to it: First, in the face of DeGrazia's unequivocally strong claim about self-awareness in animals it might be all the more surprising that he himself does not provide any explicit definition or conceptual analysis of self-awareness. On the one hand, DeGrazia, of course, rejects the concept of self-awareness as "involving the *concept* of a self" (DeGrazia 1996: 101, emphasis added).[16] On the other hand, he simply seems to presuppose the minimal formal notion of self-awareness as the immediate (identification-free) awareness of oneself *as* oneself; in contrast to an awareness of what *just happens* to be oneself, as experienced in a mirror scenario. Second, importantly, his phrasing of "most or all sentient animals" is not to be interpreted as an unfortunate choice of words, but suggesting the empirical possibility that some actually existing sentient animals might lack self-awareness. We should take DeGrazia seriously when he claims that it is "the cumulative force of *various empirical data and* conceptual considerations" (ibid.: 201, emphasis added) that makes it more reasonable to accept than to deny the self-awareness thesis. "[C]onsciousness does not *logically entail* self-awareness. It may be, however, that what we know about evolutionary pressures (as well as animal behavior and physiology) suggests that actually existing conscious animals are probably self-aware" (DeGrazia 1996: 175).

6. DeGrazia's Self-Awareness Argument

DeGrazia (1996) draws this conclusion – which also serves as the implicit backdrop of his reasoning in DeGrazia (2009) – by linking consciousness and self-awareness via agency:

16 As for the complications introduced by considering the relations between self-awareness and self, DeGrazia frankly states, "there is just one self, the individual, who may be self-aware in various ways" (DeGrazia 2009: 201).

> "I have argued that we have good reason to suppose that all conscious animals can experience pleasant and unpleasant feelings, that such feelings implicate desires, and that desires work with beliefs in intentional actions. (Again, what function does sentience have if one cannot act in ways that get one away from painful stimuli and toward pleasant ones?) If we combine my "conscious animals are agents" thesis with Regan's "agency implies self-consciousness" thesis [Regan 1983: 75], we get the perhaps surprising thesis that all conscious animals are self-conscious. (DeGrazia 1996: 175)"

According to DeGrazia, it is not one single capacity such as sentience (or intentionality, memory and anticipation) by itself that implies self-awareness. This insight is also expressed in his account of bodily self-awareness, which is not to be equated with sentience but "includes both an awareness of one's own bodily condition and an awareness of one's *agency*, of moving around and acting in the world" (DeGrazia 2009: 202).[17] Since it is (empirically) unlikely (but possible) that any of these capacities in question exist in isolation from one another, this tight interconnectedness ought to be reflected at a conceptual level as well. Let me reconstruct DeGrazia's basic line of argumentation by tying together several steps of what I term DeGrazia's *Self-Awareness Argument*. It unfolds as follows:

(1) If x is conscious, then x must be sentient (DeGrazia 1996: 99).

(2) If x is sentient, then x must be able to experience pleasant and unpleasant feelings (ibid.).

(3) If x can experience such feelings, then x must have desires [motivational/conative intentional states] (ibid.: 127).

(4) If x has desires, then x must also have beliefs [informative intentional states] (ibid.: 141).

(5) If x has interconnected feelings, desires, and beliefs (ibid.: 166), then x has "action tendencies", the disposition to "go for" something (ibid.: 129).

17 Recognizing "the multimodality of bodily experience" (Musholt 2015: 53) it must be noted that even the "awareness of one's own bodily condition" aspect of bodily awareness includes more than proprioception and sensation, e.g. touch and vision.

(6) If x has action tendencies, then x is an agent being able to perform intentional actions (ibid.: 172).

(7) If x is an agent, then x has temporal awareness of itself as persisting over time (2009: 205–207).

(8) If x has temporal awareness, then x is self-aware (ibid.).

(9) Therefore, if x is conscious, then x is self-aware (1996: 175).[18]

While premises (1) and (2) are uncontroversial, there has been much debate over premises (3) to (9), with challenges to premise (5) being raised especially, casting doubt on DeGrazia's thesis that there is such a tight interconnection between feelings, intentional states, and agency (e.g. see Steiner 2008: 42–55). This is not the place to discuss the (inter)relations of the argument in full detail, but for our present purposes it is worth considering how DeGrazia makes the case for premises (7) and (8), focussing on the agency aspect of bodily self-awareness by emphasizing temporal self-awareness. "My best example features my family's Labrador retriever, who, apparently frustrated at being confined to the study, reared on her back legs and attempted to turn the doorknob" (DeGrazia 2009: 206). DeGrazia's dog intentionally running to the door with a desire to leave the room as fast as possible, probably in order to go for a walk with her human companions, requires that she has a bodily awareness of her movements as well as some awareness of herself as being around long enough to go outside.

> "The very desire to do something, even if the action is obstructed, is similarly future-oriented and self-implicating. For the desire and intention amount to a rudimentary plan, which necessarily includes a representation of completing the intended action. If this is correct, then a commonsense appreciation of the ordinary behaviors of many animals

18 I do not claim that this is exhaustive or the only way to spell out DeGrazia's multilevel argumentation. For instance, if memory (a sense of the past) and anticipation (a sense of the future) constitute temporal awareness, and noting DeGrazia's focus on the interconnectedness of the different capacities, one might add the capacity of a sense of time between premises (4) and (5): "Drawing from all of these considerations, it seems reasonable to conclude that animals who are sentient, experience fear, have desires and beliefs, and learn, also remember and anticipate and therefore have some conscious sense of time [...] These animals are not, after all, stuck in the present" (DeGrazia 1996: 171).

> suggests a kind of self-awareness – namely, bodily self-awareness, here with an emphasis on the agency aspect. (ibid.: 205)"

As DeGrazia maintains, desires to do certain things and intentional actions that involve doing them implicate at least some "rudimentary awareness of oneself as persisting through time". Bodily self-aware animals are not just "stuck in the moment" or "live moment-to-moment" (DeGrazia 1996: 168). If this is true of DeGrazia's dog, then *a fortiori* it ought to be true of the aforementioned examples from animal cognition studies, involving more complex planning, problem-solving, tool use and tool making in great apes, dolphins, New Caledonia crows, scrub jays, et cetera.

> "Again, intentional action is possible only if the animal agent has some sense of herself as persisting long enough to complete the action or plan. This sense of self involves, most basically, a sense of one's own body as importantly distinct from the rest of the world and as subject to one's direct control. (DeGrazia 2009: 206)"

This is a considerable point of agreement regarding the phenomenological conceptions of agency and time-consciousness.[19] DeGrazia's conceptual reasoning seems to be consistent with Shaun Gallagher's distinction between a *sense of ownership* and a *sense of agency*: the pre-reflective experience of *mineness*, that the embodied subject is "the one who is moving or undergoing an experience", and the pre-reflective experience that the subject is "the one who is causing or generating a movement or action or thought process" (Gallagher 2012: 132). These minimal aspects of self involve "very short experiential time-periods" (ibid.) of the subject's self-identity through time.

Furthermore, the concepts of *body image* and *body schema* could be of noteworthy importance for more detailed research in animal agency and bodily self-awareness. While the *body image* includes a subject's *perceptual* experiences and *emotional* attitudes toward its body, the *body schema*, cutting

19 At the same time, DeGrazia's account of desires and intentions as *representations* is an important point of disagreement with the phenomenology of agency (Gallagher/Zahavi 2008: 158–162), which must be discussed in a more extensive account of animal agency.

across pre-reflective conscious and unconscious information, consists of "(1) the close-to-automatic system of processes that constantly regulates posture and movement to serve intentional action; and (2) our pre-reflective and non-objectifying body-awareness" (Gallagher/Zahavi 2008: 146). Although this is not the place to explore these relations further, these few introductory remarks may serve to identify significant starting points for future research into animal cognition, agency, and embodiment from a phenomenological point of view.

7. The Consciousness Challenge

While I agree with DeGrazia's conceptual reasoning in principle, the case for his *Self-Awareness Argument* cannot be regarded as sufficiently established. All former illuminating conceptual considerations put aside, there still seems to lurk a somewhat "conspicuous absence of any reflection on the nature of experience" (Zahavi 2002: 18) and self-awareness in DeGrazia's account. This introduces the possibility of a serious objection, the *Consciousness Challenge*. It has been claimed that the most basic types of self-awareness in question are instances of mere *consciousness* and not self-awareness.

This claim implies that, firstly, conceptualists could agree that DeGrazia's basic bodily self-awareness thesis is true at a conceptual/linguistic level, once self-awareness is brought about by conceptual/linguistic abilities. Secondly, DeGrazia's main thesis could also be accepted at the nonconceptual level of consciousness as having a weaker analogon: higher types of awareness presuppose more basic types of awareness, namely bodily awareness *qua* awareness. Further, contrary to some dualistic worries, positing proprioception and sensations at the very beginning of conscious life would not be disputed. However, there might be no case of nonlinguistic introspective awareness that would qualify as self-awareness. Nevertheless, for example, different nonlinguistic forms of social awareness would be considered as requiring more basic forms of bodily awareness. Furthermore, according to this line of interpretation, the mirror test would neither be necessary *nor* sufficient for indicating self-aware self-recognition in nonlinguistic beings. The recognitional ability would merely demonstrate that test subjects have some rudimentary bodily awareness of their movements – "a step toward self-consciousness" (Baker 2012: 23).

The *Consciousness Challenge* is prominently reflected in Lynne Rudder Baker's distinction between two stages (or ontogenetic phases) of the first-person perspective: "I understand mere consciousness in terms of a rudimentary first-person perspective, and self-consciousness in terms of a robust first-person perspective" (ibid.: 19–20). The latter is "the capacity to conceive of oneself in the first-person, *as* oneself – as an agent and a subject of experience. [...] a robust first-person perspective is a conceptual capacity, which, I shall argue, depends on language" (ibid.: 21). Hence, Baker's account is underpinned by a commitment to the aforementioned *Concept-Language Argument against self-awareness in animals*: self-awareness requires concepts, which in turn require language.

In contrast, "merely conscious" beings have a rudimentary first-person perspective which is "independent of linguistic or conceptual abilities".[20] By definition, "to have a perspective is to perceive the world from a particular spatiotemporal location", and moreover: "It is first-personal, but it does not explicitly refer to a subject (first-personally or otherwise); it is simply the default location of the subject – the location from which the subject perceives the environment, the origin of a perceptual field" (ibid.: 21–22).

First, Baker is definitely right in maintaining that a subject's egocentric point of view must be taken into account as a first-person perspective, be it rudimentary or robust. Second, it is also uncontroversial to contrast the assumed implicit self-reference of the rudimentary perspective with explicit self-reference at the conceptual/linguistic level. But how much "implicitness" is enough for any perspective or experience to be properly called a *first*-person perspective? It might be puzzling that Baker characterizes the rudimentary first-person perspective as simply being "the default location of the subject". Weakening the first-personal aspect of the rudimentary perspective even more, Baker goes on to claim that "persons have first-person perspectives *essentially*;

20 Interestingly, Baker does not even attribute the rudimentary first-person perspective to all sentient beings with intentional states, and, somewhat arbitrarily, adds the ability of imitation as a third criterion for consciousness: "I think that a first-person perspective (and hence consciousness) is more than mere sentience and intentionality, and all the animals to whom I would intuitively attribute a first-person perspective are to some degree imitative" (ibid.).

nonhuman animals have first-persons – and nothing but rudimentary ones at that – only *contingently*" (ibid.: 22, emphasis added).[21]

Now, this is a perfect example of what Griffin has called "an arbitrary and unjustified restriction" (Griffin 2001: 274). If Baker's intention is to reinforce the alleged anthropological difference between animals as (at the most) conscious beings and humans as persons, then she might rather succeed by dropping the "first-person" characterization of the rudimentary perspective altogether. Since, given Baker's ambiguous descriptions, it is no longer clear what the force is of claiming that we are dealing with a form of the first-person perspective. This point may become clearer by contrasting her account with a phenomenological analysis of the first-person perspective.

8. A Phenomenological Alternative

Baker conspicuously ignores the experiential aspect that having any first-personal perspective at all means that the perceiving – and acting – subject itself is, not merely contingently, accidentally, *de facto*, or "simply by default", but *essentially*, "the origin of a perceptual field". It cannot be the case that egocentric spatial perception is simply about an individual who *just happens* to be the subject at a particular location without the subject's recognizing that the individual in question actually is itself. Nor is it to be understood as an impersonal "particular spatiotemporal location" that is simply occupied by a subject. It is rather the egocentric perspective, the subjective point of view of the perceiving embodied subject itself.

In egocentric space others as well as various objects are necessarily given in relation to the subject, being to its left, its right, its back, or its front. All of these relations, which enable perceptions and actions, are experienced by the subject as being *for* the subject. Since no question arises as to whom it is that the egocentric information is given, this very subjective aspect marks the egocentric experience essentially or necessarily as being *for* the subject.

21 According to Baker, what is essential to being a person is to be *of a kind* that typically develops a robust first-person perspective (ibid.: 23). This anthropocentric view is reiterated in Baker 2013.

"Every perspectival appearance implies that the embodied perceiver is herself the experiential zero-point, the indexical 'here' in relation to which every appearing object is oriented" (Gallagher/Zahavi 2008: 142).

The very starting point for particular phenomenological analyses of egocentric space (with reference to Husserl) also introduces the more general, fundamental phenomenological account of a "basic pre-reflective experiential subjectivity" (Zahavi 2012: 148). However, bearing in mind that "what-it-is-like-ness is properly speaking what-it-is-like-*for-me*-ness" (Zahavi/Kriegel: 2016: 36), the "essential constitutive aspect of experience", which is most relevant to the present concern, is not the "what it is like" quality aspect, but the distinct *for-the-subject* aspect, the subjective aspect of *for-me-ness*.

> "Whatever their character, whatever their object, all experiences are subjective in the sense that they feel like something *for somebody*. They are subjective in the sense that there is a distinctive way they present themselves to the subject or self whose episodes they are. It could consequently be claimed that anybody who denies the for-me-ness or mineness of experience simply fails to recognize an essential constitutive aspect of experience. Such a denial would be tantamount to a denial of the first-person perspective. (Zahavi 2012: 149–150)"

This implicit "primitive form of self-referentiality or for-me-ness" (Gallagher/Zahavi 2008: 50) characterizes the fact that experiences are non-anonymously something *for* the subject in question. This has some rather obvious but significant implications for dismissing the *Consciousness Challenge*. Since Baker's distinction between consciousness and self-consciousness requires the distinction between two stages of the first-person perspective (in her terms), and to the extent that her description of the rudimentary stage is not sufficient for a proper characterization of the first-person perspective, the "mere consciousness" account of nonlinguistic beings is also called into question.

The upshot of this discussion is that for-me-ness as implicit but conscious self-reference to the subject of any first-person perspective is "explicitly" important enough to be properly called pre-reflective *self*-awareness. Far from

being merely a terminological consideration, to argue that consciousness as such entails a primitive form of self-awareness might indeed prove "to make the strongest case possible for the existence of prelinguistic and nonconceptual forms of self-awareness" (Zahavi 2002: 18).

Therefore, in addition to DeGrazia's *(Bodily) Self-Awareness Arguments*, the phenomenological analysis can consistently support and substantiate his – and indeed anybody else's – case for considering the most basic forms of "mere" bodily awareness as entailing pre-reflective self-awareness.

I hope that this may serve to demonstrate that there is a good chance that the resources to be found both in analytical approaches to animal cognition as well as in phenomenological conceptions of embodiment and self-awareness can substantially contribute to the philosophy of animal minds. In terms of prospects for future research, I opt for optimism. Taking bodily self-awareness in animals seriously is a significant starting point in order to broaden the horizons of embodiment for future investigations into corporeality in animals.

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EMBODIED, ENACTED AND EXPERIENCED DECISION-MAKING

1. Introduction

The considerations that guide this paper mainly come from the realization of how limited our understanding of decision-making actually is. We have little knowledge about how common people make decisions in their everyday lives. We have almost no insight into how the process of decision-making looks and unfolds from the experiential perspective of decision-makers – how they understand (and create) uncertainties, outcomes, consequences, etc. We do not even know whether people interpret situations that are perceived as decision situations from a third-person perspective as decision situations in the first place. Having to rely mostly on behavioral and neural data gathered in very specific and restricted decision situations forces us to postulate abstract theories and models about what is going on in the minds of decision-makers, when in fact we have little assurance that they correspond to how people go about deciding (in the lab, or in everyday life). All in all, we have little understanding of what sense and meaning decision-making has for decision-makers, and thus have a very limited understanding of the phenomenon at best.

The goals of this paper are to show that mainstream approaches to studying decision-making – accepting assumptions of traditional cognitive science and

research practices – provide a very limited account of decision-making, and to outline a better starting point for understanding and researching decision-making.

With these goals in mind I will, in the first part of the paper, elucidate some common views, claims, and presuppositions of traditional cognitive science that are still prevalent in most contemporary accounts of cognition. In the second part, I will show how they pertain to, and define, mainstream understanding and research on decision-making, and point to several problematic issues in the field. Among them are, for example: conceptualizing the process of decision-making as a kind of representational, disembodied activity; objectification of the phenomenon; disregard for the subjective and experiential perspective; lack of persuasive accounts of how people make sense of decision situations, etc. Finally, in the last part, I will propose that enactivism, with its critique of representationalism and naive realism, together with (neuro)phenomenology, which argues that experience should be studied rigorously, represent a more suitable starting point for understanding, researching, and explaining decision-making.

It should be said that cognitive science, enactivism, and phenomenology are immensely rich, diverse, and complex scholarly endeavors which I will not be able to cover in whole. My take on the problem and the limited scope will force me to focus only on certain aspects of cognitive science, enactivism, and (neuro)phenomenology. Further, I will not try to provide a comprehensive overview of decision-making, but will rather focus primarily on the generally accepted understanding of decision-making, common research practices, and some examples.

Furthermore, I should emphasize that I view decision-making as an activity that is at least partly a conscious activity: that is, an activity of which decision-makers are at least partly aware (from fleeting, fringe feelings pertaining to the activity, to full-blown deliberations about the decision at hand). In this, a fully unconscious process/activity does not count as decision-making in my

view[1]. Lastly, my goal is not to provide a comprehensive definition of decision-making. Rather, I will try to show that decision-making should primarily be seen as an activity of sense-making – an activity that cannot be separated from the perspective of decision-makers.

2. In search of the mind: from behaviorism to enactivism

2.1 The black box of cognitive science and the elusive experience

Cognitive science in large part emerged as a response to, and a critique of, behaviorism, which denied the use of mental vocabulary and the validity of interpreting behavioral data in terms of consciousness in explaining and predicting behavior. With the goal of providing a better explanation and prediction of behavior, the newly emerging accounts of cognition claimed that processes and mechanisms between stimulus and response are in need of exploration and explanation. The behaviorist black box was opened, researched and explained. In that, cognitive science represents a rather radical departure from behaviorism. However, it retains its goal of be(com)ing an objective science: it mostly tries to research and understand cognitive functions and mechanisms as entities independent of the researcher and free of subjects' observations and points of view.

Nisbett and Wilson's critique of the use of introspective methods in psychology is one of the most well-known examples of such a distrustful attitude towards introspection. In the abstract, for instance, the authors claim that "there may be little or no direct introspective access to higher order cognitive processes" (Nisbett and Wilson 1977: 231). Similarly, many of those working in contemporary cognitive science hold the belief that reliance on subjective data and introspective methods should be avoided, or at least minimized, as much as possible and substituted for "objective" measures of various aspects of the mind, even, for example, awareness (e.g. Persaud, McLeod, and Cowey 2007).

1 Such a position, of course, leads to further problematic questions, such as: "Lower-level" organisms thus do not make any decisions? What are the criteria for ascribing consciousness/awareness to organisms? Et cetera. These intriguing considerations unfortunately exceed the scope of the paper.

It should be noted that Nisbett and Wilson's (1977) critique of introspective methods is, to a certain degree, valid but does not hold as a general critique of "introspection". What Nisbett and Wilson are actually and unknowingly criticizing is the "naive" introspection[2] that can lead subjects to report on their beliefs, opinions, and implicit theories of *what* is going on in their minds, but not to report on the *how*, the lived, pre-reflective experience. Nisbett and Wilson's (1977) conclusion that we have no introspective access to "higher-order" cognitive processes is thus mistaken (Petitmengin et al. 2013).

Cognitive science, with its numerous models of what transpires between input and output, tried, and to a certain degree succeeded, to remedy the behaviorist "explanatory gap" between input and output. However, when it started filling the black box with abstract claims about mentality and consciousness, it opened a new kind of gap – it "created" the epistemological and methodological explanatory gap between the psychological and the physical (Levine 1983), the experiential and the material, the subjective and the objective. Furthermore, in its search for the "objective" mind, it overlooked its essential aspect, namely, lived, conscious experience. Roy et al. (1999) nicely express the point that (traditional) cognitive science "is a theory of the mind without being a theory of consciousness. It is a theory of what goes on in our minds when they are cognizing without being a theory of what is it like to be a cognizing mind" (Roy et al. 1999: 7). Cognitive science as a purportedly objective, third-person science of the mind did not, and cannot, close the explanatory gap that plagues it, if it is to continue to embrace an objectivist "view from nowhere". In this regard, cognitive science mostly does not differ much from behaviorism, which it tried so hard to denounce.

For, how could a cognitive scientist, relying on brain dynamics or behavioral data, state anything meaningful about a certain cognitive phenomenon, in a way that would be relevant to explaining and understanding a cognitive phenomenon, if not by firstly knowing and understanding what

2 According to many, the naive introspective observations originate from our natural attitude towards the world and experience, which should be suspended or "bracketed" (*epoché*) in our inquiry of consciousness and researched from a first-person perspective in its own right (see Gallagher and Zahavi 2012; Husserl 1982; Kordeš 2016; Varela et al. 1993; Varela 1996).

the phenomenon is or means? (This pertains to designing experiments as well.) The fact is that our "objective" cognitive scientist could not have come to such understanding by solely using "objective" measures of the mind. Rather, understanding what one wants to measure, interpreting the gathered data, and having an idea about how to use such results in explaining the mind (or a cognitive phenomenon) comes from one's (cultural) beliefs, from the paradigm accepted by the community of scientists (Kuhn 1962), and, most essentially, from observing and understanding one's own experience. For, how could one have a notion of what an emotion or decision is if not partly and necessarily by experiencing emotions and decisions?

Consequently, purportedly objective research is always, directly or indirectly, subjective. According to Gallagher and Zahavi (2012), this is why Merleau-Ponty

> "criticizes the one-sided focus of science on what is available from a third-person perspective for being both naive and dishonest, since the scientific practice constantly presupposes the scientist's first-personal and pre-scientific experience of the world [Merleau-Ponty 1962: ix]. This is also why the usual opposition of first-person versus third-person accounts in the context of the study of consciousness is misleading. It makes us forget that so-called third-person objective accounts are accomplished and generated by a community of conscious subjects. There is no pure third-person perspective, just as there is no view from nowhere. (Gallagher and Zahavi 2012: 20–21)"

In light of these considerations, cognitive scientists should start researching experience and their own "first-personal and pre-scientific experience of the world" in a systematic and rigorous way – the need for which, as I will show later, is rather obvious in decision-making sciences – if they are to understand the mind. This is not a simple matter, but one that is absolutely crucial.

2.2 From "naive" realism[3] to enaction

Another major claim of traditional and the majority of contemporary accounts of cognition is that cognition is formal manipulation (or calculation) of internal mental representations of a pregiven world that leads to behavior. The main idea of the representationalist view of the mind is that the agent is a sort of problem- or task-solving "functional machine" that takes in something objective and "agent-independent", internally represents it, manipulates what is represented, and, as an output, produces more or less appropriate behavior.

In their enactivist program, Varela, Thompson, and Rosch (1993) differentiate between two types of representation. First there is an uncontroversial sense of representation as being *about* something, as a "simple" fact of the intentionality of consciousness. Then, there is a much stronger sense of representation (representationalism), which, according to Varela et al. (1993), is burdened by false ontological and epistemological assumptions: "We assume that the world is pregiven, that its features can be specified prior to any cognitive activity. Then to explain the relation between this cognitive activity and a pregiven world, we hypothesize the existence of mental representations inside the cognitive system" (ibid.: 134–35).

In contrast to such representationalist and realist accounts of cognition, enactivism claims that the separation of the world and the subject (with its lived body and mentality) is a false dichotomy. The enactivism of Varela et al. (1993), which incorporates many ideas of phenomenology (especially of Merleau-Ponty), conceptualizes cognition as something that is neither there in the outer world nor in the subject, but rather in the relations between the world and (the actions of) the agent with a lived (experienced) body. The subject and the world, the "inner" and the "outer", are intrinsically interdependent and mutually defining – dancing in a mutual, circular specification and negotiation of meaning that does not allow for any such strict separations. As Merleau-Ponty (1962) succinctly points out towards the end of *Phenomenology of*

3 With "naive realism" I have roughly "metaphysical realism" in mind – the thesis "that the objects, properties and relations the world contains exist independently of our thoughts about them or our perceptions of them" (Khlentzos 2016).

Perception: "The world is inseparable from the subject, but from a subject which is nothing but a project of the world, and the subject is inseparable from the world, but from a world which the subject itself projects" (Merleau-Ponty 1962: 430, quoted from Varela et al. 1993: 4).

The similarity between enactivist and phenomenological conception of the "relationality of cognition" can, for instance also, be seen in the phenomenological notion of intentionality:

> "Intentionality is always a relation to that which transcends the present state of the system (where what transcends the system does not have to exist in the sense of being a real entity). In saying that the mind is intentional, phenomenologists imply that the mind is relational. 'Being-in-the-world' (Heidegger) and the 'lived body-environment' (Merleau-Ponty) are different ways of articulating this kind of relation. (Thompson and Stapleton 2009: 26)"

Cognition, as conceived from the enactivist point of view, is thus radically different from how traditional also embodied cognitive science sees it.

It must be noted that most contemporary accounts of embodied decision-making (e.g. Filimon et al. 2013; Lepora and Pezzulo 2015; de Oliveira et al. 2009; Oullier and Basso 2010), for instance speak of sensory-motor representations, retain the presupposition of naive realism, speak of the influence of the body on higher-order cognition, but not of the body as constitutive of cognition (at least of the body as a physical and experiential structure), etc. With this in mind, the mentioned approaches should not be equated with the enactivist view of cognition as embodied action (*enaction*; see Vörös, Froese, and Riegler 2016).

Moreover, enactivism takes the question of how agents "negotiate" sense and meaning through their embodied actions as essential and, consequently, aims at understanding the subjective, experiential point of view, which is, for instance, reflected in its incorporation of Merleau-Ponty's double sense of embodiment into its theory (the body as both experiential and physical structure). As such, enactivism, together with some ideas of phenomenology, is a much more sensible starting point for understanding and researching decision-making, since decision-making, decision situations, and decisions, in my opinion, cannot

be understood without seriously considering what sense and meaning they have for and in the experiential perspective of decision-makers.

I will now underline some of the shortcomings of the mainstream (disembodied and embodied) accounts of decision-making, which – originating from the traditional understanding of the mind and its presuppositions – are rather clueless of what sense decision-making has for and in the perspective/horizon of the decision-maker.

3. Mainstream accounts of decision-making: from naive conceptions to limited research practices

3.1 Understanding and research of "disembodied" decision-making

Usually, decision-making is described as the process of choosing between alternatives or possible courses of action – an unassuming definition, which in itself does not seem to carry any strong methodological, epistemological, or ontological commitments. But how are "alternatives" and "choosing" actually conceptualized in classic and mainstream accounts of decision-making? And how is this process researched?

Let us first look at Hastie's (2001) rather commonly accepted understanding of decision-making. He defines decisions as situation-behavior combinations that can be described with three defining components: "(a) courses of action (choice options and alternatives); (b) beliefs about objective states, processes, and events in the world (including outcome states and means to achieve them); and (c) desires, values, or utilities that describe the consequences associated with the outcomes of each action-event combination" (Hastie 2001: 656). He then defines outcomes as "the publicly describable situations that occur at the end of each path in the decision tree" and consequences as "subjective evaluative reactions (measurable on a good-bad, gain-loss scale) associated with each outcome" (ibid.: 657). The uncertainty with which decision-makers are faced when making decisions, in his view, "refers to the decision-maker's judgments of the propensity for each of the conditioning events to occur. Uncertainty is described with several, sometimes competing, measures in various decision theories, including probabilities, confidences, and likelihoods" (ibid.), while judgment "refers to the components of

the larger decision-making process that are concerned with assessing, estimating, and inferring what events will occur and what the decision-maker's evaluative reactions to those outcomes will be" (ibid.).

Looking into Hastie's definition of decision-making, one quickly realizes that it is well-entrenched in the described assumptions of classical cognitive science. First, the existence of (at least two) alternatives is seen as a necessary starting point for decision-making (as is clear from experimental tasks used in research on decision-making that I will present shortly, alternatives are pregiven and as such seen as entities that exist independently of decision-makers). Second, the agent is presupposed to have (fixed?) beliefs, which are primarily about objective states, processes, and events (including potential outcomes) situated in the outside world. In this regard, probable outcomes are viewed as separate from the subject. Third, outcomes conveniently anchor and "define" subjective consequences, conceived as "evaluative reactions" to objective outcomes. The conception of subjective consequences as reactions, responses to external stimuli (outcomes) is in accordance with the classical "stimulus-calculation-response (behavior)" conception of the mind. Fourth, although subjectivity must be admitted into the picture of decision-making, it is by and large neatly packed into objective measures (such as good–bad, gain–loss scales), derived from "objective" measures, or it is simply ignored. Fifth, regardless of the fact that subjective consequences are seen as part of uncertainties, decision-making research is mainly concerned with uncertainties that lie in the objective world, being judged in the way of assessing, estimating, and inferring probabilities, confidences, and likelihoods. Finally, decision-making is often viewed (or modelled) as a sort of calculation with probabilities or likelihoods. This is a perspective on decision-making that plainly reflects the views of classical cognitive science – namely, that of naive realism, representationalism, and the "objectification" of the mind. The limitations of such understanding and entailed research practices are easily uncovered in experimental tasks, used by mainstream research on decision-making. Let me provide some examples.

The first example is a task used widely in neuroscientific research on perceptual decision-making. In the two variations of the task, the subject (animal or person) must repeatedly decide whether the net motion of a noisy field of dots moves in one or the other direction (or whether the presented

noisy image is a face or a house), indicating this by moving the eyes or pressing a button (see Heekeren, Marrett, and Ungerleider 2008).

The next is the Iowa gambling task – a gambling decision task under risk and uncertainty, first used by Bechara et al. (1997). The subject is faced with four decks of cards and given a virtual loan of 2000 dollars. She is told to try and draw cards in such a way as to lose the least amount of money and win the most. Without knowing which decks bring gains and which bring losses, subjects make a hundred consequent draws from any of the four decks, while researchers record the draws. Bechara et al. (1997) also measured the skin conductance responses of participants as a correlate of unconscious "emotional biases".

The last decision task is an example of research on consumer decision-making that is also widely studied in psychology, behavioral economics, and neuroeconomics. In one of the experiments conducted by Dijksterhuis et al. (2006), participants were presented with the task of choosing the best of four cars. First, they read the descriptions of four cars, which were characterized by four attributes in one condition ("simple" choice) and by twelve attributes in the other ("complex choice"). Then, one group of participants was instructed to think about the cars for four minutes before they chose their favorite car ("the conscious thought" condition), the other distracted for four minutes by having to solve anagrams (the "unconscious thought" condition). Researchers also "measured" (on a scale) participants' postchoice satisfaction. The best car was defined in terms of the most positive attributes (the positivity/negativity of attributes was predefined by researchers).

I do not want to claim that such studies do not tell us anything useful about decision-making. The tasks described by Heekeren et al. (2008) tell us something about low-level mechanisms of perceptual discrimination that play a role in decision-making, if we consider such activity as decision-making in the first place. Studies about judgment and decision biases (see the seminal work of Tversky and Kahneman 1974; Kahneman and Tversky 1979) tell us that people's decisions are influenced by many different factors (which sometimes, in specific contexts, lead to biases). Studies about the role of emotions in mediating decision-making and decision biases (Bechara et al. 1997; De Martino et al. 2006) tell us that emotions play an important role in decision-making. The study of Dijksterhuis et al. (2006) points to a

rather intuitive conclusion that decision-making is "not all conscious" (but not much more than that). However, even though such research does tell us something about decision-making, it provides very limited understanding of the phenomenon at best.

For instance, objective and "simple" uncertainties and "objectified" subjective consequences, if at all included in the tasks, are negligible, for they bear no real consequences on decision-makers. The decisions studied (being mainly simple, one-shot, short-in-duration lab decision problems performed under "simple" risk and/or "slight" uncertainty) are consequently very different from everyday decisions, which might entail many important, even existentially important consequences for decision-makers. In that, they cannot be generalized to everyday life decision-making (Strle 2016), which is more "chaotic", includes more or less well defined uncertainties, can be full of important subjective consequences, etc. Moreover, even if "subjective factors" (as subjective consequences, emotions, feelings, etc.) are seen as important for decisions, they are mostly researched superficially (for instance by using various scales, as in Dijksterhuis et al. 2006, by confronting the subjects with a simple question, as in Bechara et al. 1997) or derived from "objective" behavioral measures (as in Bechara et al. 1997 or De Martino et al. 2006).

The fact is that most contemporary researchers of decision-making do not consider the experienced, subjective character of decision-making seriously and hence have no way of knowing how decision situations – even simple lab-decision problems – are understood by decision-makers and how the decision-making process actually unfolds. This is clearly the case, for instance, in Dijksterhuis's et al. (2006) research, where researchers have no clue about how participants understand the purported complexity of choices, how they understand the characteristics of cars that are presented to them, whether they were in fact consciously thinking about the choice in the conscious thought condition, etc. (see Newell and Shanks 2014; Strle 2013). In that respect, mainstream objectivistic accounts of decision-making provide a very limited account of decision-making at best.

My goal is not to delve further into the particular problems of such research, but to make a more general point that is common to all classic and most mainstream approaches to understanding and researching decision-making (I will try to explain this in more detail in the last part of the paper). Namely,

the question of what sense and meaning, if any, decision-making and decisions have for decision-makers is not asked and even less so answered. This is a very problematic aspect of decision-making research, especially since it not only leads to the postulation of abstract and general theories of decision-making that are supposedly also valid for decision-making in everyday life, but also to the problem that researchers do not know how participants actually understand decision situations or go about deciding (how they understand alternatives, uncertain events, outcomes, subjective consequences, etc.) in already severely limited laboratory settings.

3.2 Embodying decision-making: from weak embodiment to enaction

In recent years, there has been a surge of proposals for "embodying" decision-making. Such proposals claim, for instance, that emotions (as bodily states) play an essential role in decision-making (Damasio 1994); try to understand decision-making as a dynamic, time-pressured activity (e.g. Cisek and Pastor-Bernier 2014); emphasize the importance of the brain's sensorimotor regions for (perceptual) decision making (Filimon et al. 2013); study mechanisms of bidirectional and dynamic influences between action, perception, and decision-making (de Oliveira et al. 2009; Lepora and Pezzulo 2015); emphasize the importance of interactions between agents in social (neuro)economics by considering how the information provided by bodily signals influences the way we make economic decisions (Oullier and Basso 2010). Nevertheless, looking into the literature on embodied decision-making, one quickly realizes that embodiment here is understood in the weaker, representationalist, and naive-realist sense.

Oullier and Basso (2010), for example, are the only authors who refer to the work of Varela or other enactivists among the cited papers on embodied decision-making, although I do not see that they fully grasp the consequences entailed by enactivism. This is quite clear in their incorrect claim that the "affect heuristic can be viewed in terms of embodied cognition or 'enaction' [Varela et al. 1992]" (Oullier and Basso 2010: 293). Looking at the seminal paper on affect heuristic (Finucane et al. 2000) it is not hard to see that it

is firmly entrenched in the presuppositions of traditional cognitive science. Researchers, for instance, espouse the traditional "dual-process theory" view of the mind, which takes affect and analytic thought as two separate types of processes (contrary to enactivist views; see Colombetti 2014), conceptualize affect as an "affective tag" of representations of objects, etc. To provide another example, Lepora and Pezzulo (2015) claim that "the action dynamics of our bodies causally influences our central cognition, which is a core assumption of embodied theories of mind" (ibid.: 1). This claim presupposes a modular view of cognition, in which body dynamics are still seen as separate from "central cognition" rather than essentially constitutive of it, as enactivism would have it. Furthermore, the notion of "central" cognition clearly reflects the "old-school" psychological theories of "the central executive", etc. Damasio's (1994) account of the influence of emotions on decision-making – inasmuch as he conceptualizes emotions primarily as body states – can be subsumed under embodied decision-making theories. Nonetheless, he – as most other embodied decision-making researchers – views emotions (and the body) as separate from "higher-level" cognition and conceptualizes them in the traditional stimulus-response manner. Last but not least, all of the above-mentioned embodied accounts of decision-making do try to provide an account of the role of the body, but the lived (experienced) body is not taken into consideration at all. As pointed out by Varela et al. (1993), this double sense of embodiment has been largely absent from classical cognitive science and is still absent from contemporary accounts of embodied decision-making.

The cited embodied accounts of decision-making do solve some of the problems of classic decision-making research programs (i.e. they try to move away from conceptualizing decision-making as a purely rational, abstract, higher-level information-processing, non-dynamic, and non-bodily activity), and are thus a welcome move towards a better understanding of decision-making. However, they retain the focus on studying *simple* decision-situations in an *objectivist* way and do not, by any means, endorse the stronger commitments of enactivism. As such, most traditional and mainstream accounts of decision-making tend to leave out what is essential to, and constitutive of, decision-making – namely, what sense and meaning

situations, the process of decision-making, and decisions themselves have for decision-makers.

4. Decision-making as experienced sense-making

Di Paolo et al. (2010) characterize five constitutive and intertwined ideas that define the enactive approach: autonomy, sense-making, emergence, embodiment, and experience. Although all five are necessary for enactivism, I will focus on the notions of sense-making and experience, and show how they pertain to a better understanding of decision-making.

Di Paolo et al. (2010) characterize sense-making in the following way: "Exchanges with the world are inherently significant for the cognizer and this is the definitional property of a cognitive system: the creation and appreciation of meaning or sense-making in short" (ibid.: 39). In this regard, all of an agent's (cognizing) activities necessarily presuppose that the world, the agent's activities, and the relation of the agent with their world are imbued with meaning. But where does this meaning come from? As said before, meaning does not lie in the objective world, waiting to be discovered by the agent, nor is it already present "inside" the agent, who somehow imposes it on the world. Rather, meaning is being created by agent's interactions with the(ir) world. In this sense, sense-making presupposes a certain perspective, from which meaning is being "created". It presupposes an experiential perspective that is always present for the agent (and not (only) for an observer), a perspective from which the agent cannot "escape". Colombetti makes this point clearly:

> "Sense making […] necessarily entails a point of view from which the system and the environment are evaluated. The adaptive autonomous system is not just a unity of interrelations among processes but a perspective on the world that generates meaning and norms for itself, a locus of inwardness […] The enactive notion of sense making is also intimately related to the one of Umwelt (literally, "world around"), in Uexküll's ([1934] 2010) sense of the environment as experienced or lived from the organism's perspective. For a living system to be a sense-

> making system is to live in a world that is always an Umwelt, namely, an environment that has a specific significance or value for it. […] Cognition from an enactive perspective is, rather, the capacity to enact or bring forth a world of sense, namely, an Umwelt that has a special significance for the organism enacting it. (Colombetti 2014: 17–18)"

Looking at decision-making, it is not hard to see that decision situations, decisions, and the process of decision-making cannot be separated from the significance and meaning they have for decision-makers. Decision-making is always a perspectival activity from which decision-makers "enact or bring forth a world of sense" that is, and cannot but be, significant and meaningful for them – activity, which is always imbued with the felt horizon that the embodied decision-maker brings forth. Let me now delve deeper into some ideas and provide some examples that show how decision-making should be viewed and researched as an activity of experienced sense-making.

Contrary to what most accounts of decision-making imply, alternatives are not entities existing independently of decision-makers, lying somewhere in the objective world or being definable from the researcher's third-person point of view. Rather, they "exist" (or not) only in *the eye of the beholder*, who interprets (or not) a certain situation as one that *affords or calls for* decision-making. Some qualitative studies on decision-making make this point very clear. Klein, Calderwood and Clinton-Cirocco's (2010) report on the qualitative study of expert fire fighters' decision-making nicely shows how expert firefighter commanders were not, in fact, choosing or deliberating between alternatives when trying to "decide" what to do in real-life firefighting situations. Rather, they considered (followed) one feasible course of action. They, in fact, did not make any choices – a finding that researchers could not have reached by considering only the "behavioral" or neural responses of expert firefighters in virtual lab settings. If, for instance, firefighters were faced with alternative courses of action in a lab, neatly presented to them on a piece of paper, and told to choose the best one, it would easily happen (as does in most quantitative research on decision-making) that researchers would interpret firefighters' behavior as deliberation between alternatives. This would be a rather unwarranted conclusion. In light of these considerations,

most laboratory studies of decision-making are limited from the start, for they do not even have an idea whether subjects would, if provided with alternatives or not, interpret a decision task as one that must be decided upon.

Van Manen's (2014) phenomenological study of parents' experience of "ethical decision-making" in neonatal intensive care further shows that the "same" or very "similar" decision situations – presented alternatives included initiation, limitation, or withdrawal of medical therapies – can be understood, experienced, and carried out in very different ways, depending on how the decision-makers understand and interpret situations, uncertainties, consequences, etc. In his study, he identified five "interpretive themes" of parental decision-making:

> "The first "category" – "a decision that was never a choice" – is illustrated by two parents who felt pressured by doctors to decide between leaving their son on, or taking him off, life-support. Despite the fact that they were aware that he, if left on life-support and survived, could end up severely disabled, they did not see the situation as a decision situation: "We just wanted to let him have a chance. If he was to die, he would die on his own. We did not want to take his death away from him. (Van Manen 2014: 283)"

> "The second – "a decision as looking for a way out" – is exemplified by parents faced with a similar situation (they had to choose whether to give their daughter dexamethasone without which she would die, but which, if administered, could damage her brain). They, quite unlike the first parents, deliberated about various options, uncertainties, and consequences (what they knew and what not; what would life be like for their child and for them), but in the end felt overwhelmed by the many uncertainties and decided to leave the choice to a medical examination of their daughter's brain."

> "The third – "a decision as thinking and feeling oneself through the consequences" – shows that some parents, instead of deliberating

about the knowns and the unknowns, rather felt themselves through the consequences of a purported decision."

"The fourth category – "a decision as indecision" – is illustrated by parents who had to decide whether to save their son's life or not, but he would almost certainly be impaired if he survived. The father reports thinking about the various consequences of having an impaired child (for his other children, what they would have to sacrifice, etc.), but he could not settle upon a decision. For the parents, the only possible "decision" was indecision."

"The last category – "a decision as something one falls into" – is exemplified by a mother, who was in a perpetual state of having to decide between palliative care and heart transplantation for her daughter. Although she had already decided, she kept coming back to process of deciding. At the end she "fell" into the final decision: "[A]t some point, I stopped hearing the risks of transplantation, and I finally knew what we had to do. […] I had to give her the chance of transplantation no matter the risks, no matter what she may have to go through, even if she died on the waiting list. I had to do that as her mother. (Van Manen 2014: 285)"

Let me provide some further examples. Imagine, for example, a rather "simple decision situation" of choosing the flavor of ice cream. For some decision-makers this is a rather simple "task". For instance, they would look at the range the shop has to offer, imagine how various flavors tasted, and choose accordingly. For others, on the other hand, this could be a rather difficult and longer lasting endeavor, involving strenuous information-gathering as to which shops serve the most healthy ice cream, consideration of one's dieting goals and the possible consequences of eating too many sweet things, and the feelings of anxiety and doubt. Still for others, such a situation would not represent a decision situation at all, for they always opt for chocolate ice cream. If such an example seems too trivial, let us imagine a more "complex" decision-situation. A student, having to

choose what to study after finishing high-school, can for instance know exactly what they want to study and go on to study what they actually want (hence: this is not a decision-situation for them). On the other hand, we can imagine a student deliberating about the pros and cons of various study programs, thinking about their career, feeling (or imagining feeling) various potential future consequences that a given choice might bring and considering their broader goals and life aspirations. Moreover, one student might enjoy thinking and feeling about their future, while for some other student the process might cause anxiety and uncertainty about what they actually want, about their identity, etc. Still another student might gather all the information they deem important, forget about the choice, and, when the deadline for enrolling arrives, simply decide according to what their intuitive feelings "tell" them at the moment. One student might perceive the choice as existentially important, the other as something that one should not spend too much time on.

Van Manen's (2014) phenomenological study of decision-making and the presented imagined decision scenarios – which can be clearly understood/interpreted in some radically different ways by decision-makers – show that decision situations, alternatives, uncertainties, consequences, etc. cannot be found in the "outer", objective word or be defined from the perspective of other agents or researchers. Rather, they are constituted by the significance which decision-makers cast onto their world, that is, by what sense and meaning they have for the individual decision-makers that enact them. As such, the question of how people go about deciding cannot be answered without seriously, rigorously, and systematically considering decision-makers' experiential perspective.

Decision situations investigated by van Manen (2014) and the imagined examples presented above could be claimed to belong to specific types of decision situations or decisions. We should bear in mind, however, that this is a claim stated from a third-person perspective. What I am trying to say is, in fact, quite straightforward: seemingly similar "decision situation types" can stand for quite different decision situations from the perspective of different decision-makers. That is, decision situation types as general categories do not exist. By that, I do not wish to claim that decision-makers necessarily understand/interpret decision situations in radically *and* arbitrary different ways, since they are, after all, embedded in to a certain degree similar

socio-cultural and physical environments. I simply wish to state that they understand/interpret them a) in different ways and b) that we cannot know how they understand/interpret them, if they even do, without considering their experiential sense-making – a point that might seem obvious to some, but is blatantly (and unwarrantably, one should add) denied by others (most contemporary approaches to understanding and researching decision-making).

Thus, it is more sensible to try to uncover (similarly to van Manen 2014) *potentially* general ways (or "types") of decision-making[4] or of enacting decision situations than types of decision situations or decisions themselves (such as ethical, consumer, simple, complex, under risk, under uncertainty, etc.). For example, two decision makers can understand (enact) a "similar type of decision situation" in entirely different ways: one, for instance, as a complex decision under "great" and "varied" uncertainty, another as a simple decision that is hardly worth any consideration. Thus, it seems more sensible and productive to look at how individual decision-makers enact *decision situations* and try to see whether general "categories" or ways of enacting decision situations can or cannot be uncovered (see also the last paragraph of this part of the paper), than trying to define supposedly objective "types" of decision-situations or decisions that are allegedly valid for all decision-makers that find themselves in similar circumstances.

These and similar considerations, especially those presented in this part of the paper ("Decision-making as experienced sense-making"), constitute the main reason why I advocate the rigorous and systematic study of experience, as exemplified by van Manen (2007; 2014), Petitmengin (2006; 2013), and other similar (neuro)phenomenological research that aims at empirically investigating experience in a non-superficial way (e.g. by following Husserl's

4 By "types of decision-making" (meant as a process) researchers usually refer to rational, deliberate, intuitive, etc. decision-making – a distinction that some find useful, but is in fact quite superficial if one considers studies such as van Manen's (2014).

"method" of phenomenological reduction[5]).

I must emphasize that I *do not* claim this primarily because I believe enactivism or phenomenology to be the "true" accounts of the mind, but for the sole reason that, when thinking about decision-making and its various aspects – hopefully, without too many naive implicit theories and beliefs, including the ones coming from my knowledge of enactivism and phenomenology –, I cannot but conclude that traditional concepts, theories, and experimental practices do not do justice to it as a whole. Furthermore, I do not wish to claim that a full-blown phenomenological account of decision-making is *necessary*, but that phenomenology – be it empirical or philosophical – and its methodological ideas should be seriously considered and incorporated into research on decision-making.[6] It is true that a more thorough analysis and empirical exploration of decision-making as experiential sense-making in everyday life is needed, but this endeavor exceeds the goals of this paper and remains a project for the future.

The final point I want to make is that phenomenology, or at least certain strands within it (particularly those based on the ideal of "eidetic variation"), has, in my opinion, one limitation (or, rather, one limiting goal) as a method for systematic inquiry into experience of decision-makers, insofar as it attempts to capture the invariant structures of experience, the very conditions and structures of phenomenality as such, and not the here-and-now of

5 Varela (1996: 336–38) proposes to phenomenological reduction as the method for the systematic investigation of experience, which – by disciplined training in bracketing our habitual beliefs and directing our observations towards "the arising of thoughts themselves", in becoming intimate with the observed and experienced, and in describing the observed – enables us to rediscover "the primacy of human experience and its direct, lived quality that is phenomenology's foundational project" (Varela 1996: 335–36). Others (e.g. Kordeš and Markič 2016; Varela et al. 1993) have proposed using meditation practices (e.g. mindfulness) as methods for researching experience in the scope of cognitive science. Still others propose building experimental designs around phenomenological insights ("front-loading phenomenology", e.g. Gallagher 2003).

6 It is a question as to whether one can merge phenomenology into cognitive science (i.e., the problem of naturalizing phenomenology), since they espouse some radically different epistemological and ontological presuppositions (see Gallagher and Zahavi 2012; Kordeš 2016; Petitmengin 2006; Roy et al. 1999; Vörös 2014; Zahavi 2004 for various aspects of and solutions to the problem of naturalizing phenomenology).

individual experience. I would argue that, at least in terms of understanding the sense and meaning of decision-making as it is brought forth by individual decision-makers from their own experiential perspective, understanding the general structures of consciousness or the *a priori* conditions of experience (in decision-making) is not enough. For, if individuality is not considered, one possibly loses oneself in generalities and theoretical assertions, as much as objectivistic science does. Furthermore, individuality is, in my opinion, always present in decision-making, and thus cannot be deduced from "discovered" generalities. I believe that one needs to understand both: the constitutive, intersubjective structures of consciousness, and the individual, personal sense, and meaning that always permeate our consciousness.

5. Conclusion

In this paper, I presented some of the aspects of understanding and investigating decision-making that show decision-making to be an activity that cannot but be "inherently significant" for decision-makers: decision-making that makes sense and has meaning for and in the perspective of decision-makers with a body, experience, and environment that co-determine and co-create each other; decision-making that, if removed from sense and meaning, as a phenomenon would in fact not make much sense, and would probably not "exist". If the significance of decision-making for decision-makers is not considered, all researchers can hope for is that their abstractions about what is going on in the minds of decision-makers, when they are allegedly deciding, are not too far from "reality". What feeble hope, indeed!

In this regard, enactivism and phenomenology seem to provide a more promising starting point for understanding and investigating decision-making than mainstream accounts of the phenomenon, since they – each in its own way and right – see the subject and their experienced sense-making as central to any understanding of the mind. Although there are many problems to be encountered along the path of understanding the experienced sense and meaning of decision-making, I believe that opening new horizons of and for the mind is what contemporary cognitive science needs, if it is to understand the mind and decision-making in all its richness and complexity.

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Ema Demšar

I UNDERSTAND YOU BECAUSE I KNOW YOU

The influence of past embodied encounters on social understanding

Acknowledgments

I would like to thank Dr. Line Ryberg Ingerslev for her advice on how to investigate the topic of this essay. Many thanks also to Dr. Urban Kordeš for his general guidance and for introducing me to the fields of phenomenology and enactivism.

Imagine that you are sitting in a bar with a good friend, both of you immersed in passionate conversation. You enthusiastically raise your voice above hers to make an important point, but suddenly notice the waiter, who has approached your table and is looking at you with a notepad in his hands. You pause in the middle of the sentence to redirect your attention towards him and, in a lower voice, order your drink. Turning back to your friend you see her smiling at you the way she always does when you get too carried away with your talking. You know that she is a bit annoyed, but also that she is expecting you to continue – you smile back in apology and carry on with what you were saying in a calmer way.

How did you know that the waiter had approached you in order to ask what you wanted to drink? What made you recognize that your friend felt that you should have been more considerate instead of drowning her out? How did you understand that she was nevertheless waiting for you to carry on? These are questions related to social understanding – the phenomenon that refers to our ability to understand other people and know how to interact with them.

In this paper I will talk about everyday social understanding in face-to-face social interaction of the kind described above. I will regard social understanding as a heterogeneous phenomenon that comes in many different forms and is supported by a variety of factors reaching beyond an individual's cognitive processes. The aim of the first part of the paper is to elucidate some of these factors by summarizing certain accounts of social understanding. After presenting some major difficulties of the traditional, so-called *mindreading* approaches, which view social understanding as a matter of attributing mental states to others, I will stress the ways in which one's understanding of the other is *environmentally supported* by sharing with them the concrete context of the unfolding interaction as well as the broader common framework of social practices and roles. I will show that the environmental scaffolding in face-to-face social encounters is always achieved through direct bodily interactions, making social understanding *situated* as well as *embodied* and inseparable from the interactional process. Arguing that interaction plays a central role in our understanding of others, I will present the enactive account of *participatory sense-making* (De Jaegher and Di Paolo 2007) , which construes interaction as the coordination of behavior and meaning between two embodied subjects, while the phenomenological description of such coordination reveals that it can be experienced from the first-person perspective by various feelings of interconnectedness with the interacting other.

In the second part of the paper, I will focus on one particular type of such feelings: the *feeling of familiarity*. By conceptualizing it as an *existential feeling* (Ratcliffe 2005), I will describe feeling familiar with someone as a background orientation that shapes our experience of the possibilities offered by the (social) environment. I will consider how our present interactions can be influenced by our history of embodied encounters: through *intercorporeal memory* (Fuchs 2012a), our interactions with a familiar other can acquire self-sustaining internal patterns that implicitly guide our unreflective actions and contribute to how we experience and understand the other. I will argue that pre-reflective social understanding can be characterized as the ability to *appropriately respond to the possibilities of social interaction*. Since the set of actions that appear relevant to us in a particular social encounter – for instance, the possibility to smile, look away, touch or reflect upon what the

other is thinking – depends, in part, on whether we experience the other as familiar or not in the first place, I will suggest that the feeling of familiarity is not only a passive experiential correlate of historically structured interactional patterns. Instead, it also *actively contributes to social understanding* by enabling us to experience the actions of the other as already-having-been-expected and let ourselves be bound to the dynamics of social interaction.

1. Overview of some approaches to social understanding

1.1 Understanding the other by reading their mind?

Many approaches in cognitive science and philosophy of mind have attempted to explain social understanding in terms of *mental state attribution*. These views, often grouped under the term 'mindreading' (Spaulding 2010), suggest that we somehow infer the internal states of other people's minds on the basis of observing how they behave and then use the knowledge of their mental states to explain their past or ongoing behavior and predict their future actions.[1] According to an influential representational theory of mind put forward by Jerry Fodor (1987), the central concepts that we employ in making sense of other people's actions are the mental states of belief and desire. On this account, and many others inspired by it, you would understand the meaning of the waiter's approach to your table by ascribing to him the intention of getting your order, and the belief that coming to your table would result in that; you would figure out the message behind your friend's smiling face by attributing to her the belief that you were too loud, the wish that you would speak more quietly, and the desire to hear the rest of the sentence.

1 In relation to the question of the mechanism of mental state attribution, mindreading accounts are commonly divided into so-called *theory theory* and *simulation theory* approaches: while theory theorists claim that we ascribe mental states by inferring them from other persons' behavior using folk psychological theories, simulation theorists maintain that, instead of theorizing, we simulate others' mental states by using our own mind as a model (see Bermúdez 2005; Gallagher 2001, 2012; Spaulding 2010).

Phenomenological critiques of mindreading approaches (e.g. Gallagher 2001) point out that our everyday face-to-face social interactions very rarely include any conscious experience of either deducing others' mental states or using them to predict and explain others' behavior. Instead, for the most part, we seem to understand the other person unreflectively, skillfully, and without explicit deliberation. However, this in itself does not necessarily refute the idea that ascribing mental states plays the central role in social understanding. Indeed, many mindreading accounts (including Fodor's belief-desire psychology) take the reflective attribution of mental states to be only an occasional explicit manifestation of otherwise largely non-conscious reasoning, which is based on an implicit theory and is constantly employed in the background as we navigate through the social world. If one accepts that neither the process of attributing mental states nor the use of inferred mental states for making sense of others' behavior need to unfold on a conscious level, one might question the significance of the phenomenology of social understanding for accounts of social cognition. Emphasizing that the mindreading debate revolves around non-conscious, sub-personal processes, Spaulding (2010) even dismisses the happenings on the phenomenological level as completely irrelevant.[2]

Even if we disregard the phenomenological criticism, the fact that in most social encounters we do not seem to experience the processes of mental state attribution and/or explanation and prediction of behavior is not the only challenge to the mindreading approaches: another important objection is that these processes could be overly computationally demanding. This so-called 'computational argument' (Bermúdez 2005: 194) points out that, keeping in mind the speed and ease with which we mostly adjust to the behavior of others in social encounters, it is difficult to imagine how social cognition could be based on complicated and possibly time-consuming processes of attributing mental states to other people and subsequently explaining or predicting their acts. Bermúdez argues that our everyday social interaction simply does not fit the computational complexity that is believed to be necessary for mindreading – even more so when we take into account that our understanding of a social

2 For a defense of the relevance of phenomenology for accounts of social cognition, see Gallagher (2012).

situation frequently refers to the interdependent actions of several people at once. Understanding such a situation by attributing mental states to its many participants would require a "computationally intractable set of multiply embedded higher-order beliefs about beliefs" (ibid.: 196): in order to deduce the mental states of any particular participant, one would have to take into account the actions of all the other individuals involved and hypothesize about which mental states the participant in question would ascribe to them, and so on.

1.2 Social understanding is supported by the social world

In order to provide an alternative to the computationally implausible mindreading approaches, Bermúdez suggests that our everyday social understanding often primarily relies on our knowledge of the social situation we find ourselves in. He points out that rather than primarily making itself understandable through deciphering others' minds, "the social world is often transparent, easily comprehensible in terms of frames, social roles and social routines" (Bermúdez 2005: 205). To return to the above example, when the waiter approaches your table, you simply need to recognize him as *a waiter*: the identification of his social role and the knowledge of related social practices will then enable you to understand and anticipate his behavior without any need for mental state attribution. In other words, understanding the waiter as an individual with typical behavioral patterns in a typically unfolding social setting does all the interpretative work that is necessary for you to interact with him; there is no need to even consider what he believes, desires, etc. Bermúdez thus argues that social understanding is often "a matter of matching perceived social situations to prototypical social situations and working by analogy from partial similarities" (ibid.: 204). That is to say, the way in which our more abstract and theoretical knowledge of the social world guides our particular face-to-face encounters is through comparing the ongoing interaction to typical ones. But is the relationship between prototypical and perceived concrete situations really so straightforward?

An interesting analysis of how abstract understanding of social roles enters more primary and pristine forms of social interaction was put forward by Alfred Schutz in *The Phenomenology of the Social World* (1967). Drawing from

the fact that we experience and understand others in many different ways, Schutz argues that the social world is heterogeneous and can be divided into different regions depending on the degree to which the other is present to, or distant from, us in space and time. Among various forms of interpersonal understanding, the most elementary is the direct awareness of the other in a face-to-face social interaction in which the participants are directly bodily co-present. Schutz claims that this so-called *We-relationship* (ibid.: 163) – a pre-reflective, lived-through interaction in which the participants have an immediate experience and understanding of each other – is the foundation of all other forms of social understanding. Nevertheless, he acknowledges that pure We-relationship is only a *formal* concept. In social reality, social interaction always consists of much more than my pure awareness of the other's presence paired with their reciprocal knowledge of my awareness (ibid.: 168): *concrete* face-to-face social encounters, characterized by varying degrees of immediacy, intensity and intimacy, are instead shaped by factors that reach beyond one's current interaction. As such, they are never completely 'pure': they unfold against the background of a common intersubjective world within which my understanding of the other can be substantially supported by having direct knowledge of our shared physical and social environment. Furthermore, Schutz points out that we enter each particular encounter with the other person with a "whole stock of previously constituted knowledge" (ibid.: 169). What does this stock of knowledge consist of?

Schutz suggests that when other people are not directly and bodily present, we experience them in an indirect, even impersonal way by employing interpretative schemes of what he terms 'ideal types'. Rather than grasping a person as a specific individual self, we might for example abstractly conceive of them solely in terms of their social role. Similarly, although in a less anonymous fashion, we typify concrete people from our lives with whom we occasionally directly interact in terms of their character and traits. Importantly, the ideal types are not operative only in the absence of the other. As Schutz explains,

> "they become part of our stock of knowledge about [the social] world. As a result, we are always drawing upon them in our face-to-face dealings with people. This means that ideal types serve as interpretive

> schemes even for the world of direct social experience. However, they are carried along with and modified by the We-relationship as it develops. (ibid.: 185)"

It is thus possible to understand the other person in terms of his or her ideal type even in face-to-face interaction with them; nevertheless, through actual encounters, such impersonal understanding of the other can be enriched and can even change one's conception of ideal types themselves. Interacting with a particular waiter might, for instance, change one's understanding of what waiters do, and through that influence the way in which one will interpret waiters in general. Therefore, even though previously existing knowledge of the broader social world or of the character of the particular other guides our direct interactions with the other person, that same knowledge is in turn modified by the unfolding experience.

This identification of the double influence between generalized knowledge of the social world and concrete face-to-face social encounters elucidates the difficulty of discerning the *prototypical* from the *concrete* in Bermúdez's above suggestion that we understand perceived social situations by matching them to prototypical ones. Ratcliffe (2007) adopts a more dynamical view of the relationship between shared social situations and concrete social encounters. He argues that our everyday social understanding is environmentally supported not by means of detached comparison of the two, but rather through our practical involvement with the environment. The framework of social norms, roles and functions against which we understand the other does not have to be known explicitly and independently of the specific interaction:

> "Pre-established situations are not set in stone; they can be reshaped through interactions between people. We inherit situations but, through our interactions, we modify them. Hence there is a complex relationship between established norms and interpersonal interactions, involving two-way feedback between them. (ibid.: 180)"

Ratcliffe points out that our social interactions are implicitly guided by a common regulatory framework of the social world that limits the range

of possible actions of participants and makes some of them more probable than others. In many cases we can therefore understand or predict the others' behavior without any reference to their internal mental states: our social understanding is instead supported by the shared (social) environment. In addition to being thus *situated*, Ratcliffe points out that social understanding is just as fundamentally *embodied*: the environmental support of our understanding of the other in face-to-face encounters is always achieved through concrete embodied interaction, which is characterized by a specific kind of bodily responsiveness of the participants. Described this way, social understanding can be regarded as a form of both situated and embodied cognition.

1.3 The central role of the process of interaction: the enactive perspective

This complex intertwinement of the general social world with the interactional process that I have described exposes the difficulty of pinning down the 'environment' of social encounters and suggests that both the 'achievement' of understanding the other and the broader environmental context in which we do so are inextricable from the process of concrete embodied interaction. For this reason, I find it problematic to study social understanding exclusively within the confines of any singular framework of, for example, extended, scaffolded, situated, or embodied cognition. The way in which understanding others depends on the environment can hardly be compared to the way cognitive processes are typically environmentally supported in the extended mind (e.g. Clark and Chalmers 1998) and/or scaffolded mind (e.g. Sterelny 2010) models. Unlike the paradigm cases of these accounts, which mostly describe individuals using environmental resources to perform goal-oriented cognitive tasks (a notebook for memorizing a particular piece of information, a map for navigating through the city, etc.), social understanding in face-to-face encounters can hardly be broken down into discrete tasks and resources.

In order to demonstrate this point, it could be said that your task in the bar episode was both to (implicitly) *understand* that your friend did not like you

raising your voice, but still wanted you to continue talking, and to *be disposed to (inter)act* accordingly (for instance smiling in apology and lowering your voice).[3] In that case, the patterns of your embodied interaction with her – the exchange of glances and smiles – could be characterized as the environmental support for this task, which would make them a kind of a resource enabling you to understand her. On the other hand, these same interactional patterns could be regarded as the goal of your social understanding, since the purpose of your understanding-related action is to modify them in appropriate ways. Reflecting on the complexity of such simple social situation reveals the inadequacy of limiting the cognitive processes involved in one's social understanding exclusively to one's individual 'cognitive' mind, thus separating them from the interaction itself as well as from the bodily and affective components of the social encounter. Furthermore, the difficulty of specifying the precise 'environment' that would support cognitive processes also puts into question the plausibility of treating social understanding primarily as a case of environmentally extended cognition.

I suggest that one of the most appropriate ways to study everyday social understanding is to approach it from the perspective of *enactivism* (Varela et al. 1991). The enactive approach argues that all cognition is embodied action; it regards cognitive processes as inseparable from the affective processes; and it locates cognition in the realm of the 'in-between', i.e. as a "relational process of sense-making that takes place between the [cognitive] system and its environment" (Thompson and Stapleton 2009: 26). Recent enactive accounts of social cognition view interaction as much more than just the mere context in which one's understanding of the other takes place or the process that unfolds as the product of such understanding – rather, they place it at the very core of social understanding. Since, as has been demonstrated above, the various elements that underpin our ability to understand the other are inextricable from the concrete embodied interaction, I think that acknowledging the central role of the interactional process is the only way to

3 Since the pre-reflective understanding of the social situation, as will be argued below, already entails the disposition to act in a certain way, these are not separate steps, but rather two different aspects of the phenomenon of social understanding.

recognize the complexity of social understanding. In what follows, I will turn to the so-called participatory sense-making approach (De Jaegher and Di Paolo 2007), which takes interaction itself to be the foundation and source of intersubjectivity.

1.4 Participatory sense-making

The account of *participatory sense-making* (ibid.) approaches the question of how we understand each other by shifting the focus away from the individual's isolated mind to the 'in-between' space. De Jaegher and Di Paolo suggest that in face-to-face social encounters, the coordination of participants' behavior and sense-making activity can be frequently achieved through interactional patterns alone, without resorting to specialized cognitive mechanisms in their individual minds. They further argue that, as we jointly make sense of the world in social encounters, the interaction process emerges as an 'entity' that can acquire certain autonomy on its own, steering the ongoing episode of social interaction in ways that cannot be reduced to individual acts of the participants.

In this view, my understanding of the other in a social encounter arises from the unfolding patterns of the ways in which we coordinate our behavior and meaning, while my actions and reactions are led in part by forces located outside of my mind within the dynamics of interaction. How do I experience the other in this joint sense-making process? From my first-person perspective, the other is, unlike in classical mindreading accounts, available to me through the way their autonomy guides my own sense-making activity. However, this availability is only partial, as the other is always experienced as the *other-in-interaction*. As De Jaegher and Di Paolo explain:

> "We don't experience the other-in-interaction as totally obscure and inaccessible, nor as fully transparent (like an object fully constituted by my sense-making activity), but as something else: a protean pattern with knowable and unknowable surfaces and angles of familiarity that shapeshift as the interaction unfolds. Those patterns of change are influenced by my

> own participation in the emergence and breakdown of joint relational sense-making, hence they are not totally alien. (2007: 504)"

According to this explanation, your understanding of your friend in the bar episode – knowing that she is displeased by the volume of your voice but also wants you to continue with what you are about to say – primarily stems from the coordination of your movements and the related generation of the patterns of meaning. Your experience of the subtle dynamics of the exchange of glances and smiles guides you to know how to interact and brings about your implicit understanding of how your friend feels.

Fuchs and De Jaegher have combined the so-called "dynamical agentive systems approach" (2009: 466) of participatory sense-making, which describes interaction as the coordination between two embodied subjects, with a phenomenological perspective. They suggest that, from the phenomenological viewpoint, the process of social interaction can be described using the notion of *mutual incorporation*, which refers to the "reciprocal interaction of two agents in which each lived body reaches out to embody the other" (ibid.: 474). The dynamical process of participatory sense-making is experienced, from the first-person perspective, as a pre-reflective bodily connectedness between the interacting agents. Through this bodily connectedness, often referred to using Merleau-Ponty's notion of *intercorporeality*, the sense of the other person's gestures is implicitly understandable to us prior to any intellectual analysis.

> "Communication or the understanding of gestures is achieved through the reciprocity between my intentions and the other person's gestures, and between my gestures and the intentions which can be read in the other person's behavior. Everything happens as if the other person inhabited my body, or as if my intentions inhabited his body. (Merleau-Ponty 2012: 191)"

According to Merleau-Ponty, the perceived behavior of the other does not 'acquire' meaning in an additional act of interpretation. Instead, "[t]he sense of the gesture thus 'understood' is not behind the gesture … [it] spreads across the gesture itself" (ibid.: 192). In embodied social interaction, the

bodily gestures of the other are thus directly perceived as meaningful, making intercorporeality the foundation of social understanding.[4]

By delving deeper into the phenomenological aspects of social interaction, Fuchs and De Jaegher stress the first-person experience of the aforementioned autonomy of interactional dynamics: the interacting participants can feel the guiding power of the interaction as the pull of the 'in-between', through which the interactional process acquires its own 'center of gravity' – "in engaging in a social encounter, there is an extent to which I surrender to the other and to the process of interacting" (ibid.: 476).

Could these feelings be regarded as constitutive of social understanding? As has been mentioned above, the enactive approach broadly maintains that cognition and affectivity do not belong to two distinct systems, but are rather inseparably intertwined. Already on the level of the individual organism, sense-making is carried out with regard to the features of the world that are perceived as meaningful and significant from the organism's point of view. This meaning and significance are revealed by emotions, which, from the enactive perspective, are defined as both bodily and cognitive-evaluative processes (Colombetti and Thompson 2008). As in any sense-making activity, cognition and emotion are also inseparable in social understanding. As pointed out by Colombetti and Torrance, "autonomous organisms bring to their encounter their own forms of cognitive as well as affective understanding, and as a consequence affectivity is perturbed and transformed as the encounter unfolds, and as it generates its own meaning" (2009: 4–5). While being grounded in motor coordination and bodily resonance between the participants, participatory sense-making is therefore also necessarily *affective* and characterized by various levels and degrees of emotional interconnectedness.

4 Knowing what other people think or feel, and how to interact with them, often becomes more explicit and comes to involve higher, more concept-laden processes of social cognition as well as more detached, observational stances towards the other (especially when we are not engaged with them in face-to-face interaction). However, Merleau-Ponty and the proponents of enactive and phenomenological approaches to social cognition presented in this paper (see also Gallagher 2012) consider the described form of unreflective, non-conceptual embodied understanding as prior to those higher levels both *developmentally* (as the first form of understanding others that emerges in infancy) and *categorically* (as the primary form of adult social cognition, that continues to be the operative in how we understand others throughout our lives).

2. The feeling of familiarity and its contribution to social understanding

In what follows I will focus on one particular type of these feelings of interconnectedness: the *feeling of familiarity*, which, as I will argue, actively influences the course of unreflective social interaction as well as the ways in which one experiences and pre-reflectively understands the other. One can experience social situations as familiar without necessarily having the feeling of knowing the other person(s) involved in them, for example when sitting on a tram on one's everyday commute to work or routinely ordering a drink from an unknown waiter. However, in many social encounters – most obviously in long-term interpersonal relationships – it is primarily *the other* whom we feel familiar *with*. This feeling familiar with the other could be described as a background sense of trust in the fact that we (can) know the other, which shapes the general way in which we experience the social situation. Ratcliffe (2005) refers to the category of such subtle experiences, often overlooked in philosophical discussions on emotions, with the term *existential feelings*. Although existential feelings are "feelings, in the sense that they are bodily states which influence one's awareness", they are, unlike typical emotions, "not directed at specific objects or situations but are background orientations through which experience as a whole is structured" (ibid.: 46). I might, for example, experience the world as homely or strange, a situation as comfortable or awkward, or being with another person as familiar or not – feeling in a certain way, but not about anything in particular. Ratcliffe argues that these different ways in which I can find myself in the world can be best understood in terms of my pre-reflective receptiveness to the world's possibilities.

The feeling of familiarity thus designates a background orientation that shapes one's general experience of social situation and the possibilities for action provided by it. This subtle bodily feeling does not necessarily have an obvious emotional valence: one can feel familiar with another person in an emotionally neutral way, or even when the other or the social situation as a whole is experienced as unpleasant. Furthermore, feeling familiar can come in different degrees of intensity: a very basic sense of familiarity, a primary trust that one can in principle understand the other as a human being, is most likely

necessary for, and present in, nearly all instances of social interaction. However, I will focus specifically on the more pronounced feeling of familiarity that is especially characteristic of relationships with well-known others with whom one has interacted in the past.

2.1 Body memory and the history of embodied encounters

As has been explained, face-to-face social interactions are characterized by certain patterns of coordination of movement and meaning generation that guide the unfolding of the encounter and can take on a kind of autonomy. These patterns can be modified by a variety of factors, most obviously by the interactors themselves. Of particular interest of the present analysis is that the influence of these modifications can *extend over time*: having its roots in our past embodied encounters, the internal structure of interactional patterns is not limited to a single episode of social interaction, but can rather be preserved from one episode of interaction to the next. As De Jaegher and Di Paolo point out: "Sustained interactions can be expected to have undergone several instances of loss and regain of coordinating structures, each of them leaving the interactors slightly better able to remain in such interaction or reinitiate it" (2007: 496).

The patterns of one's present interaction are shaped by the history of one's embodied encounters through the so-called *body memory*, with which Fuchs (2012a, 2012b) denotes the totality of acquired bodily dispositions, skills, and habits that implicitly shape one's present experience and behavior. In contrast to explicit memory, which consists of conscious recollections of past events and knowledge, the implicit memory of the lived body *re-enacts the past in the lived present*: it guides our everyday unreflective action through the modification of our bodily dispositions, of which "I often remain unaware, which in fact come to meet me from outside, namely in the form of the attractive or repelling objects, the inviting characters and field structures of my environment" (2012b: 75). Fuchs recognizes body memory as the 'unconscious' foundation of our habitual dealings with the world, but stresses that this phenomenological conception of the unconscious differs from the traditional views of the psychoanalytic

tradition. Rather than being regarded as inaccessible to the subject and hidden below consciousness, in the depths of our psyche, the unconscious of the lived body is to be found in the ways we relate to the world and manifests itself in our unreflective, habitual patterns of behavior.[5]

Apart from enabling us to learn how to ride a bike, explaining how we can still find our way around our childhood house in complete darkness, or providing us with an excuse as to how we have yet again ended up standing at the kitchen window with a cigarette in our hand, body memory also plays an important role in unreflective social interaction. Intercorporeality, which has been in the previous section described as the foundation of social understanding, is influenced by our past through the so-called *intercorporeal memory* – a dimension of body memory with which Fuchs refers to a "pre-reflective, practical knowledge of how to interact with others in face-to-face encounters which is acquired already in early childhood" (Fuchs forthcoming: 11). Our intercorporeality is shaped from our early days onwards, and throughout the course of our lives comes to reflect our entire history of embodied encounters with others. Thus, "[i]n each social encounter, both partners unconsciously re-enact a history of embodied socialization and relationships that have shaped their styles of interacting, their empathic skills and intuitions as well as their class- and culture-specific habitus" (ibid.: 18).

My general intercorporeal style, formed through my individual autobiography, tends to slightly alter when I interact with people with whom I share a specific dyadic past of embodied encounters. Through the so-called *joint* or *dyadic body memory* (ibid.: 16), repeated interaction with a particular other can develop its own characteristic interactional patterns which implicitly

5 The idea of an unconscious that is partly accessible to the subject might sound confusing: How can we have experiential access to that which we are, by definition, not conscious of? Zahavi points out that, in order to be able to claim that consciousness is essentially and directly first-personally given, it is not necessary to argue for its total self-transparency. We can be pre-reflectively aware of the unconscious, when the latter is understood "in the sense of subjective components, which remain ambiguous, obscure and resist comprehension" (Zahavi 2002: 79). The terms 'unreflective', 'pre-reflective', 'implicit', and 'unconscious' in this paper (whose seemingly interchangeable use throughout the text reflects the way they are originally used by the authors) generally refer to this *ambiguous dimension of pre-reflective experience*.

guide both me and the other to adopt a specific shared style of interaction that would re-emerge with each new encounter. Regardless of the topic of the conversation, I might for instance automatically speak very animatedly, use a lot of gestures, and burst into laughter at the slightest occasion with one friend, while with another friend it might feel just as natural to behave in a calmer, quieter, and more reserved way. Everyday life provides us with numerous other examples that demonstrate how, when interacting with a particular person, we end up – for better or for worse – being pulled into the 'same old' interactional dynamics without any conscious intention to do so.

Going back to the example of the social interaction in the bar, we can now see that your body memory has contributed to your immediate and unreflective grasp of what your friend's smile meant: firstly, you have been through similar interactions with *people in general* many times in your life; and secondly, you have been through similar interactions with *this particular friend*. If she were to be replaced with a random passer-by, it might be much more difficult for you to discern the hint of annoyance paired with the willingness to continue listening to your story from the smile of this new, unfamiliar person.

2.2 Social understanding in unreflective (inter)action

As has been argued, most of our everyday social interaction unfolds in the absence of explicit reflection. However, that does not mean that it amounts to a mere automatism. In his analysis of unreflective action, Erik Rietveld (2008) points out that although unreflective acts are not completely conscious and voluntary, they are neither unconscious in the strong sense of the term and experienced as 'automatic' or beyond our control. Instead, they involve peculiar, 'intermediate' types of agency, cognition, and experience that are guided by one's current environment. In the flow of acting unreflectively, the features of one's environment are not perceived as neutral, but instead directly, without explicit reflection, motivate one to act in a certain way. One's unreflective acts depend on which ways of acting are experienced as possible and motivating in the current environment, that is to say, which *possibilities for action* that environment offers. Rietveld argues that unreflective action should

be understood as one's responding to these possibilities for action, widely referred to as *affordances* in the field of embodied cognition.

It is not only the particular affordance that we are engaged with that we experience as relevant: rather, the world as a whole appears to us as a *field of relevant affordances* – a multitude of possibilities to act that are not merely theoretical and phenomenologically 'empty', but are instead pre-reflectively experienced as more or less bodily potentiating or affectively alluring. Rietveld maintains that unreflective action should be characterized in terms of our responsiveness to this field as a whole, and stresses that the structure of the field – that is, the set of the possibilities for action to which we are sensitive at a certain moment – is determined not only by our current environment and our momentary needs, interests, and preferences, but also by our previous learning and experience.

While the notion of affordance is usually used with regard to motor intentionality, Rietveld expands the original term, introduced by J. J. Gibson, beyond the strictly motor domain, proposing that affordances can include possibilities for action that would require reflection. The act of reflection can be pre-reflectively experienced from within the flow of unreflective action as simply one of the affordances in the field, "one of the various relevant possibilities for action exerting influence on us from the background" (ibid.: 163). Furthermore, Rietveld maintains that in addition to the so-called 'object affordances', the field also includes what he terms 'social affordances': "possibilities for social interaction offered by an environment" (2012: 208).

In accordance with Rietveld's description of unreflective action as "a form of *embodied* intelligence that is 'motivated' by the situation" (2008: 4), we can therefore regard pre-reflective social understanding as a matter of one's adequate responsiveness to various possibilities for (inter)action provided in a particular social situation. As you are sitting opposite your smiling friend in the bar, her annoyed-yet-willing-to-listen expression affords you to smile back, showing that you have acknowledged her expression, and to continue with your speech. Your appropriate response to this possibility for action manifests that you have understood the situation, and can thus be described as a kind of embodied intelligence. Notably, there are other affordances that you might experience as relevant and respond to instead, for instance the possibilities of

feeling ashamed and looking down, shouting an angry "What are you smiling at?" or resorting to explicit reflection on your friend's mental states in trying to figure out how she feels and what she thinks about you. In any of these cases, your understanding of your friend and the subsequent unfolding of the interaction would be different – the reason that you unreflectively respond to the possibility to smile in apology and keep talking is found in the structure of your current field of affordances. As I have argued, the set of affordances we experience as relevant in a social encounter with a familiar other depends in part on our history of interactions, mediated through the memory of the lived body. Another crucial element in its determination – related to the shared embodied past, but nevertheless more than only a passive experiential correlate of intercorporeal memory – is the feeling of familiarity.

2.3 The influence of 'feeling familiar' on social interaction and understanding

It is perhaps almost self-evident that the first-person experience of a particular social encounter as familiar usually coincides with the condition in which, as Fuchs and De Jaegher describe it from the third-person perspective, "the history of coordination [has demarcated] the interaction as an identifiable pattern with its own internal structure" (2009: 471). Certainly, repeated interaction with someone – playing table tennis, being intimate or discussing personal problems – over time not only becomes more coordinated, but also comes to be experienced with increased degrees of familiarity. In this way, the feeling of familiarity is commonly understood as a *passive* experience, somehow secondary to the interactional process: we experience interacting with the other as familiar *because* the patterns of our interaction have become structured over time.

Although it often goes hand in hand with historically established patterns of interaction with a well-known other, I suggest that the feeling of familiarity is not their mere phenomenological counterpart, but instead actively guides the unfolding of a particular interaction episode. The proponents of the situated approach to emotions (Griffiths and Scarantino 2009) maintain a similar view

for affective states more generally, arguing that while an individual's emotions are, without doubt, shaped by the course of a particular emotional episode, they in turn causally contribute to its development. Rather than being only passive signals of the significance of environmental stimuli, emotions are dynamically coupled to their social environment and can modify one's social context. Colombetti and Krueger (2015) further suggest that the way in which our affective states, with or without our conscious intention to do so, manipulate the (social) environment, can result in the establishment of what they term *affective niches*, "instances of organism-environment couplings (mutual influences) that enable the realization of specific affective states" (ibid.: 4).

Being thus coupled to the social situation, the feeling of familiarity in a way supports its own continuity. While our feeling familiar with another person can emerge from the shared history of interaction, we might in turn already enter every new particular face-to-face encounter with this person with a background feeling of familiarity that will influence how we grasp them from the very beginning. Therefore, the feeling of familiarity can, in a way, precede the interaction rather than only secondarily emerge from its structure: we can feel familiar with someone even in the absence of the interactional process. What matters is that we experience the relationship with this person – either in their physical presence or through imagination – as *providing us with certain possibilities to act*: we pre-reflectively *know that we can* address them with a certain utterance, look or touch them in a certain way, etc. Actively structuring how we experience the possibilities of the social situation, the feeling of familiarity shapes the ways in which we unreflectively (inter)act and might contribute to the stability of our cognitive grasp and affective relation to the other over time.

Although this hypothesis certainly requires further investigation, I believe that the feeling of familiarity could encompass a certain affordance structure of our experience of (interacting with) the other, in which the possibility of reflection (on how to interact), described above as one of the affordances in unreflective action, is experienced as less relevant. While being more sensitive to various established possibilities to (inter)act with the familiar other with the pre-reflective confidence that we can do so, we might be less likely to feel the (however marginally experienced) need to step out of the flow of unreflective

interaction with them and reflect upon their mental states and other kinds of reasons, or deliberate about our own ongoing or future actions. Such disposition to let ourselves be bound by the ongoing interactional exchange might be characteristic of encounters in which we experience the other as more transparent, available and connected to us.[6] As Schutz explains, "the greater my awareness of the We-relationship, the less my involvement in it, and the less I am genuinely related to my partner. The more I reflect, the more my partner becomes transformed into a mere object of thought" (1967: 167). Furthermore, the distinctive openness towards the possibilities of interacting with the familiar other, which we might already bring into a particular social encounter, will importantly influence the ways in which we will feel and understand them.

Colombetti and Krueger (2015) explain that in relationships with a previous history of interaction people come to implicitly expect how the other will respond and how that in turn will influence their own responses and related affectivity. Over time, people in such relationships "develop habitual patterns of affective responsiveness to one another". The authors argue that thus acquired "pre-reflective patterns of reliance" (ibid.: 11) are the foundations of the affective feelings of trust and familiarity: we feel familiar when interacting with certain people because they act in a way which we have already pre-reflectively expected. I agree that the experience of (pre-reflective) expectations being fulfilled is a crucial characteristic of social interactions in which we feel familiar. However, I suggest that this experience might not only come from the perceived acts perfectly matching our already existing expectations. Instead, I believe that when we feel familiar with someone in the first place, the background sense of trust that we (can) know the other person shapes the way in which we anticipate their responses: in letting ourselves be

6 As has been emphasized above, the feeling of familiarity in the presented analysis does *not* necessarily have a *positive* emotional valence: it is a background orientation *through which* the interaction or the other person can come to be experienced as either pleasant, neutral, or unpleasant. On a similar note, one's openness to be unreflectively bound to the well-established dynamics of interaction does not only characterize harmonious and pleasant social encounters. There are many instances of conflicting social interactions marked by a feeling of familiarity, in which participants let themselves be drawn to destructive or unpleasantly experienced possibilities to act.

bound to the ongoing interaction, we are more likely to perceive the acts of the other as *already-having-been-expected*. While the agreement of the other's acts with historically structured and reliable patterns of interaction certainly contributes to your experience of them as having-been-expected (you might, for instance, soon stop feeling familiar with your friend in the bar episode if she reacts to your loud tone with an awkward stare she has never expressed before), the feeling of familiarity itself feeds back into the interaction by enabling you to directly experience these very patterns as 'reliable'. Even though your understanding of your friend's smile as annoyed-yet-willing-to-listen might be false, feeling familiar with her supports your trust in its correctness and contributes to guiding your unreflective actions accordingly. This feeling familiar with the other can thus also be present in cases in which we in fact *mis*understand their (explicit) reasons for acting.[7]

Throughout this paper, I have been describing pre-reflective social understanding in face-to-face encounters as a form of non-conceptual, practical intelligence that emerges from the coordination of the participants' behavior and meaning in embodied interaction. The first part of the paper examined how understanding of the other is supported by the shared social environment, while the second has focused on the ways in which it is shaped by our history of interactions. Suggesting that pre-reflective social understanding is a matter of one's appropriate responsiveness to the possibilities for (inter) action in a social situation, I have examined two crucial elements that influence

7 By arguing that the feeling of familiarity is an active component of social understanding, I am thus not making any claims with regard to the correctness of such understanding – described as the ability to appropriately respond to current possibilities for (inter)action, pre-reflective social understanding clearly does not refer to the other's explicit reasons to act (if at all present) and is therefore not to be judged in terms of being explicitly true or false with regard to them. However, it is possible that the feeling of familiarity contributes to the formation of more propositional, true or false, knowledge of the other's reasons to act or their general beliefs or feelings. Two people can, for instance, be involved in a relationship of mutual *mis*understanding and nevertheless 'falsely' feel that they understand each other, possibly uncovering the discrepancy only after having verbally exposed each other's explicit reasons for action. In such a case it is exactly the feeling of the other as familiar that allows both participants to experience the acts of the other as having-been-expected, enabling them to feel that they understand each other and interact without reflection.

the set of possibilities experienced as relevant in social interaction with a well-known other: intercorporeal memory and the feeling of familiarity. I have conceptualized the feeling of familiarity as an existential feeling, describing it as a subtle background orientation towards the social situation that does not necessarily only result from established patterns of interaction, but can itself actively structure the ways in which we understand the other and interact with them. By providing us with the basic trust that we know and (can) understand the other, the feeling of familiarity might shape our social understanding in a way in which we are less inclined to reflect upon the ongoing interaction and more disposed to experience the acts of the familiar other as already-having-been-expected, and could therefore support the stability and continuity of our experience of the other. Thus, it might in a way reinforce itself: we experience the interaction with the other as familiar in part because we have felt familiar with them in the past.

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Julia Garstenauer

TEMPORALIZATION OF TOUCH AND ITS CONSEQUENCES FOR EMBODIMENT[1]

1. Preliminaries

One of the concepts that Husserl is most famous for in contemporary phenomenology and beyond is the concept of the 'lived body'. In Husserl's texts, especially in *Ideas II*, the notion of 'lived body' is very closely linked to the sense of touch. When I touch something I do not only have *sensations* of the touched object, e.g. its coldness or hardness, but I also experience "sensings" (Husserl 1989: 152) in the body itself. This is exactly what Husserl calls "double apprehension" (ibid.: 155), which constitutes the lived body through localization. Due to its sensings the body is no longer apprehended merely as a yet another object among other objects. The lived body becomes a "'here' which has no other here outside of itself, in relation to which it would be a 'there'" (ibid.: 166), or in other famous words of Husserl, it is "bearing in itself the *zero point* of all these orientations" (ibid.: 166). This *here* has, according to Husserl, a *pre*-conscious status; it has "a localization which is actually intuitively given" (ibid.: 161). By contrast, "the intentional lived experiences themselves are *no longer* directly and properly *localized;* they no longer form

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a stratum on the Body. Perception, as the touching apprehension of the form, does not have its seat in the touching finger in which the touch sensation is localized" (ibid.: 160–161). Thus, Husserl characterizes the lived body through the sense of touch and by means of localization, i.e. he describes it primarily in terms of *spatial* characteristics. With the term 'localization' Husserl creates *a concept of pre-conscious bodily space*. The lived body is a pre-intentional *here* that must always be where I currently am – even before referring intentionally to the world.

The *temporal* dimension of the lived body, on the other hand, remains largely unthematized. In § 81 of *Ideas I* Husserl writes: "[T]ime is a name for a completely *delimited sphere of problems* and one of exceptional difficulty." To avoid confusion in his investigation, time "has remained silent to a certain extent, and must of necessity remain silent" (Husserl 1983: 162). Even in his later discussions on time (1991) Husserl focuses mostly on inner time consciousness, while forms of bodily time are not in the center of his interests.

This paper accordingly focuses on the temporal dimension of the body by arguing that pre-reflective bodily constitution occurs not only in the form of localization through tactile sensations, but also in the form of a pre-reflective *temporalization*. Such *bodytime* requires an extended concept of touching. I will develop these ideas in three consecutive steps:

The first part, expands upon Husserl's concept of touching. This proves necessary due to the limited character of Husserl's approach. In *Ideas II* the sense of touch is connected almost exclusively with the touching hand or, more precisely, with palpating fingers[2]. As a consequence, corporeality is a priori confined to the human body. This paper, in contrast, argues for an extended concept of touching: starting from Aristotle's concept of touching in *De Anima,* and Helmuth Plessner's *Die Stufen des Organischen und der*

2 In *Ideas II* Husserl rarely uses the German word *berühren*, and mostly utilizes the verb *tasten* or *betasten* to describe the sense of touch. In the English translation the latter is expressed as *to touch*. This may be misleading because of a subtle distinction in the German language: While *tasten* can only be carried out by fingers, the German word *berühren* includes the whole body, hands included. As a consequence, in the following paper, the word *(be)tasten* will be translated with *to palpate*, while *to touch* will denote a broader meaning, associated with *berühren*.

Mensch. Einleitung in die philosophische Anthropologie (published in 1928), touching is construed as getting in contact with something or someone and as the realization of borders. Thus, touching is resolved from its reduction to palpation and broadened into a general bodily phenomenon.

On this basis, I provide in the second part of this paper a description of *temporalization*, i.e. the *temporal dimension* of touching. On the one hand, touching and being touched seem to be necessary conditions for *lifetime* in general, because they secure a continuity of being-towards-the-world. On the other hand, it is argued that bodytime is a pre-conscious time in which the three time ecstasies interact.

In the third part of this paper, this continuity of being-towards-the-world through touching is exposed as fractured or deferred. Husserl characterizes the relation between the touching hands of one body as the co-presence of the physical body (Ger. *Körper*) and lived body (Ger. *Leib*), but overlooks that this simultaneity also encompasses a *time deferral*. To describe this in more detail, I turn to the phenomenon of phantom limb sensations, and that of injury.

2. On Touching

In *Ideas II* Husserl gives a few examples of how touching evokes corporeality. Here is one such example:

> "[I]n order to bring to perception here the tactual thing, paperweight, I touch it, with my fingers, for example. I then experience tactually the smooth surface of the glass and the delicate crystal edges. But if I attend to the hand and finger, then they have touch sensations which still linger when the hand is withdrawn. (Husserl 1989: 154)"

While palpating the paperweight I feel its hardness, smoothness, coldness, and its delicate edges – qualities that Husserl calls *sensations*. But at the same time, and "with a 'different direction of attention'" (ibid.), I also have feelings of hardness and coldness in my fingers themselves, which may persist even if I withdraw my finger from the paperweight. To describe this type of phenomena

Husserl coins the term "sensings" (ibid.: 152). Combined, sensations and sensings constitute so-called "double apprehension" (ibid.: 155). Thus, in touching, I can specify an external objective place in space, which provokes sensations, but I can also feel the sensings at their very place within the body itself. This is what Husserl calls "localization" (ibid.: 153). Localization is, according to Husserl, the necessary condition for the lived body, or in other words, the body becomes a lived body only "by the localization of the sensations as sensations" (ibid.: 151), i.e. as sensings. Because of its capacity for localization, the sense of touch is differentiated from all other senses in which localization is not possible.

These examples show how tactile sensations evoke localization and therefore corporeality. They are, however, associated with a very limited view of the sense of touch, which is understood primarily as the touching hand[3] or, more precisely, the palpating fingers. This has several detrimental consequences, which can be gleaned from the already quoted example of the paperweight: the act of palpating the paperweight has a precise starting point. During the process of palpating, it is always possible to clearly delineate between the palpating subject and the palpated object (Waldenfels 2002: 76). However, touching is not just the process of palpating, and it does not only concern the hands of a subject. Touching is much more varied and heterogeneous. During the act of touching the touched thing and the one doing the touching get in contact, which means they are always touching and being touched at the same time (ibid.: 79–80).

As a result it is no longer possible to clearly differentiate between the touching and the touched. These types of contact do not necessarily have an explicit beginning or a precise end. Unlike Husserl's example, in which the paperweight gets touched intentionally and consciously, I would argue that touching is not and cannot be fully controlled by consciousness. Its heterogeneity may be shown by the following example: at this particular moment, my elbows are touching the table, my feet are touching the floor, a large part of my body is being touched by my clothes, and while I'm talking to myself silently, my lips touch each other.

3 The important but also restrictive role of the hand in Husserl's concept of touching, as well as its exhaustive significance for embodiment, has been meticulously exposed by Jacques Derrida in the form of a deconstructive lecture on *Ideas II* in his book *On touching. Jean-Luc Nancy* (2005: 159–182).

The sense of touch is also very important in children's development. In childhood, the skin is the primary sensory organ. Children require plenty of tactile stimulation for growth and mental development (Fuchs 2000: 115), not only on their hands and fingers, but throughout their entire body.[4] Sensations of touch can be localized much more precisely than internal sensations, such as those in the heart or viscera which are nevertheless tactile stimuli. (Bernet 2009: 53; Husserl 1989: 165). Therefore the sense of touch is characterized by constantly gliding from palpating to touching (Waldenfels 2002: 77).

That the sense of touch is not necessarily limited to the fingers and hands was already pointed out by Aristotle, as his *De Anima* describes a much broader concept of touching. The sense of touch is the most fundamental among the senses: Living beings "have at least one of the senses, touch […]" (Aristotle 1993: 414a 36).[5] In this Aristotelian understanding, touching is not restricted to the hands, but is much more extended; together with the sense of taste, touching is also the sense of nutrition, or more precisely, of food intake. As a consequence, touching becomes relevant for living beings, irrespective of whether they have hands or not. The anthropocentric gesture, accompanying the already quoted examples from Husserl, can therefore be avoided. Thus, we find a much more fundamental notion of touching in Aristotle compared to Husserl.

On this basic level, touching is first and foremost a *sense of demarcation*. Bodies come into contact through reciprocal touching. Thus, they define themselves in delimitation from other bodies; they distance themselves; they separate (Nancy 2000: 5; 92). The sense of touch creates a first boundary: it sets apart self and non-self, lived body and objects (Fuchs 2000: 109–110). Helmuth Plessner's 'biophilosophy' is closely linked to this concept of touching. He develops a *logic of the living forms* based on the concept of the delimitation of the body. *Delimitation*, in Plessner's sense, is characterized in terms of consecutive levels of existence which are the result of an "Abhebung" (Plessner 1975: 243), a *raising* from itself in itself. Living bodies therefore differ from non-living bodies because of their ability to realize borders, or in

4 See also: Anzieu 1985.
5 However, the sense of touch is not considered as superior sense.

Plessner's own words, living bodies are "grenzrealisierende Körper" (ibid.: 126), i.e. border-realizing or border-erecting bodies. Consequently, life depends on a peculiar relationship between the body and its limits (its form, its margins), a relationship which Plessner describes as *skin-like* (Ger. "hauthaften"; ibid.: 123).

The concrete boundaries of an organic body thus differ from those of an inorganic body. The boundaries of a thing correspond to its edges, by which it abuts on other things (ibid.: 100–101). Thus, the boundary belongs neither to the body itself nor to the adjoining media, but to both, because the ending of the one is always the beginning of the other (ibid.: 103). In contrast, the borders of the living body belong to the body itself, which therefore guarantees not only the transfer of its contents to the adjoining medium by means of its limits, but rather performs the transfer by means of its borders – by *being* its borders (ibid.). While inorganic bodies have an edge or a contour, living bodies are *themselves* their borders, through which they stay in contact with their environment. The organisms realize their borders by relating to the environment, as well as by differentiating from it. There are at least three border aspects in touching: the border between inside and outside; the border between foreign and familiar; and the border with other bodies. Thus, the sense of touch is itself a border phenomenon; it is the sense of demarcation and differentiation.

The sense of touch as a sense of differentiation and demarcation is also crucial in the deconstructive phenomenology of Jean-Luc Nancy. According to Nancy, contacts are decisive for differentiating oneself from other bodies and from the environment. They always take place on the limits of the body – limits that, in turn, are located on the surface of the body. In this regard, Nancy writes in *Corpus*: "*Bodies don't take place in discourse or in matter*. They don't inhabit 'mind' or 'body.' They take place at the limit, *qua limit*" (Nancy 2008: 17). The term 'border' also implies the notion of being exposed and with it the fundamental and continuous touchability of the body. The surface of the lived body, its skin, always exposes itself, and is therefore always tangible:

> "Nothing exists that is 'pure', that does not come into *contact* with the other, not because it has to border on something, as if this were a simple accidental condition, but because touch alone exposes the limits

> at which identities or ipseities can *distinguish themselves* [se démêler] from one another, with one another, between one another, from among one another. (Nancy 2000: 156)"

Thus, the borders of the body are not static, but rather constitute an outermost edge, and are in constant flux. According to Nancy, they can neither be totally controlled by consciousness nor can they be completely closed off or opened up. The body is therefore never closed; rather, it is *always exposed*. It is a porous passage constantly absorbing and emitting, and therefore simultaneously an entry and exit point, permeable from both sides. It is exposed to its environment, *touchable*, and at the same time always *touching* its surroundings: it is, in short, a touchable and touching lived body. This concept of borders should be an invitation to reconceptualize the notion of the (lived) body from the perspective of its ability to erect borders and to differentiate. The edges and borders are targets of constant rapprochement; they are areas of contact.

Touching, understood as realizing borders, characterizes everyday life much more than palpating fingers. It provides for a much broader concept of touching, which becomes relevant for a wide variety of bodily phenomena.

At the end of this chapter some general remarks are necessary: the proposed concept of touching is not intended to give the sense of touch any advantage over the other senses. In fact, as Nancy and Derrida point out, there does not exist *the* sense of touch, *the* sense of sight, *the* sense of smell, *the* sense of taste or *the* sense of hearing (Derrida 2005: 180). All senses are, on the one hand, closely intertwined with one another, and have, on the other hand, their own importance and specifications. The point is rather to reorganize the sense of touch and the senses (ibid.). Thus, the proposed concept of touching does not depend strictly on the so-called sense of touch. Instead, the constitution of the lived body as a border-realizing entity always presupposes the outside and the other, and refers to the absence and the interruption in general, to *spacing* (ibid.) as well as *timing*. This last point will be analyzed in more detail in the following two chapters.

3. Temporalization of the Lived Body
3.1 Lifetime

Touching, in general, is closely intertwined with the life of a human being. As already noted by Aristotle, it is the first sense that the fetus develops, a sense whose loss leads to certain death:

> "It is apparent, therefore, that this is the only sense deprived of which animals must die. For, it is not possible for anything which is not an animal to have this, nor is there any other sense except this which something which is an animal must have. And for this reason the other objects of perception […] do not in excess destroy the animal, but only the sense-organs […] (Aristotle 1993: 435b 4–11)"

The tactile equivalent to the loss of vision (*amaurosis*), hearing (*anakusis*), sense of smell (*anosmia*), and sense of taste (*ageusie*) can only be a *partial* disorder in sensing, but never a total one. By the sense of touch

> "the animal is determined as such. For it has been shown that without touch it is impossible for an animal to exist. Hence, excess in objects of touch not only destroys the sense-organ, but the animal also, because this sense alone it must have. The other senses the animal has […] not for its existence, but for its well-being. (ibid.: 435b 14–20)"

Therefore, touching is not only one of the senses, but rather an indispensable condition for life and embodiment.

The crucial factor in touching is the following: in contrast to seeing, where I can close my eyes if I do not want to see, smelling, where I can hold my nose if I do not want to smell, or hearing, where I can cover my ears if I do not want to hear, touching is much more similar, if more empathically so, to tasting in that I cannot freely decide if I want to touch or if I want to be touched. On the contrary, I am always touching and being touched – if I were not, my life would be over. Touch is the only sense that cannot be lost completely and, maybe even more importantly, it is impossible to be born completely without

it. Consequently, my lifetime is bound to my tangibility and my lived body: "Having a *lived body* means having *time*. The time of my *lived body* is my lifetime [Ger. die Zeit meines *Lebens*]" (Pöltner 2016: 24; transl. by J. G.). To this, I would also like to add: the temporal dimension of my lived body is based on a touching-touched being-towards-the-world, which is not only spatial, but also *continuous* and therefore *temporal*.[6] As detailed above, touching is an ongoing process that involves the whole body, meaning that there are no 'breaks' in touching. However, the tactile body is not a homogeneous contact surface but tactile flesh with divergent thickness and folds, continuously interpenetrating with other senses (Al-Saji 2010: 24). It has different sensitivity as well as divergent intensities. Thus, the tactile body can be characterized as a "qualitatively different scene: a relief where touch sensations overlap and intertwine" (ibid.).

Whether we get to know a new part of the world, acquire a new skill, or become used to a new habitat, the being-towards-the-world of the lived body is the *sine qua non* for all these endeavors. The touching-touched lived body is the "a priori of our existence" (Fuchs 2000: 326). Touching provides a pre-intentional relation to the world, which gives life its continuity, namely the temporal dimension of touching and being touched. Thus, touching provides bodytime with a continuity of being-towards-the-world.

3.2 Bodytime

To deepen our understanding of touch, especially of how it relates to affection, it is useful to turn to Husserl's *Analyses Concerning Passive and*

6 For this reason, positions that assume that one can have a "pure lived body" (Fuchs 2000: 388) without tactile sensations must be rejected. As examples states of deep relaxation or contemplation are frequently cited (Fuchs 2000: 388; Ströker 1965: 163), but even in such circumstances, the lived body has tactile affections (that is, unnoticed affections, which will be considered more detailed in the next chapter of the paper) and is not deprived of a sense of the world (Grunwald 2001: 5). In most cases I also do not consciously feel the ground under my feet while stepping constantly on it. A pure self-feeling without contact is not possible – even feelings of being hungry or tired, or feelings of pain, which have no immediate datum in space, are based on bodily conditions.

Active Synthesis. Husserl describes two levels of affection. First, there is "actual affection", which motivates the body to bring its attention unto something. It is a "peculiar pull that an object given to consciousness exercises on the ego" (Husserl 2001: 196). Second, there is a pre-conscious level of affection, which remains simply "the tendency toward affection" or "the potentiality of affection" (ibid.). Thus, it is not noticed as affection, but remains implicit: "Sensible data (and thus data in general) send, as it were, affective rays of force toward the ego pole, but in their weakness do not reach the ego pole, they do not actually become for it an allure that awakens" (ibid.). In relation to touching, both levels of affection are important: the tactile field of the body consists not only of intentionally directed actual affections like pain, but also of unnoticed affections like "the pressure and pulls of the clothes" (Husserl 1989: 145) or touch sensations that occur while walking: when I walk, my feet touch the ground; but the ground, in turn, also influences my way of walking. If the ground is smooth like sand, I will walk on it differently than I would if it were hard like cement or slippery like the snow or ice. If the ground is even, I will put my feet on it differently than I would if it were uneven. Usually, I do not have to consciously reflect on how I should put my feet on the ground; my body has retained previous experiences of walking and modifies its gait accordingly (Rodemeyer 2015: 131).

What gains importance within the field of touch are not objects, but rather affections that exercise various affective pulls and that are differentiated relative to one another (Al-Saji 2010: 25). Affection is therefore in a certain way "a function of contrast" (Husserl 2001: 197). The intensity of affection depends on the context, and therefore on the interrelation of affective forces within the field of experience, as well as on the direction of interest and on sensibility, which, again, determines what is salient (ibid: 150). Thus, it can be said that contrast is constituted both spatially and temporally; it is habitual, and has a historical horizon. This results in an affective relief constituted by contrast (Al-Saji 2010: 27). Consequently, affections are never isolated from, and are indifferent to, each other; they are not static in their significance and motivational power. In the temporal flow of experience unimportant affections can become important and important ones may vanish (Husserl 2001: 163).

Walking is a habitual movement, which is acquired in an experimental mode of trial and action, error, and reaction. As a result, a habituation occurs, in which single movements are integrated into a figure that is incorporated in the unconscious bodily modes of comportment (Fuchs 2000: 186–187; 328). To a limited degree, this also applies to animal life. Animals like horses try to get up immediately after birth. Initially, their movements are stiff, insecure, and clumsy. However, already after a few hours or days they are much more confident and stable, because the movements have become habitual.

Through practice and repetition, these sensorimotor processes become habits, i.e. they are so firmly integrated into our daily life routines that they become almost like a *second nature*[7]. Such habits characterize the "basic temporal structure of the lived body" (ibid.: 326). Sensorimotor processes become dispositions of the lived body, ranging from motor and perceptual skills (e.g. walking), to controlling the secretion processes, speaking, reading, writing, or playing instruments. Habit, in this sense, means basic familiarity with one's body, and, through it, the world: the lived body is characterized by developed structures and has its own history.

This, the pre-intentional relation to the world provided by touching is *always* already assumed. The term *always* denotes an "implicit past" (ibid.), a body memory, which necessarily precedes conscious knowledge: although consciousness influences and synthesizes many aspects of body memories, a certain aspect of these memories is also sedimented in the body itself. The bodytime does not mean simply an embodied time consciousness, as for instance Rodemeyer seems to assume: "Thus this memory, along with all sensory experiences, is constituted through an integrated, embodied consciousness (not just consciousness alone)" (Rodemeyer 2015: 132). Although she admits that body memory is not related to consciousness only, but to an *embodied* consciousness, this does not really solve the problem but merely shifts it to another level, because consciousness has only been transferred into the body. This simple maneuver, i.e. transferring Husserl's concept of inner time consciousness into the realm of the body, is not able to

7 From a bodily point of view the German phrase, *in Fleisch und Blut übergehen*, describes this process quite well.

cope with the peculiarity of the lived body; on the contrary, it is overlaid by the structures of consciousness (Waldenfels 1995: 16).

In contrast to this kind of approach, I argue for a temporal understanding of perception and the lived body: what the lived body remembers is not the same as those memories produced by retention that are immanent to consciousness, but it pertains rather to body rhythms, performed bodily procedures, or trained implementations that remain external to consciousness (Esterbauer 2012: 541). Walking was never learned consciously; it has always been done bodily. In this case walking differs decisively from other examples often quoted in this context: typing on a keyboard or playing an instrument (Merleau-Ponty 2012: 146–154; Fuchs 2012: 10; Fuchs 2016) have been learned consciously and have, in the course of time, solidified into a habit.

Past perceptions influence the body in its present as well as in its future. If this were not the case, we would constantly have completely new perceptions and experiences. Walking uphill or downhill, climbing a flight of stairs, and so on, all these activities would never cease to surprise us, and would be a great challenge to us. How quickly the body adjusts to new circumstances becomes abundantly clear, when we think of the first few steps taken on land after having spent several hours, or even days, on a boat, or after having ridden a horse for some time (Rodemeyer 2015: 131). In its present, the lived body relies on perceptions and experiences made in the past – in other words, past perceptions and experiences are transformed into the present and the future (ibid.). Bourdieu notes: "The habitus – embodied history, internalized as a second nature and so forgotten as history – is the active presence of the whole past of which it is the product" (1990: 56).

But the temporal structure of the body is not limited to habituation. Various forms of body memory have been elaborated in particular by Casey (2000) and Fuchs (2000; 2011; 2012). Casey distinguishes three different types of body memory: habitual, traumatic, and erotic. Fuchs (2000: 327–332) uses a somewhat different classificatory scheme: in addition to habituation, he describes three other types of body memory: incarnation (appropriation of foreign or resistant sensations of the body), sensitization (development of feelings and moods), and oikeiosis (development of relationships with other

people, spaces, things).[8]

According to Fuchs, the history of the lived body includes the following aspects: first, the biologically based unfoldings of bodily dispositions and faculties; and second, the diverse sensual and atmospheric experiences that are sedimented in body memory. It is there, in body memory, that nature and culture, corporeality and sociality, are intertwined. In history, the pre-reflectively lived time and the reflexive envisioned time of human history come together and interpenetrate one another (2000: 315).

Thus, touching constitutes not only a continuous bodily space, as thought by Husserl, but also a *continuous bodytime* construed as an individual course of one's life. Time consciousness is neither transferred into the lived body nor is it simply an embodiment of consciousness. Instead, bodytime grounds conscious time. The latter is always embedded in a bodily time, which remains necessarily external to it. Thus, the acts of consciousness, which constitute time, always take place in (bodily) time (Esterbauer 2012: 533). My lived body, i.e. my life, temporalizes itself without any help from consciousness (Pöltner 2016: 24–25). A scar is my visible history of a violent contact that I have not only experienced at some point in the past, but that I *still am* – now, in the present (Esterbauer 2012: 542). Thus, bodytime is neither a uniform time nor a linearly passing time. Rather, it is a *transeunt time* (Ger. "transeunte Zeit"; Petzold 2012: 3), i.e. a time in which the three time ecstasies exceed themselves and mutually interfuse each other without thereby merging or coalescing. Thus, the habitual way of thinking about traditional causal relations and linear references in time is subverted. There is no *then* that could be understood as a direct result of a *before*, which was formerly been a contemporary *now*.

8 In *The Phenomenology of Body Memory* (2012: 12–18), Fuchs modifies and expands his terminology; he differentiates six forms of body memory: procedural memory (sensorimotor and kinaesthetic faculties), situational memory (concerning spatial aspects), intercorporeal memory (concerning encounters with others), incorporative memory (development of embodied personality structures especially in early childhood), pain memory (concerning painful experiences) and traumatic memory (for instance experiences of a serious accident, of rape, torture, or threat of death; this is the most indelible impression in body memory).

As shown above, bodytime gains its continuity of being-towards-the-world by constantly and necessarily touching and being touched. In the following chapter, this continuity will be characterized as broken and deferred.

4. The Deferred Character of Temporalization

4.1 Co-Presence

The phenomenon of self-touch, i.e. of two hands of one body touching each other, plays a special role in the constitution of the lived body in Husserl's phenomenology. If our hands touch each other, we are touching and being touched at the same time; not only that, the whole procedure is doubled, as each hand both touches and is touched. Thus, each hand is simultaneously the object of touching and the performer of the touching act. Here, we not only have a double apprehension as in touching an object, but "the sensation is *doubled* in the two parts of the Body, since each is precisely for the other an external thing that is touching and acting upon it, and each is at the same time Body" (Husserl 1989: 153). This is exactly what Husserl calls "double sensation" (ibid.: 155). The enormous importance of double sensation shows up again in children's development: by touching, say, their hands or feet, infants explore their own body and learn to distinguish it from other touched objects, which are not characterized by this double sensation (Fuchs 2000: 11). Double sensations are only possible in the sense of touch, which is why the latter is clearly distinguished from all other senses (Husserl 1989: 145–148). This has two major consequences for embodiment:

First, double sensation results in the corporeal body (Ger. *Leibkörper*) being split into the physical and lived body:

> "[F]irst, it is a physical thing, matter; it has its extension, in which are included its real properties, its color, smoothness, hardness, warmth, and whatever other material qualities of that kind there are. Secondly, I find on it, and I sense 'on' it and 'in' it: warmth on the back of the hand, coldness in the feet, sensations of touch in the fingertips. (ibid.: 153)"

Second, Husserl establishes indirectly a conception of time through which physical body and lived body come to coincide once again. He writes: "That which is constituted in the outer attitude is there co-present together with what is constituted in the inner attitude" (ibid.: 161). Co-presence means simultaneity or a "temporal coincidence" (Derrida 2007: 222) of sensation and sensing, of the inner and outer attitude, which occurs precisely in the self-contact of the two hands.

However, although Husserl, in *On the Phenomenology of the Consciousness of Internal Time (1893–1917),* emphasizes that the present is not a single, discrete moment but rather a "temporal field" (1991: 32) that is constituted by protentions and retentions; his highly complex theory of inner time consciousness never departs from the purity of the now in which the corporeal body comes to itself (Laner 2014: 228). It is exactly this assumed simultaneity between physical body and lived body that I aim to question and criticize in the following chapter, starting from the extreme case of phantom limb sensations.

4.2 Time Deferral

Phantom limb sensation is the perception of touch sensations of a limb that no longer exists, or exists only partially. It may even happen that a person tries walking on a leg that no longer exists. As a complement to the widely held thesis that phantom limb phenomena show the absolute spatiality of bodily sensations (Fuchs 2000: 100; Fuchs 2013: 86), it is here argued that they also demonstrate the temporal dimension of the lived body.

Phantom limb sensations give neither real nor erroneous impression of presence. Rather, they arise because of a dissociation within the temporal bodily existence. The lost bodily presence has not yet been sedimented; it has not yet become past. As a result, it takes over the actual present (Merleau-Ponty 2012: 84). Inveterate bodily rhythms cannot be shaken off easily or quickly; rather, they tend to be carried out, even when they are no longer physically performable (Waldenfels 2005: 102–103). The habitual body takes over the actual body, or, in other words, the physical body and the lived body are not co-present; there lies a *time deferral* between them. In extreme cases

of phantom limb sensations there even occurs a *time fracture*. Here, however, normality and pathology go hand in hand (Waldenfels 2005: 102–103) as temporal deferral proves to be constitutive for embodiment. The phantom limb as extreme cause of time deferral is closely related to the crucial feature of touching: touching also necessarily means being touched and thus a complete exposure and vulnerability. Although this dimension is also implicitly included in Husserl's concept of palpation – if the paperweight has a sharp edge, it will cut my skin and hurt me – it remains underexposed and, again, related to the hands only. But the relation to the world occurs not only through the initiative of the subject, as suggested in Husserl's examples on touching; instead, it is primarily a continuous state of being-touched, from which I cannot escape. It is therefore a permanent physical exposure, which in turn is connected to a fundamental *vulnerability*.

If I walk on thin ice, the ice might break. If I walk on glass fragments, I might get hurt. An injury never concerns only the body in isolation, but is usually related to both: the relationship between the physical and lived body, as well as that between the corporeal body and the objective world (Delholm 2011: 114). We do not only suffer an injury or break a leg; we also become immobile. An injury *eats into* our lives and lifetimes and is thus an interruption to and disorder in our daily lives. The lived body becomes a physical body; it experiences its corporeality (Fuchs 2013: 84–85). We can also say that the as yet inconspicuous physical body that I *have* becomes a body that I *am*. Thus, getting injured or getting ill leads to a fracture, a *temporal deferral*, between physical body and lived body (ibid.: 87). However, every injury is also a beginning of an adjustment process, in which we re-appropriate our own body and reinvent our relationship to the world (Delholm 2011: 114). Very often this new relationship retains the trace of the injury by which it was initially caused.

Even in self-contact a time deferral between physical body and lived body occurs, and can thus be related to Husserl's example of the pair of touching-touched hands: the bodily existence that opens us to the world remains bound to the physical body and thus to the being's pre-personal or impersonal existence. To some degree the physical body's own processes, cycles, and rhythms remain anonymous to the lived body (Waldenfels 2005: 102–103). This includes the

heartbeat, breathing, diet, digestion, reproduction, disease and aging, sleeping, and waking. Thus, if my two hands touch each other, there is no co-presence in the sense of pure presence, or even in the sense of a coincidence between the physical and lived body, but rather a *division* of the self – a division in which my body manifests itself as a functioning body on the one hand and an objective body on the other, with the two bodies never coinciding fully (Waldenfels 1995: 17). Thus, self-touch is – in line with Husserl's definition of reflection – an inevitable "Nachgewahren" (Husserl 1959: 89), which "refers to the grasping of a lived experience immediately after the experience itself, i.e., while the content of this episode is still given in retention" (Schmicking 2010: 45).

This leads to important consequences for the constitution of the lived body: the lived body as bodily living is, in itself, temporal. Although it is always and necessarily a now, it can never fully merge with it. The lived body is shaped by sedimented experiences as well as by bodily expectations. Thus, the unity between the lived and physical body is never concurrent; it is always postponed. This temporal deferral is gradual, ranging from a full-blown fracture in the case of phantom limb sensation to a minimal deferral in self-contact. Thus, corporeality is based on temporal deferral, or as Merleau-Ponty puts it: "[T]he ambiguity of being in the world is expressed by the ambiguity of our body, and this latter is understood through the ambiguity of time" (2012: 87). Already in the self-contact itself is the unity of lived body and physical body only partial and postponed, similar to the unity of the perceived spatiotemporal object (Husserl 1973: 142). Or, as Derrida writes: "Even between me and me, […] between my body and my body, there is no such 'original' contemporaneity" (2005: 193). Lived body and physical body build a constantly changing and shifting unit, a non-coincidence; they are never fully co-present.

5. Conclusion

Finally, the initial question – whether there is a pre-conscious temporal constitution corresponding to the spatial constitution of the lived body – can be answered in the affirmative. A detailed analysis of touching has revealed

that, in addition to its spatial dimension (*localization*), the lived body also has an important temporal dimension (*temporalization*).

It was suggested that Husserl's concept of touching is too restrictive, as it limits touching to palpating hands, and consequently to an active human being. For this reason, the first part of the paper undertook an expansion of the notion of touching, starting from Aristotle and moving up to Plessner and Nancy. First, the newly proposed concept of touching is no longer restricted to hands but refers to the whole body. Second, touching has now been reconstrued as a *realization of borders*, i.e. through touching, bodies differentiate themselves from other bodies.

Based on the concept of touching, the second part of the paper portrayed bodytime as a continuous and constant being-towards-the-world through touching and being touched. *Bodytime* was characterized by its three main aspects: first, it is said to be closely connected to lifetime. Second, bodytime is not part of consciousness, but rather withdraws from it. Moreover, it grounds time-consciousness. Third, bodytime has been characterized as transeunt time, in which the three time ecstasies exceed themselves and influence each other.

The third part of the paper showed that the continuity of bodytime is *fractured* or *deferred*. Starting from the extreme case of the phantom limb, it was demonstrated that, in cases of injuries, and even in the case of the two hands of one body touching each other, a time deferral occurs. The time deferral is gradual; it ranges from a fracture (in phantom limb sensations) to a minimal postponement (in self-contact). Therefore, the idea of a full-blown unity between the lived and physical body was rejected, substituting it with the notion of a deferral, of non-coincidence.

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Martin Huth

INTERANIMALITY AND ANIMAL ENCOUNTERS THE PHENOMENOLOGY OF HUMAN-ANIMAL RELATIONS

1. Introduction

The aim of this paper is to present a general framework for a phenomenological analysis of human-animal relations (HARs). Of course, it is impossible to provide a comprehensive and detailed analysis of HARs within the confines of such a short text. Instead I only intend to provide the basic and most important prerequisites for the analysis of our being-with-animals.

The phenomenological framework that I will be presenting is built on three major cornerstones: the interspecies intercorporeality we are inevitably immersed in; the distinctions between humans and animals, and between different animals themselves; and the possibility of animal encounters that disturb habituated normalities in our being-with-animals. After a short stroll through some classical reflections on animals in philosophy, and particularly in phenomenology (with the intention of providing a general foil for the proposed analysis and its benefits), I will start off by drawing on Husserl´s work in general, and Merleau-Ponty´s concepts of *intercorporeality* (Merleau-Ponty 1964: 168) and *interanimality* (Merleau-Ponty 2003: 189) in particular, in an attempt to clarify the "being-with-animals" as an immanent part of our "being-to-the-world". As bodily beings, we are constantly engaged in dialog with animals. So, interpreting animals as natural objects can only be considered as the result of a kind of *subsequent* objectification that is justified

only under certain methodological restrictions but has no clear ontological justification (Hua 6: 52). This will be described by the concept of *lateral* and *tacit co-existence* that is a precondition for any animal encounter.

In the second step, I will try to show how this *interspecies intercorporeality* is pre-determined by different significations of animals and the fact that our perspective and our world are a priori shaped anthropologically (Hua 29: 320, 324, 329). It is inevitable that we as human beings draw a line between *us and them*, but we the problem is that we normally do so in the context of plural and contingent practices of inclusion and exclusion (Agamben 2003; Derrida 2008). Some animals are closer or even closest to us, and are considered as family members or even substitutes for children. Some are symbolically charged and appear as "iconography" (like eagles on flags) or as figures humans identify with (Hobbes' *wolf* is a prime example). Some are objectified on a regular basis, and are treated, and thought of, as livestock, pests, lab animals, etc., which makes it almost impossible to recognize them as partners in mutual communication or as objects of moral concern. These differences constitute *tacit recognizability* (Butler 2009) that is an immanent part of the normal and normative infrastructure of our lifeworld, our perceptual patterns, and our practical habituation.

Third, these structures of normality of HARs are contingent and open to disturbances that happen particularly through direct animal encounters. The *lateral sociality* with animals can be disrupted by *frontal encounters*. While the concept of lateral sociality expresses the *tacit being-with* (in which we are always already immersed) that determines our habituated routines of interactions, the frontal encounter refers to the direct confrontation with the particular Other as a disturbance of a co-existence we are inevitably in (Waldenfels 2015: 9). The *intercorporeal resonance* (Fuchs 2016, in press) in the event of encountering "*a singular animal*" (Calarco 2008: 5) has the potential of constituting a "surplus", which breaks through the usual socio-cultural attributions and interrupts epistemological generalizations (ibid.: 118). This has been analyzed prominently by Derrida (2008), but one can also find traces of similar ideas in Levinas (1988: 171–172.; Calarco 2008: 118). Finally, I will conclude my paper with a brief synopsis and some reflections on the potential of a phenomenological theory of HARs.

Let us now take a quick look at the appearance of animals in the tradition of Western philosophy. The notions of 'animals' and 'animality' play a very prominent, if complex, role in several central texts of the Western philosophical cannon. There is hardly any philosopher – from Plato and Aristotle, via Descartes or Kant, to Husserl, Heidegger, and the post-classical phenomenologists – that doesn't mention animals and the role they play in human life and self-understanding. But a lot of these reflections seem to conceal the phenomenal structures of our primordial being-with-animals. They concentrate on comparisons between "the human" and "the animal" by means of identifying similarities and/or differences between them.

For example, Aristotle distinguishes between humans and animals in his famous "layered" account of *psyché* (Aristotle 2002: 1097b21–1098a20; 2009: 1253a9–10), which is largely responsible for the common conception of the human being as animal plus X. In addition to the abilities of the animal soul (e.g., nutrition, flourishing, movement, perception, voice), human beings also have a further ability (*logos*) that is lacking in animals and that constitutes a classical *differentia specifica* of being human. This idea of the human-animal distinction remains influential throughout the historical development of philosophy until modern times. Descartes (with his interpretation of animals as ingenious machines without a *res cogitans*) can be said to represent a conceptual culmination of a tradition that interprets animals even as mere objects without a mind/language that are separated from human beings by a radical abyss (Merleau-Ponty 2003: 19–20).

The human self-understanding as *master and possessor of nature* has had a strong impact on how we as human beings use and have used animals, but it has also played a very prominent role in our theoretical interpretations of animals, which are often burdened with the metaphysical ballast of viewing animals as *humans minus* X and even as objects. The conception of animals as *bundles of instincts*, which was a prevailing trend in biology until at least the 20th century seems to be an extension of this traditional account of animals as beings lacking specifically *human* capacities (Ingensiep/Baranzke 2008: 60–61). As Agamben has shown, Descartes' interpretation of animals was not a radical shift but rather a natural development within a tradition that harkens back all the way to the Ancient Greeks (Agamben 2003). The power of such

historical prejudices is still implicit in the currently predominant views on animals in our everyday lives as well as in scientific theories.

Thus, animals hardly ever appear in philosophy as participants of our being-with, i.e., as beings with which we co-inhabit a common world and are engaged in mutual interactions. Instead, they appear as a contrast foil for the general notion of "the human" against the backdrop of a presupposed hierarchical relation between humans and animals. A similar attitude has also been adopted by some prominent phenomenologists; here, I can only provide a very fragmentary overview of some of the most well-known approaches.

In *Being and Time*, Heidegger rarely mentions animals, and when he does, he describes them as ready-to-hand (*zuhanden*) and as beings that "produce themselves" (Heidegger 2006: 70/66). In other words, and in line with the Aristotelian and Cartesian tradition, animals are conceived as *mere objects* that are not part of the fundamental co-existence in which we are always already immersed. In *The Fundamental Concepts of Metaphysics*, Heidegger claims to be elucidating the sense of animals not through a metaphysical *differentia specifica*, but then goes on to defend a subtle version of it when he uses the animal as a contrast foil for the human being. Between the *worldless stone* and the *world-forming human*, there is the animal which is said to be *poor-in-world* (*weltarm*) and not open for being, i.e. not capable of accessing things *as things* (Heidegger 1983: 272/184). In *Plato's Doctrine of Truth* (Heidegger 1954), *On the Way to Language* (Heidegger 1959: esp. 215), and in other writings this tendency becomes even more pronounced. This can be exemplified by the exclusively human relation to death: While being-toward-death plays a fundamental role in thinking about the *Da(-)sein* throughout his work, Heidegger assumes that animals do not know about death and finitude, and are thus neither in an intelligible relation to their own existence nor are they open to being. Heidegger, then, proves to be an (maybe involuntary) heir of Aristotle and Descartes, in that he portrays animals as lacking a certain specifically human capacity. Again, animals are portrayed as *humans minus X* (for a more detailed analysis see Huth 2016).

Levinas, who, in the phenomenological tradition, is often considered to be the very opposite of Heidegger, actually proves to be very close to Heidegger when he postulates that animals do not have a *face*. While human beings raise

an instantaneous ethical demand in their appearance as Others, a demand that exceeds any conceptualization and categorization (this is what Levinas understands under the concept of "face"), animals are categorically excluded from this deep structure of experience (Levinas 1998: 64–70). There is thus an implicit abyss between the human and the animal in relation to the ethical demand exerted by the Other. Even if we "fail" to notice eye color when encountering the Other (Levinas 1996: 85), we supposedly recognize the species in apprehending the Other as the Other, since, according to Levinas, the demand is exclusively raised by members of the species *Homo sapiens*. But one has to acknowledge that there is a slight shift in these reflections on the part of Levinas. In a later interview, he admits that he is not so sure anymore whether some animals couldn't have a face (Levinas 1988: 171–172). Yet even here Levinas hesitates to recognize a face in animals, as the following quote shows: "The human face is completely different and only afterwards do we discover the face of an animal" (ibid.: 169).

I conclude this cursory overview by going back to Husserl who is likely to prove a difficult case study for whose unique contribution presents a challenge to any critical inquiry into phenomenological theories of animals. He acknowledges that animals are partners in our co-existence (Hua 6: 621), that they have a lived body (*Leib*) as a psychophysical "uniform whole" (Heinämaa 2014: 134), which is characterized by specific movements that one *cannot interpret as anything but behavior*. Therefore, they are considered as subjects embodying another *here*, another perspective, another center of experience (Hua 1: 147; Hua 6: 108; Hua 29: 19–20). Despite the fact that humans and nonhumans also appear as objects in the world, "I experience them at the same time as *subjects for this world*, as experiencing it (this same world that I experience)" (Hua 1: 123). Because we *cannot but* interpret the movements of embodied others as behavior, we have no choice but to assume that someone must be "at home" over there; there must be a *Meinheit*, a *mineness,* of all experiences implying a *for-me-ness* qua (at least minimal) self-referentiality, implicit in any experience of the Other (Zahavi and Gallagher 2008: 50).

Even so-called "lower" animals, like the jellyfish, appear to me *immediately* as subjects that are accessible by appresentation (Hua 14: 116). The famous passages on touching in Husserl's *Ideas II* (Hua 4: § 18) show that living and

experiencing relate fundamentally to "sensings" (*Empfindnisse*) *on* and *in* the lived body. This is noticeable through proprioception in my own body (the famous case of "double apprehension" in *touching-being touched*) and visible in the movement of other bodies, which appear through this movement directly as "enlivened" (Hua 6: 145–147, 153–155; for animals see Hua 15: 625; see also Heinämaa 2014: 132; my account here draws on Heinämaa's interpretation). The sense of being as sensing is transferable from my own to the animal body (Hua 14: 97).

This appresentation, however, is tied to a view of animals as *anomalous* beings (Hua 14: 120, 126; Hua 29: 8, 19–20, 326; see a critique in e.g. Merleau-Ponty 2003: 79). In other words, such appresentation stems inevitably from the presupposed *human* perspective that we are in when perceiving and thinking about animals. However, one can ask why Husserl groups animals together with infants, the disabled, and the mentally ill, and conceives of them explicitly as "disturbed humans" (Hua 14: 126). In Husserl's interpretation, they (and this refers to both animals and impaired humans) can only be grasped through *Abbau* (dismantling), or at least *Abwandlung* (variants), which takes its leave from the normal adult. We have to dismantle the "upper" strata of our human experience and transfer the "rest" (the "lower" layers) to animals so that they appear as living beings and thus centers of experience themselves (Hua 14: 116–117; Heinämaa 2014: 137). However, these centers of experience are characterized by a significant lack of certain strata of experience, namely culture and tradition (Hua 15: 181–182), making them an anomaly from the perspective of the ("normal") human being.

But one should hesitate to accept the view that construes animals as *identical* to anomalous human beings. Behind this idea we find a subtle teleology of nature or *scala naturae,* such as the one found in in Carl von Linné, where human beings are depicted as the pinnacle of creation. In one passage Husserl even seems to explicitly endorse organic teleology (Hua 14: 123). This conception is, in fact, closely related to the notion of animals as *human beings minus X* (implying a hierarchy without allowing for the possibility of their possessing a "different", but nevertheless "*full-blooded*" life-form). There would, consequently, exist an ontological abyss between us and them.

In Merleau-Ponty's later writings (unlike in some of his earlier texts such as *The Structure of Behaviour*), the *topos* of the animal as anomalous human being

or as *human minus X* is discarded. Here, animals are considered to be a *different kind* of *Leib* or being-to-the-world *with whom we relate in intercorporeality*: "This leads him to recognize an irreducible *Ineinander* [intertwining, M.H.] of animality and humanity such that 'the relation of the animal to the human will not be a simply hierarchy founded in addition' but rather a 'strange kinship'" (Toadvine 2007: 18; see Merleau-Ponty 2003: 268; Merleau-Ponty adopts the concept of *Ineinander* from Adolf Portmann).

A *lateral* (instead of vertical)[1] co-existence is conceivable when we construe it in terms of intercorporeality instead of applying the classical notion of intersubjectivity which presupposes autonomous, reasonable – and thus "normal human" – subjects who enter into communal interrelationships consciously. Our relation to animals is now considered as one of proximity and/or distance against the backdrop of an already existing bodily relatedness, as an intertwining (Merleau-Ponty 1968: 274), but *not* as a unidimensional vertical relation or a juxtaposition (*Nebeneinander*).[2] In order to apprehend animals, there is no need for any kind of *dismantling*; instead, one must transcend humanity laterally to apprehend animals in their *alterity* (ibid.: 359). If we proceed from a primal intertwining or interanimality, then, on an ontological level, there are no separate animals or humans but a fundamental co-existence that that allows to distinguish between "us" humans and "them" as animals only against the backdrop of this already pregiven interanimality. Of course, there are differences in body constitution, but animals and humans are "fellow inhabitants-of-the-earth" (Acampora 2006: 87) sharing an existence as lived (and vulnerable) bodies, and relating to a world that is shared at least to a certain extent. Hence, mutual (bodily) communication and intelligibility cannot be abolished by a dualism that separates bodies from minds or humans

1 The distinction between lateral and vertical relation should express the reluctance regarding a simply presupposed *hierarchical* relation between humans and animals.
2 To point out this horizontality, one can think of the empirical fact that we do not merely use animals as resources but are also express our gratitude towards them, grieve after them, etc. These practices show that we implicitly acknowledge a practical, emotional and rational interconnection with animals.

from animals by a subtle *differentia specifica* (Toadvine 2007: 26.).[3]

2. Interanimality

The fundamental role of the lived body (*Leib*) for enacting intentionality and intersubjectivity (or as Merleau-Ponty puts it: *intercorporeality*) has already been thematized by Husserl. The *Leib* is not a mere body-object, but a fundamental starting point, the "zero-point of orientation" (Hua 4: 158), and the basic "*I can*" (ibid.: 253) ,[4] through which I experience and engage with all other things and living beings from the very beginning of my ontogenesis. It is not (de)limited by the skin (and thus not co-extensive with the *Körper*), but is rather in a dynamic interdependence with a certain *milieu* or *Umwelt*, as emphasized by Merleau-Ponty (1966: 132–134) drawing on Uexküll. This milieu is not a lifeless field, but is fused with and co-constituted by living (bodily) beings – not least animals as part of *co-existence*. Therefore, the idea of a discrete, independent subject that enters social relations only subsequently (as famously propounded by, e.g., Hobbes and Rousseau) is in sharp contrast with the phenomenological idea of the *bodily* self.

In what follows, I will further elaborate upon the idea of a bodily self in a primal interrelation with Others by drawing particularly on Merleau-Ponty's concept of *intercorporeality* (1964: 168) and on his idea of being located "within" *animality* instead of *vis-à-vis* the animals (e.g., Merleau-Ponty 2003: 227). An *interspecies co-existence* and *being-co-determined-by* the Others precedes not only our conscious decisions to constitute or enter

3 According to Heinämaa (2014), this account can also be found in some of Husserl's writings – but only to a certain extent. Animals are part of the co-existence we as humans are inevitably immersed in, but Husserl always emphasises at the same time the human-animal contrast that subverts the role of animals in sociality. As Heinämaa points out, in Husserl animals lack language, knowledge regarding natality and mortality, and they lack traditionality (ibid.: 139; see also Hua 15: 159, Fn. 1). Thus, they are not to be considered as co-constituters of the cultural-historical world, but instead as determinants of co-existence only on a pre-cultural level (Heinämaa 2014: 163).

4 Any perception, any experience is dependent on the lived body and its immanent kinesthetic potentiality. It is the very condition respectively ability to move, perceive, and to act.

a community, but even our understanding of, and empathy for, another individual being (Zahavi 2001: 166).

This is most vividly portrayed by Merleau-Ponty's earlier description of the "two distinct layers, that of the habit body and the body at this moment" (Merleau-Ponty 1962: 82). Bodily habituation is said to reside on the most fundamental level of behavior (perception and gestalt constitution, gesture, posture, movement patterns, and practical know-how) constituting the already mentioned "*I can*". It is an *implicit* bodily memory (Fuchs 2016, in press) that is not under our direct conscious control but that is the very condition of any kind of perceptual or practical disposition or capacity. It is deeply influenced by the co-existence of humans and animals and grows out of a history of "*mutual incorporation*" (ibid.), starting in the earliest stages of childhood. Wehrle is on the right track when she describes it as "proper synchronization" (Wehrle 2013: 228) preceding our intentional behavior: "The in-between becomes the source of the operative intentionality of both partners" (Fuchs and De Jaegher 2009: 465). Any behavior *at this moment* can be understood only against the background of the bodily past (habituation) that is not exclusively of my own, nor even of exclusively *human* making. The co-habituation constitutes "open loops" (Fuchs 2016, in press) of behavior qua dispositions that are actualized in concrete situations and encounters. Fuchs' examples include our immediate, pre-reflective sliding into a certain dialect when meeting an old friend or taking on other tacit dispositions that seem *prior to our conscious decisions*. Similar examples can also be extended to our behavior towards, and communication with, animals where postures, gestures, tones of voice, etc., play a crucial role.

The body as the "carrier" of our capacities is characterized by a primordial openness towards mutual communication and is thus constituted by communication with the world and the Others (Merleau-Ponty 2003: 208). The most fundamental presupposition here is the inevitable *expressivity* of all bodies (e.g., Hua 6: 109; Scheler 1973; Merleau-Ponty 1962 and 2003), including animal bodies that are a part of the milieu into which our bodies are immersed. The *Umwelten* of humans and animals are not identical, but they overlap to a considerable degree, so that the already mentioned mutual incorporation, mutual bodily understanding, and the reference to the same

things, situations, and significations is made possible in and through a kind of *interanimality* (Merleau-Ponty 2003: 189). This can be gleaned from the most trivial fact that humans and animals alike tend to ask and respond, beg and demand, by means of gestures, tones, and other forms of expression. In the vein of Scheler, one could say that there exists a general *inter-species grammar of expression* that exceeds the realm of humanity, although the total and ongoing communication between human beings and animals seems illusionary, of course – especially when considering animals that resemble humans only to a very little degree, e.g., invertebrates and the like. However, common phenomena, such as showing teeth in aggression, shivering from cold (an example Husserl uses in Hua 14: 118), flight and fright behaviors, etc. show that "understanding and fellow-feeling are able to range throughout the entire animate universe, even though they rapidly fall off in respect of specific qualities as we descend the organic scale" (Scheler 1973: 48).

The famous anecdote about *Clever Hans* is a prime example of interspecies expressivity on a corporeal level. The horse named Hans was said to be able to perform mathematical calculations. Whenever Hans was presented with a mathematical riddle, he would convey his answer by tapping with his hoof. However, such claims soon proved to be false, because whenever his owner was absent, Hans was unable to solve any mathematical tasks. It turned out that Hans was able to "read off" (as a specific form of bodily *know-how*) minimal gestures or even mere bodily tensions that were specific to his owner, so he noticed when he should stop tapping. This example of a finely tuned bodily cor-*respondence* or *resonance* indicates a – potentially mutual – in-corporation between different species on a pre-reflective level, which holds true especially in the case of co-habituation between a human being and an animal. It is a naive underestimation of the scope of the anecdote to use it only as an example of a bad experiment in cognitive biology and ethology purporting to show the distorting effects that the animal owners can have on the validity of the research outcome (the so-called Clever-Hans-effect; Schmidjell et al. 2012).

Another (almost trivial) example of the co-dependency of understanding and behavior is playing with companion animals (based on training and habits). Here, mutual incorporation can reach a very high level of complexity. In the act of playing (even if it is just with a regular ball) one can see that humans as

well as animals can even anticipate the anticipations of other participants in the HARs; this complex anticipation relies on bodily co-habituation in which open loops qua specific behavioral dispositions are constituted, as Fuchs describes by drawing on the work of Bourdieu (Fuchs 2016, in press). This is also significant for the training of guide dogs or therapy animals.

One last example of interspecies intercorporeality is the psychological fact that ongoing, regular human-animal interactions can significantly increase one's ability to read emotions in human faces (Stetina et al. 2011). Here, we can see particularly well that the habituation in intercorporeality is effective on a subtle, pre-conscious level and might lead to an increase in sensitivity and responsiveness (understood as a bodily *know-how*).

To sum up, it might be said that animals do not only, or inevitably, appear as beings accessible through a progressive dismantling of experiential strata or even as objects concealing minds in their bodies, but as parts of the *co-existence* in which we already find ourselves submerged. They are our (bodily) expressive partners in habitual mutual incorporations, joint actions, and joint experiences.

These practical realities of co-existence often remain in the form of a *tacit, lateral sociality* that is hidden behind the ongoing debates about human-animal distinctions, cognitive abilities of animals, and their use as resources, or the ethical debates about logically and morally consistent treatment of animals. We are interconnected with animals on an *a priori* level; the self-discrimination as humans as well as the definition of animals as animals is based upon, and derives from, an *interanimality* that is hidden behind the assumptions of discrete entities that are separated from each other through a *differentia specifica*.

3. Interludium: Thresholds between us and them

Before I elaborate more deeply on the frontal encounter (see the following section), we need a more precise account of lateral sociality because so far, the description of the interconnectedness of humans and animals has not considered the relief of HARs in terms of differences between humans and animals as well as among animals (in terms of their different significations)

sufficiently. But a proper phenomenological analysis of interspecies intercorporeality must take into account the infrastructure of our lifeworld as an "anthropological world" (Hua 15: 617; Hua 29: 324). The primal norm (*Urnorm*, Hua 14: 154) that constitutes our perspective is the human being in its unique bodily condition and situated in its unique life-world imbued with uniquely human significances that co-structure any kind of HAR.[5]

The notions of animals and of our co-existence with them are never understood adequately without critically examining the predominant notions of nature, animals, and humans in our particular socio-cultural context (Därmann 2011: 314). Animals are an integral part of our social milieu, not least because of their *significance for us*: they are portrayed as helpful and friendly or annoying and dangerous (Hua 15: 625), as family members, pests, disease (zoonotic) vectors, data providers, food, as symbolically charged figures (the eagle in iconographies of power, Hobbes' wolf, the dog as our best friend, etc.). These significations are not only external frameworks that add to our bodily interconnectedness with animals, but are co-constitutive for our perceptual and behavioral patterns. A cow, pig or chicken do not appear primarily as animals to play with, while a dog or a cat do not appear primarily as animals to make use of in the sense of "mere" resources.

Sympathy and antipathy, fear and disgust, attraction and repulsion, but also indifference, are deeply influenced by these frameworks which pre-determine the mutual incorporation with animals at the habitual level. These social constructions build the anchor of what Husserl terms the *logos of the aesthetical world* or *orthoaisthesis* (Hua 4: §18), and co-determine, on a perceptual level, our affectability by animals as well as relevant practices related to them (of dealing with animals as edible resources, as best friends, particularly vulnerable beings we are obliged to care for, as pests, etc.). They constitute animals as co-beings in proximity and lead us to recognize them as expressive and vulnerable bodily beings or, on the other side of the spectrum, as resources or enemies. Butler terms this multi-layered dynamic *recognizability*,

5 Thus, the description of animals as "anomalous" is even comprehensible. However, I think that the blatant schism between the co-existence with animals and the historical-cultural world in Husserl leads to an underestimation of the role animals play in our culturality and exacerbates metaphysical burdens.

i.e., a *structural prerequisite* for any possible recognition of living beings as co-beings, as protection-worthy, "grievable", etc. Recognizability is the sine qua non for any notion of a "life that matters" (Butler 2009: 14). It consists of patterns of perception and associated actions that predetermine what we can see and feel when encountering different species of animals.[6]

These social orthodoxies of perception and action are operative in the form of open loops qua habitual dispositions for compassion, communication, and other kinds of interaction. But specifically, they lead to different interconnections and thresholds between "us" and "them".

The world is inevitably *anthropological* and is constituted by human significations (see above the considerations drawing on Husserl). These significations, as well as our notions of being human, are the outcome of responsive humanization and self-discrimination (Waldenfels 2015: 22). There is no "human" without a reference to that which is "non-human", which helps us determine what we understand as typically, or "essentially", human. Unlike Husserl, Merleau-Ponty describes "the human" neither as a metaphysical essence nor as a *telos* of natural development, but as a contingent outcome of the struggle with other species (Merleau-Ponty 2003: 94). "The human", as Därmann puts it, is grounded in zoological power (Därmann 2011: 304).

Thus, the human perspective is to be interpreted as a relational structure (or a framework) that is dependent on its various counterparts, which occur within the presupposed co-existence. This relational structure constitutes *tacit thresholds* (Waldenfels 2015: 219; Butler 2009: 41, 51) *between us and them*. Human beings are the ever-pursued outcome of self-discrimination practices rooted in symbolic and material processes, as well as on social practices of inclusion and exclusion (Agamben 2003: 46–47; Calarco 2008: 92–93). To capture these processes, Agamben coined the term *anthropological machine* (Agamben 2003: 31). There is no *differentia specifica* that is simply "given"

6 In 2014, a giraffe in the Copenhagen zoo was killed due to overpopulation, and fed to the lions. As a consequence, there was a public outcry in the media and an online petition to close the zoo signed by more than 60,000 people. Inhabitants were outraged and considered the act as exceedingly cruel. However, probably very few people would object if those same lions were fed a young calf, even if it happened in the presence of zoo visitors themselves.

and independent of human actions. The thresholds between us and them consist in contingent and variegated chrono-topical exclusions and limitations (Waldenfels 2015: 211). Therefore, there is not just one fixed border between *the human* and *the animal*, but rather a plurality of asymmetries and fluctuating domains of limitation and discrimination (Därmann 2011: 304) that lead to the already mentioned multi-dimensional *allocations of recognition* within a primordial co-existence.[7]

The differential recognition of animals as parts of our sociality is particularly obvious in the opposition between the humanization of companion animals on the one hand and the excessive devaluation and reification of animals in factory farms, lab experiments, etc. on the other. In factory farming, to take what is probably the most prominent example, the bodily being we meet is reduced to a *mere object*, it is given a *number* instead of a name, and is conceived of as a *production unit* instead of a partner in bodily communication.

These ambiguities are often the target of a sustained critique that is usually directed toward the supposedly morally unjustifiable inconsistencies in the treatment of animals. However, this *shared ethos* constituted by the structures of recognizability is not necessarily "logically consistent". The described treatment of animals and its acceptance in society is not derived from a strict principle claiming that equals (in terms of biological characteristics) must be treated equally. On the contrary, we see that the sources and forms of moral respect for animals are as complex and multidimensional as the human-animal thresholds or the HARs. This complexity is overlooked by the unidimensional principles proposed to govern our treatment of, and relation to, animals, such

7 As Butler (2009) and Agamben (2003) point out, the distinctive criteria for being human are often selective in the sense that some human beings do not fulfil them so that they are not (fully) recognized as human beings or persons.

as Regan's subject-of-a-life criterion[8] which leads to kind of a vegan imperative, or Singer's (2011) equal treatment of all animals in possession of self-awareness and the ability to suffer irrespective of the species they belong to.

Nevertheless, there are strong intuitions in our society about how animals should be treated properly, e.g., in terms of obligations pertaining to the proper care for companion animals from the beginning of their lives until they are humanely euthanized, limitations on cruelty in dealing with livestock or laboratory animals, etc. These intuitions exist by virtue of an incorporated ethos that is part of our *personal* (not to be misunderstood as "private") bodily habits[9] and is therefore never entirely consciously accessible or in our direct possession (Varela 1989: 12—14).

This always already pre-given *ethos* of HARs is particularly obvious in social approbations and legal regulations that draw clear lines between different animals in accordance with their lifeworld significations. Laboratory experiments on pigs, mice, or rats are permitted only if they meet legal requirements, for instance, only if they abide to the 3R-principles.[10] Experiments on cats or dogs are not allowed, e.g. in the Austrian Protection Law, because they would seem cruel to a majority of people, whereas in other

8 The subject-of-a-life-criterion is valid for all individuals if they "are able to perceive and remember; if they have beliefs, desires, and preferences; if they are able to act intentionally in pursuit of their desires or goals; if they are sentient and have an emotional life; if they have a sense for future, including a sense of their own future; if they have a psychophysical identity over time; and if they have an individual experiential welfare" (Regan 2004: 264). In a thought experiment that is similar to the (in)famous "trolley case", Regan builds on cognitive abilities, independently from being human or non-human, as the anchor point for ethical considerations. This leads him to the claim that animals should have a greater priority when it comes to survival than *mentally impaired* human beings (ibid.: 324).

9 We learn how to treat animals when engaging with them in different socially approved practices, such as caring for, using, or eating them. How we treat animals is socially determined, and are thus never strictly "our own". Moreover, treating animals is not arbitrary; any moral and/or social permission of a particular treatment is dependent on the intersubjective comprehensibility of motifs and reasons for actions.

10 The 3R-principles comprise (i) *reduction* of the number of individuals used; (ii) *replacement* of animals in research by computer models or tissue samples; and (iii) *refinement* (improvement regarding animal welfare) of keeping systems and test sequences.

socio-cultural contexts dogs are regularly considered as edible animals and thus as livestock and food source. So, the incorporated ethos pre-determines what one should (not) do with specific animals on a personal (habitual), but also on an institutional, level. The backdrop is our differential affectability by dogs, cats and other companion animals in contrast to rats, mice, or livestock. This affectability rests on the aforementioned *incorporated ethos*; "our moral responses […] are tacitly regulated by certain kinds of interpretive frameworks" (Butler 2009: 41).

This is true not only for our lifeworld *in toto,* but also for what Husserl calls *Sonderwelten* ("special regional worlds") (Hua 6: 125). The German sociologist Marcel Sebastian has shown that even in specific segments of our society, where animals are handled by skilled professionals in the context of highly technical routines, tacit moral arrangements underlie our dealings with animals. Sebastian's investigations into the attitudes of slaughterhouse workers reveal complex differentiations; some actions are considered legitimate (including specific types of killing), others unnecessary and cruel (Sebastian 2013). Some tacit norms therefore can even be found in a social practice of objectifying the animal where one is, to a certain extent, forced to avoid having feelings towards the other living being.

One last issue seems relevant with regard to the recognizability set against the background of thresholds that delineate humanity from animality. Our capacity to apprehend bodily beings qua centers of experience and partners in mutual communication is dependent on "life being produced according to norms that qualify it as a life, or, indeed, as part of life" (Butler 2009: 3). These frameworks organize or predetermine our morally primed perception of animals. The notorious Singer debate is a telling example of the fact that the thresholds are contingent but never arbitrary. In Singer's view being human is a biological fact without any moral or practical signification. The treatment of a living being is dependent on rational capacities and the ability to suffer, but not on any species affiliation (Singer 2011: 73–75). Thus, the justification of animal experiments is analogous to a justification of experiments conducted on impaired humans (ibid.: 52). The outcries against Singer show that not many people are willing to adopt this view. Our ethos is not open for an abandonment of a value-laden concept of humanity.

This is also meant to counter Agamben's bold plea for an *Aufhebung* of the anthropological difference by shutting down completely the functioning of the anthropological machine. Agamben writes:

> "[T]o render inoperative the machine that governs our conception of man will therefore mean no longer to seek new – and more effective or more authentic – articulations, but rather to show the central emptiness, the hiatus that – within man – separates man and animal, and to risk ourselves in this emptiness: the suspension of the suspension, Shabbat of both animal and man. (Agamben 2003: 92)"

However, if Husserl is right in stating that we inhabit an *anthropological world*, then the processes of constituting plural thresholds are a pre-condition of any human self-understanding and of any HAR. A hiatus between us and them remains inevitable because we *cannot but* speak, act, and think from a human perspective that is not at least partly constituted by socio-cultural significations. But the processes and practices that constitute these thresholds and structure the recognizability of animals remain always *in statu nascendi*. The rise of animal ethics as well as recent developments in ethology, which ascribe a theory of mind, culturality, and even proto-morality to animals (de Waal 2013 as prime example), indicate that the predominant notion of what it means to be an animal is never a given fact, but rather a contingent outcome of specific historical situations, institutions, and practices. These changes might rest on social shifts, scientific insights, or historical events. Moreover, enough room is left open for individual (re)conceptualizations of animals as partners within a co-existence that might be co-determined by concrete animal encounters.

4. Animal Encounters

I have indicated several times that the normative infrastructure we are living in is not arbitrary, but contingent. The changeability of the prevailing conceptions of animals (and humans) relies on what Waldenfels calls *productive forms of experience* (Waldenfels 2015: 9, 149). Such productive

forms have the power to change the incorporated structures of perceiving, and acting towards, (human or non-human) Others. *Gestalt shifts,* coupled with shifts in the already mentioned practical open loops, *are* possible. The horizon of the world as the horizon of possible experience (Hua 6: 141) is not to be understood as homogenous and infinite field, but contains margins and remote areas that might be "unlocked" by these productive experiences. This has been exemplified by Butler's concept of recognizability, understood as a selective and exclusive primal structure of our currently prevalent orthodoxies about perception and action (see also Agamben 2003; Waldenfels 2015).

What might such productive forms of experience that are capable of changing our habits look like? Probably, the most prominent theory of hyperbolic experiences that transcend the incorporated habituations is the one propounded by Levinas, who tried to analyze the profound disturbances that occur in our ordinary being-in-the-world through the encounters with the emphatic Other. Such disturbances arise from the *frontal encounter* (the famous *face-to-face* encounter of the Levinasian phenomenology). Within a *presupposed* co-existence that is part of our bodily habits and behavioral patterns, the appearance of the Other can exceed and challenge our ordinary, habitual categorizations and epistemological conceptualizations. The categories in which animals are framed by socio-cultural perceptual and behavioral patterns can be radically suspended by the bodily appearance of the Other. In phenomenology, such an event is prototypically exemplified by the *gaze*, i.e. by the experience of being seen by the Other (Levinas 1995; 1998; Sartre 1965; applied to animals in Acampora 2006; Calarco 2008; Derrida 2008).

Let us have a look at a famous passage from Tolstoy's *War and Peace* (1958), which illustrates beautifully the importance of a frontal (face-to-face) encounter. One of the main characters of the book, Pierre Besukhov, is presented to General Davout *as a prisoner of war*, and is about to be executed. In a lengthy paragraph, Tolstoy describes how, at a certain moment, the eyes of the two protagonists meet, and the bodily being of Pierre Besukhov, which was hitherto hidden behind a general category "enemy/prisoner of war", is all of a sudden let out into the open. Besukhov survives. Such suspension or transcendence of a generalized mode of relating to the Other can be interpreted as a telling example of genuine (concrete) encounters with the Other, for it

bears an appellative character constituting not only the suspension of usual patterns of perceiving, and acting towards, the Other, but also a basic ethical *non-indifference* towards the Other's vulnerability and mortality (Levinas 1997: 139). The event of the intercorporeal resonance *at this very moment* finds its culmination in the *gaze* of the Other – one experiences or feels the bodily Other particularly in their gaze. Sartre claims that the truth of seeing the Other coincides with seeing oneself being seen by the Other (Sartre 1965: 257).

In the more recent literature, there have been several attempts to transfer the motif of the gaze and of being affected by the Other to nonhuman beings (e.g., Calarco 2008: 75; Derrida 2008: 23). Calarco even goes on to claim that Levinas' blatant (early) refusal to consider the animal contrasts sharply with the inner logic of his philosophy of alterity (Calarco 2010: 113). This becomes particularly evident when we consider once more the famous passage from *Ethics and Infinity*, where Levinas claims that "the best way of encountering the Other is not even to notice the color of his eyes" (Levinas 1996: 85). Any kind of specification, coupled with the corresponding socio-cultural signification that would direct our behavior towards the Other, is undermined by the event of the gaze. According to Calarco (2010: 113), this also holds true for any biological specification.

The very event of encountering the Other as a bodily being *that is looking at me* thus disturbs my deeply-rooted routines of perception and action, which in turn may lead to a profound change or at least to my being more attentive to the bodily beings that I am dealing with. The recognizability of animals as bodily, expressive, and vulnerable beings is contingent and can thus be changed by productive experiences. However, there is no guarantee that such productive experiences will, in fact, occur. One could also try to immunize oneself against such experiences/disturbances by hiding the animal gaze behind the structures and institutions that actively try to prevent frontal encounters. A telling example *ex negativo* would be the following quote from a laboratory assistant: "They did not like to have clear cages because 'the animals could look at you'" (Linda Birke, quoted in Acampora 2006: 100). But nobody and nothing can guarantee that the face-to-face encounter will happen and/or that this will have productive implications for how animals are subsequently perceived and treated.

5. Conclusion

This paper provided an overview of the three cornerstones of phenomenological analyses of HARs. First, *interanimality* must be understood as *interspecies intercorporeality*, as lateral *sociality* or *co-habitualization* that opens up perceptual and behavioral dispositions of mutual incorporation and synchronization between human and non-human bodies. The Clever-Hans-effect served as one prominent example of this, but one can also think of how animals are being used in therapeutic contexts, etc. Second, *interanimality* is not a natural fact but is co-determined by respective predominant social notions about animals. The appearance of animals and of humans is framed by different significations, which allows us to conceive of, and experience, animals differently. This tacitly organizes different ways of our being affected by animals that ranges from compassion to disgust. It has been concluded that the human-animal border is not a straight, clear line, but consists of a plurality of thresholds that pre-determine our perceptions and HARs. Third, these frameworks, while inevitable (I argued against the possibility of rendering the anthropological machine inoperative), are nevertheless contingent, and can therefore be disturbed especially by singular (face-to-face) bodily encounters. The gaze of the Other has been described as a climactic event of such encounters that could build up to a productive experience. Such a productive experience might then disturb, and thus also influence, the embodied habituations of how animals are treated – but there can be no guarantees that such an event would happen or, having happened, that it would be powerful enough to engender far-reaching changes.

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HUMANITY IS ANOTHER CORPOREITY ANIMAL AND HUMAN BODIES IN THE PHILOSOPHY OF MERLEAU-PONTY

1. Introduction

Thinking about animals is necessarily related to human identity. The entire history of philosophy has attempted to define the essence of human beings from the starting point of our differences from animals. Properly speaking, the lacks that characterize animal lives are what define human beings as such: whether we speak of language, culture, cooperation, technology, or something else, human beings are the *exception* and are separated from the natural and animal world. Although science and contemporary ethology state that human beings differ from animals in degree and not in kind, the philosophical definition of human being as *animal rationale* remains; consequently, a deeply rooted humanism and a philosophical logo-centrism still characterize the majority of philosophy.[1]

In truth, the real problem regarding the anthropological difference does not concern animals: focusing scientific research on animal intelligence or mental capacities, in order to bring animal and human behavior closer together, will not resolve the enigma. Looking for human abilities in animal behavior actually reiterates human exceptionalism. According to Giorgio Agamben:

1 See Toadvine (2007).

> "It is possible to oppose man to other living things, and at the same time to organize the complex – and not always edifying – economy of relations between men and animals, *only because something like an animal life has been separated within man*, only because his distance and proximity to the animal have been measured and recognized first of all in the closest and most intimate place. (Agamben 2002: 16; italics mine)"

The separation between animal and human being – the caesura – is actually *within* humankind and humanism. Animality – the definition of the essence of animals – actually establishes the identity of human beings. It might be said that, in a certain sense, animality does not exist, or more precisely that it exists just as a word. The Animal is but a human category, a word that humans use to define (certain parts of) *themselves*. What actually exists is a vast range of living beings, each with its own specificity and uniqueness. This is the fundamental lesson of Jacques Derrida's *The Animal therefore I Am*:

> "Animal is a word that men have given themselves the right to give. These humans are found giving it to themselves, this word, but as if they had received it as an inheritance. They have given themselves the word in order to corral a large number of living beings within a single concept: 'the Animal,' they say. And they have given themselves this word, at the same time according themselves, reserving for them, for humans, the right to the word, the name, the verb, the attribute, to a language of words, in short to the very thing that the others in question would be deprived of, those that are corralled within the grand territory of the beasts: the Animal. (Derrida 1999: 400)"

Saying *the Animal* – pronouncing the very word – involves the flattening and eradication of the specificity and the difference among living beings.

Thus, the main thesis of this article is grounded precisely on the following premise: overcoming human exceptionalism does not coincide with the cancellation of the differences between the animal and the human being – or better, between living beings – nor does it coincide with an adhesion to a

reductionist human/animal continuism. On the contrary, the path I would like to trace starts from the valorization of the specificity and uniqueness of each and every living being in order to find a common ontological ground between what we call *animal* and what we call *human*.[2] I will refer to the phenomenology of Maurice Merleau-Ponty, particularly to his reformulation of the concepts of organism, behavior, and body. For Merleau-Ponty, corporeity – in the sense of *being* a body (*Leibsein*) – constitutes the common ground between animals and humans on which he lays the foundation of his relational ontology.

Starting from his first work *The Structure of Behaviour*, Merleau-Ponty tries to abandon any sort of dualism and *aut-aut* reasoning. For this reason, Merleau-Ponty cannot accept the definition of the human being as a rational animal, as an animal *plus* something more: "The concern is to grasp humanity first as another manner of being a body – to see humanity emerge just like Being in the manner of a watermark, not as another substance, but as *interbeing*, and not as an imposition of a for-itself on a body in-itself" (Merleau-Ponty 1995: 208).

It is this corporeity that opens to a structural ambiguity, the body interpreted neither as a pure subject nor pure object, but as a natural subject. The body, on Merleau-Ponty's account, is the absolute here, the installation of the first and original coordinates, or *Nullpunkt*, in the words of Husserl. As we will see, this reasoning leads to an ambiguous, chiasmic, and relational ontology: natural and animal worlds already contain culture, symbolism, and excess. Animals already possess something that cannot be reduced to deterministic physical and chemical laws: they are equipped with structures and relational capacities, with significant and dynamic interrelationships with the environment. For this reason, the anthropological difference is not an absolute one: what makes human beings unique is not the addition of consciousness (or reason, or language, and so on), but rather their *distinct corporeity*: "Reciprocally, a human being is not animality (in the sense of mechanism) + reason. And this is why we are concerned with the body: before being reason, humanity is another corporeity" (Merleau-Ponty 1995: 208).

2 According to Calarco, we can assert that there are three ways of conceptualizing the human/animal relationship: through *identity*, through *difference*, and through *indistinction*. The thesis of this article is grounded on the premises of the difference-based approach, but the outcome is very different from Derrida's (Calarco, 2015).

2. *Being* organism

Merleau-Ponty's phenomenology, from his first works on behavior and perception to his last (and unfinished) works on ontology, is internally coherent: on the one hand, Merleau-Ponty takes on the problems left open by Edmund Husserl; on the other hand, he address the problems of science, in particular of contemporary psychology and ethology. His aim is to overcome the limitations of dualism by substituting it with a phenomenology that is open to the ambiguity inherent in life and nature. His work is an endless investigation into the ontological continuity between natural world, animals, and human beings. In particular, Merleau-Ponty always tries to think about human specificity without detaching humans from the natural dimension. In a note in The Visible and the Invisible, dated March 1959, he synthetically talks of the "becoming-nature of man which is the becoming-man of nature" (Merleau-Ponty 1964: 185).

In his overall project, thinking about the animal – as a unique and specific manner of living – takes fundamental importance: analyzing the living being as an *event*, as an *être-au-monde*, is the first operation in the quest to find human roots in nature. Merleau-Ponty accordingly realizes this already in his first work, *The Structure of Behaviour*. At the very outset, he immediately declares his main purpose:

> "Our goal is to understand the relations of consciousness and nature: organic, psychological or even social. […] We will come to these questions by starting 'from below' and by an analysis of the notion of behaviour. This notion seems important to us because, taken in itself, it is neutral with respect to the classical distinctions between the 'mental' and the 'physiological' and thus can give us the opportunity of defining them anew. (Merleau-Ponty 1942: 3–4)"

The purpose – "to understand the relation of consciousness and nature" – deals with the fundamental problem of phenomenology, i.e. with the question about the transcendental relationship between subject and object.

The methodology – "starting from below" – demonstrates the importance Merleau-Ponty attributes to the ongoing debates between phenomenology and science, and to recent discoveries in psychology. The starting point of his reflection is thus focused on two neutral terms: organism and behavior.

First of all, it is necessary to understand what the organism is *not*:

> "'Organism' is an equivocal expression. There is the organism considered as a segment of matter, as an assemblage of real parts juxtaposed in space and which exist outside of each other, as a sum of physical and chemical actions. All the events which unfold in this organism possess the same degree of reality and there is not, for example, the distinction between the normal and the pathological. Is this the true organism, the sole objective representation of the organism? (Ibid.: 151)"

The atomistic conception, according to which an organism is nothing but an assemblage of its parts juxtaposed in space, does not describe the essence of the organism, or its meaningful organization. There is a *quelque chose* that eludes a reductive comprehension: the overall structure of the organism and its behavior, i.e. a significant interdependence among its parts, an irreducible totality. Against any reductive and mechanistic approach, Merleau-Ponty states that, "the organism cannot properly be compared to a keyboard on which the external stimuli would play and in which their proper form would be delineated for the simple reason that the organism contributes to the constitution of that form" (Merleau-Ponty 1942: 13). Far from reducing the animal to a machine of varying complexity, Merleau-Ponty stresses the immanent significance of each living being. The *true* organism is a concrete, significant, and indecomposable totality:

> "[T]he gestures and the attitudes of the phenomenal body must have therefore a proper structure, an immanent signification; from the beginning the phenomenal body must be a center of actions which radiate over a 'milieu'; it must be a certain silhouette in the physical and in the moral sense; it must be a certain type of behaviour. (Merleau-Ponty 1942: 157)"

Two major influences are of note here: on the one hand, the deep influence of the *Gestaltpsychologie* and its central concept of *Gestalt* (form-structure); on the other hand, the organismic theory of Kurt Goldstein and Viktor von Weizsäcker. It would take us too far afield to give an in-depth analysis of the notion of *Gestalt* and its influence on Merleau-Ponty's philosophy;[3] it is, however, essential to underline the importance it assumes in this context. In these first reflections, the notion of *Gestalt* allows Merleau-Ponty to circumvent a mechanist approach to the organism, while at the same time not falling prey to vitalist hypotheses. Form, in Merleau-Ponty, is first of all a *process*, "whenever the properties of a system are modified by every change brought about in a single one of its parts and, on the contrary, are conserved when they all change while maintaining the same relationship among themselves" (Merleau-Ponty 1942: 47). Understanding the organism and behavior as *Gestalt* allows one to track down a meaning within life and living being, or "intelligibility in the nascent state" (Merleau-Ponty 1942: 207). Structures are, in fact, unities without conceptualization, open unities in which a primordial signification emerges. Applied to living beings, the notion of structure allows us to understand the behavior of the organism while avoiding the extremes of mechanism and vitalism.

The organismic theory is of central importance here. The aim of this approach, in fact, was to propose a biological methodology that differs from the atomistic one. Kurt Goldstein aspired to understand living beings (and humans in particular) by overcoming equivocal concepts that had influenced – in a negative way – biological and psychological studies: inferior and superior behaviors, the notion of simplicity, regulation by hierarchy, and the classic distinction between normal and pathological based on quantitative criteria. In contrast, Goldstein's approach is holistic and organismic, founded on a definition of the organism as a psychosomatic totality open to an environment. In this view, behavior is not a mere response to a stimulus, but already a meaningful reaction to a signal that the organism is able to recognize.

3 For in-depth analyses of the relationship between Merleau-Ponty's philosophy and *Gestaltpsychologie* cf. Dillon (1971) or Barbaras (2001).

As mentioned briefly, Goldstein arrives at this conclusion through a deep reformulation of the distinction between normal and pathological. In Goldstein's analysis, disease becomes a heuristic concept that allows us to demonstrate that behavior is a form of significant and irreducible conduct. Symptoms are not a simple deficiency but rather a global response on the part of the individual facing a specific problem (which Goldstein calls a "catastrophic situation"). Disease does not concern the contents of behavior but the structure of the organism; it is not a subtraction from normal conduct but a "qualitative alteration" (Merleau-Ponty 1942: 19), a "new signification of the behavior" (Merleau-Ponty 1942: 65).[4] Observing and describing pathological behavior reminds us that behavior has a structure: *normal* behavior, therefore, is the auto-realization of the organism. As Goldstein states:

> "Pathological phenomena are the expression of the fact that the normal relationships between organism and environment have been changed through a change of the organism and that thereby many things that had been adequate for the normal organism are no longer adequate for the modified organism. Disease is shock and danger for existence. Thus a definition of disease requires a conception of the individual nature as a starting point. (Goldstein 1934: 328–329)"

From this perspective, auto-realization is the self-actualization of the organism, a fundamental tension that moves the organism and makes its conduct dynamic and meaningful. The organism, in fact, lives in constant negotiation with its environment, in a sort of disequilibrium and tension that constantly permit new orientations. The organism's behavior consists of movement and perception: the

4 In *Phenomenology of Perception* too, Merleau-Ponty, starting from Gelb and Goldstein's analysis of the case of Schneider, adopts this methodology: "It cannot be a question of simply transferring to the normal person what is missing in the patient and what he is trying to recover. Illness, like childhood or like the "primitive" state, is a complete form of existence, and the procedures that it employs in order to replace the normal functions that have been destroyed are themselves pathological phenomena. The normal cannot be deduced from the pathological, and deficiencies cannot be deduced from their substitutions, through a mere change of sign" (Merleau-Ponty 1945: 110).

organism moves, that is, it perceives something; the organism perceives, that is, it moves in a certain direction. The movement presupposes perception, and vice versa, but they never exactly coincide. Movement and perception are modalities of the living being, expressions of its organic totality. The organism is a totality that organizes itself, a psychosomatic unity open to a world that is meaningful for it. Goldstein's approach deeply influenced the philosophy of Maurice Merleau-Ponty. He writes:

> "Finally, if it were established that the nerve processes in each situation always tend to re-establish certain states of preferred equilibrium, these latter would represent the objective values of the organism and one would have the right to classify behaviour as ordered or disordered, significant or insignificant, with respect to them. These denominations, far from being extrinsic and anthropomorphic, would belong to the living being as such. (Merleau-Ponty 1942: 38)"

In these analyses, there is no longer a classification based on a hierarchy from the simplest to the most complex, but a phenomenological description of behavior: "These facts are essential for us, therefore, because they bring to light *a directed activity between blind mechanism and intelligent behaviour*, which is not accounted for by classical mechanism and intellectualism" (Merleau-Ponty 1942: 40; italics mine).

3. *Being* behavior

In this light, it is possible to define the organism as *subjectivity*. Here, it might be useful to take recourse to the work of Viktor von Weizsäcker. Weizsäcker proposed an interesting approach to the understanding of the organism as subjectivity. The organism is open to the world through the act of creativity, of authentic improvisation. The point of departure here is the definition of movement as an orientation *within-and-towards* the world. The movement of an organism is never pure action, but it is also never a simple reaction caused by environmental factors. On the contrary, the auto-movement bears witness to the subjectivity of the organism: the organism is capable of behaving spontaneously and creatively,

and this constitutes its own unique way of responding to the environment. The organism is not moved; rather, it itself moves. This *spontaneity* is deeply valorized by Merleau-Ponty, who emphasizes a strong interconnection between movement and perception: each movement is auto-movement and each perception is auto-perception. In his *Course Notes from the Collège de France* Merleau-Ponty states that, "[a]n organ of the mobile senses (the eye, the hand) is already a language because it is an interrogation (movement) and a response (perception as *Erfühlung* of a project), speaking and understanding. It is a tacit language" (Merleau-Ponty 1995: 211).

The link between perception and movement allows us to understand the organism's encounter with the environment. According to Weizsäcker, perception is neither inorganic nor organic, but a *historical encounter* between the self and the world. This relationship helps us understand the unity between the organism and its milieu, which is what Weizsäcker calls a "biological act". An organism's life is an improvisation, "creativity without creator", and it does not exist without a certain coherence provided by the environment. Creativity and coherence: these are the two elements that constitute what Weizsäcker calls *Gestaltkreis*, and they signify the circularity and interdependence (between organism and milieu) that characterize the living being.

Based on these reflections, we can take stock of what it means to have a behavior, or perhaps we should say, what it means to *be* a behavior. Again, we can turn to Merleau-Ponty. The organism behaves: what does this mean? It is clear that we cannot explain behavior as a mechanical response to (external) stimuli. Behavior is not a blind mechanism, nor some sort of otherworldly intelligence infused into the body; rather, it is an *oriented activity*. According to Merleau-Ponty,

> "[T]he subject does not live in a world of states of consciousness or representations from which he would believe himself able to act on and know external things by a sort of miracle. He lives in a universe of experience, in a milieu, which is neutral with regard to the substantial distinctions between the organism, thought and extension; he lives in a direct commerce with beings, things and his own body. (Merleau-Ponty 1942: 189)"

The criterion for understanding behavior is *vital equilibrium*, the global activity of the organism living in a certain milieu. Behavior is a meaningful activity that presupposes something more than a merely physical event, but at the same time, does not necessarily encompass an intelligent dimension. In this way, Merleau-Ponty reformulates his definitions of organism, behavior, and, finally, subjectivity:

> "From this moment on behaviour is detached from the order of the in-itself (*en soi*) and becomes the projection outside the organism of a possibility which is internal to it. The world, inasmuch as it harbors living beings, ceases to be a material plenum consisting of juxtaposed parts; it opens up at the place where behaviour appears. (Merleau-Ponty 1942: 167)"

To understand behavior authentically means, first and foremost, recognizing that there is a *being-for-the-animal*, a specific (animal) way of being in the world.

This approach can be useful in reconsidering anthropological difference (and animality in general) in the light of the valorization of the specificity and uniqueness of each living being. In this view, the priority does not consist in looking for human characteristics in animals so as to establish a new hierarchy. Rather, the starting point of the investigation is the organism (a neutral term that includes both animals and human beings) as defined as a significant openness to the world, as a unique way of living and behaving. It starts with Merleau-Ponty's expression *être-au-monde*. The following passage is very helpful in this regard:

> "A consciousness, according to Hegel's expression, is a 'penetration in being' and here we have nothing yet but an opening up. […] But to reject consciousness in animals in the sense of pure consciousness, the *cogitatio*, is not to make them automatons without interiority. *The animal, to an extent which varies according to the integration of its behaviour, is certainly another existence*; this existence is perceived by everybody; we have described it; and it is a phenomenon which is independent of any

> notional theory concerning the soul of brutes. (Merleau-Ponty 1942: 126—127; italics mine)"

Every organism, inasmuch as it is constitutes a significant and dynamic openness, is an *ek-sistence*, because, in living and behaving, it stands *outside* itself. *Être-au-monde* is an avid description of this kind of spatial subjectivity, a situated subject that is no longer a mere mechanical system, but also not yet a full-blown consciousness.

The space – the outside – is in-habited by the organism. The relationship between the organism and the environment is dialectic and expresses the organism's global and qualitative response. In other words, external stimuli are not causes but *occasions* for the organism. In this way, through this mutual correlation between the organism and the environment, the outside becomes a meaningful space, namely its *milieu*. This is not the place to elaborate on this notion. Suffice it to say that the notion of milieu is to be conceived in the sense of the *Umwelt*, as famously used by Jakob von Uexküll (see Uexküll 1909). It is the organism itself that composes its worlds. The organism is always oriented; it is a subject equipped with a form of intentionality. This, to be sure, is a form of bodily intentionality, but one that is already meaningful. The openness of the organism is imbued with meaning – a meaning that transforms the geographical environment, which is detached and objective, into an *environment of behavior* (in line with the distinction elaborated by the Gestaltist Kurt Koffka).[5]

This is very important for our reasoning about animal subjectivity because it deals with the question of the transcendental. According to Merleau-Ponty:

> "[E]ach organism, in the presence of a given milieu, has its optimal conditions of activity and its proper manner of realizing equilibrium; and the internal determinants of this equilibrium are not given by a plurality of vectors, but by *a general attitude toward the world*. This is the reason why inorganic structures can be expressed by a law, while organic structures

5 "Let us therefore distinguish between a *geographical* and a *behavioural* environment. Do we all live in the same town? Yes, when we mean the geographical, no, when we mean the *behavioural* 'in'" (Koffka 1935: 28).

> are understood only by *a norm, by a certain type of transitive action which characterizes the individual.* (Merleau-Ponty 1942: 148; italics mine)"

Every living being – animals included – has a unique way of being in the world, its *unique style*: that is, it possesses a *natural self*. For this reason, there emerges a new classification of living beings, no longer grounded on human traits but on the relationship that living beings build with their environment.

This point needs further clarification. The normativity we are talking about is always a relationship. It is not an inner *telos*, i.e. some goal hidden within the organism. Biological normativity is just a relationship built on the dialectic of dependence on, and independence from, the environment. The norm, here, is about choosing a certain behavior among many possibilities. In this sense, we could say that an animal is an individual subject: it is its postures and gestures. It is already *the subject of a history*:

> "Others, which are called living beings, present the particularity of having behavior, which is to say that their actions are not comprehensible as functions of the physical milieu and that, on the contrary, the parts of the world to which they react are delimited for them by an internal norm. By 'norm' here one does not mean a 'should be' which would make it be; it is the simple observation of a preferred attitude, statistically more frequent, which gives a new kind of unity to behaviour. (Merleau-Ponty 1942: 159)"

Defining behavior as preferred behavior – as found in Goldstein, Weizsäcker, and Merleau-Ponty – means recognizing that each organism has its own way of modifying the physical world, its own way of making its *milieu* appear:

> "Some of these fragments of matter, which we call living beings, proceed to trace in their environment – by their gestures or their behaviors – a view of things which is their alone, and that will appear to us only if we take part in the spectacle of animality, instead of rashly denying it any kind of interiority. (Merleau-Ponty 2002: 75)"

4. *Being* body

Merleau-Ponty reflects on the notion of body in one of his most important works, *Phenomenology of Perception*. Here, his main focus is on perception, movement, and corporeity, taking a distinctly phenomenological stance. As we have seen, in Merleau-Ponty's approach perception and movement are the original ways in which an organism experiences, and lives in, the world. The organism does not simply live; it lives *within* a world that it knows, and thus the relationship between the organism and the environment is a *lived* relationship. By this, Merleau-Ponty means to say that experiencing a world is neither a subjective representation nor an empirical collection of facts. Experience arises from our being-in-the-world (*être-au-monde*):

> "Reflex, insofar as it opens itself to the sense of a situation, and perception, insofar as it does not first of all posit an object of knowledge and insofar as it is an intention of our total being, are modalities of *a pre-objective perspective that we call 'being in the world.'* Prior to stimuli and sensible contents, a sort of inner diaphragm must be recognized that, much more than these other ones, determines what our reflexes and our perceptions will be able to aim at in the world, the zone of our possible operations, and the scope of our life. (Merleau-Ponty 1945: 81; italics mine)"

Être-au-monde is this "primary opening onto things without which there could be no objective knowledge" (Merleau-Ponty 1945: 99). This means that organisms possess a *pre-categorical*, or *bodily*, perception prior to any distinctions, including that between subject and object:

> "The presence and the absence of external objects are only variations within a primordial field of presence, a perceptual domain over which my body has power. […] If objects must never show me more than one of their sides, then this is because I myself am in a certain place from which I see them, but which I cannot see. (Merleau-Ponty 1945: 95)"

Here, a radically new definition of consciousness is taking shape: pre-reflective, embodied, and always situated. This is our primordial openness to the world.

In the first instance, we belong to the "lifeworld" (*Lebenswelt*): "It is not a surveying of the body and of the world by a consciousness, but rather it is my body as interposed between what is in front of me and what is behind me, my body standing in front of the upright things, with the animals, with other bodies" (Merleau-Ponty 1995: 209). This is also important for our reasoning about animality: animals and human beings share a corporeity that is always *postural*. According to Merleau-Ponty, a posture is a spatial localization of the body, the reason why every organism is able to *live* the space. As we have seen, space is never detached but becomes a *living space*. The posture is interpreted as a form in the sense of Gestalt psychology. Bodily spatiality is not the spatiality of fixed and external objects; rather it is a *situational spatiality*: "My body appears to me as a posture toward a certain task, actual or possible. And in fact my body's spatiality is not, like the spatiality of external objects or of 'spatial sensations', a positional spatiality; rather, it is a situational spatiality" (Merleau-Ponty 1945: 102). Corporeality is, in fact, the Husserlian zero point (*Nullpunkt*) of any experience: "When the word 'here' is applied to my body, it does not designate a determinate position in relation to other positions or in relation to external coordinates. It designates the installation of the first coordinates, the anchoring of the active body in an object, and the situation of the body confronted with its tasks" (Merleau-Ponty 1945: 102–103).

In this way, the traditional definition of the subject is now rebuilt: it is no longer the Cartesian *cogito* or the Kantian *I think*, but rather an *embodied subject* or an *I can*:

> "Finally, these clarifications allow us to understand motricity unequivocally as original intentionality. Consciousness is originarily (sic) not an 'I think that,' but rather an 'I can.' […] Vision and movement are specific ways of relating to objects and, if a single function is expressed throughout all of these experiences, *then it is the movement of existence,* which does not suppress the radical diversity of contents, for it does not unite them by placing them all under the domination of an 'I think,' but rather by

> orienting them toward the inter-sensory unity of a 'world.' Movement is not a movement in thought, and bodily space is not a space that is conceived or represented. (Merleau-Ponty 1945: 139; italics mine)"

The materiality of the body defines our being inside time and space. But, according to Merleau-Ponty:

> "[W]e must not say that our body is in space nor for that matter in time. It *inhabits* space and time. […] I am not in space and in time, nor do I think space and time; rather, *I am of space and of time; my body fits itself to them and embraces them*. The scope of this hold measures the scope of my existence; however, it can never in any case be total. The space and time that I inhabit are always surrounded by indeterminate horizons that contain other points of view. The synthesis of time, like that of space, is always to be started over again. The motor experience of our body is not a particular case of knowledge; rather, it offers us a manner of reaching the world and the object, a 'praktognosia,' that must be recognized as original, and perhaps as originary (sic). (Merleau-Ponty 1945: 140–141)"

The body inhabits the world because it grasps the world: corporeity is the *templum* of the behavior, the seat of the style proper to any organism, the twine of any possible behavior, the matrix of every existing space. As I said before, spatiality is not a possession but neither is it a detached substance: in the very moment in which an organism is in the world, space becomes the field of its possible behaviors. On Merleau-Ponty's account, corporeity is what defines an existence (according to

the etymological definition: *ek-sistere*):[6] if 'body' is a correlational structure that puts us in a *relation to the outside*, then 'corporeity' is a dialectic, it is *being-outside*.

The notion of corporeity also becomes central for us to achieve a better understanding of animality. Every living being *is* its own body: "I am not in front of my body, I am in my body, or rather *I am my body*" (Merleau-Ponty 1945: 151; italics mine). According to Merleau-Ponty, a purely material and detached body does not exist. The body, including that of the animal, is a complete experience, the reason why every organism is open to the world:

> "If the subject is in a situation, or even if *the subject is nothing other than a possibility of situations*, this is because he only achieves his ipseity by actually *being a body and by entering into the world through this body*. If I find, while reflecting upon the essence of the body, that it is tied to the essence of the world, this is because *my existence as subjectivity is identical with my existence as a body and with the existence of the world*, and because, ultimately, the subject that I am, understood concretely, is inseparable from this particular body and from this particular world. The ontological world and body that we uncover at the core of the subject are not the world and the body as ideas; rather, they are the world itself condensed into a comprehensive hold and the body itself as a knowing-body. (Merleau-Ponty 1945: 408; italics mine)"

6 In *Phenomenology of Perception*, there is an interesting note about the notion of *existence*: "In the sense we are using here, Husserl's originality lies beyond the notion of intentionality; rather, it is found in the elaboration of this notion and in the discovery, beneath the intentionality of representations, of *a more profound intentionality, which others have called existence*" (Merleau-Ponty 1945: 123; italics mine). See also: "We must restore this dialectic between form and matter, or rather, since "reciprocal action" is nothing more than a compromise with causal thought and a contradictory formulation, we must describe the milieu where this contradiction is conceivable; in other words, existence, or the perpetual taking up of fact and chance by a reason that neither exists in advance of this taking up, nor without it" (Merleau-Ponty 1945: 129).

5. *Being* expression

Reflections on corporeity are a mainstay in Merleau-Ponty's account, even in his latest work on ontology. We have seen why the notion of corporeity is so important and rich: the body 'takes root' in the situation (that is, there is a situation because there is a body); the body opens up to the possible and virtual dimension; the body *expresses something* and it communicates the co-belonging and the intertwining among living beings within nature. The tracking of possibility and virtuality within corporeity is the most important consequence of Merleau-Ponty's analysis of living beings. Thus, Merleau-Ponty can rehabilitate the animal body and animal behavior without choosing between mechanism and vitalism.

We have already seen that "the organism is not defined by its punctual existence; what exists beyond is a theme, a style, all these expressions seeking to express not a participation in a transcendental existence, but in a structure of the whole. The body belongs to a dynamic of behavior. Behaviour is sunk into corporeity" (Merleau-Ponty 1995: 183).[7] In order to conclude this brief examination of human and animal corporeity, it will be useful to address yet another important characteristic of the body: its expressive value. In a course dedicated to the notion of animality and animal behavior, Merleau-Ponty focuses on animal appearance and animal symbolism, drawing on the work of Robert Hardouin, Adolf Portmann, and Konrad Lorenz.

First of all, Merleau-Ponty analyses the phenomenon of *mimicry*. Are animal bodies 'built' so as to hide themselves? Are utility and survival the unique criteria of life? Through Hardouin's studies and examples, Merleau-Ponty tracks a sort of *natural magic* within nature and living beings, a sort of useless visibility that questions 'Darwinian ideology': "Life is not only an organisation for survival; there is in life a prodigious flourishing of forms, the utility of which is only rarely attested to and that sometimes even constitutes a danger for the animal" (Merleau-Ponty 1995: 185–186). There is a visible richness in the natural and living world that does not submit to utility and efficacy: "There are numerous cases of hypertelia, a prodigality

7 "We touch here on a profound understanding of the notion of the living body: the body is a system of motor powers that crisscross in order to produce a behaviour" (Merleau-Ponty 1995: 148).

of forms realized by life: adaptation is not the canon of life, but a particular realization in the tide of natural production" (Merleau-Ponty 1995: 184). Animal bodies have a spectacle-attitude: animal bodies are seen, animal bodies are made to be seen. However, denying the ideology of utility and accepting this form of expressivity within the living world does not abolish physical and biological laws:

> "At the origin, magic is concentrated in the architecture of the body, then is extracted from the original trace of forms. But it always remains a power that in no way pulls the living beings away from the strict conditioning of events. On the one hand there is a frenzied freedom of life, and on the other, an economy of life. (Merleau-Ponty 1995: 186)"

Freedom and economy, exception and law, finalism and determinism: all these elements can co-exist in the living world.

Merleau-Ponty questions the prejudice based on the hegemony of the inner over the external: appearances do not hide truth – there are no misleading appearances. This is an important consequence of Adolf Portmann's work: "The consideration of appearance, of animal form (*gestalt*), is not at all uninteresting. The laws of the interior and exterior are not of the same order: "The interior gives the impression of a machine, the exterior gives the impression of a product of art" (Merleau-Ponty 1995: 186–187). Body's appearance is a language: the animal is its own behavior, its own body, and its own history. The animal is further also an expression, an expressive value that is completely free and aesthetic in nature: "We must grasp the mystery of life in the way that animals *show themselves to each other*" (Merleau-Ponty 1995: 188). The intrinsic visibility of the living being demonstrates that there is an inherent relationality within nature (what Merleau-Ponty – using a Husserl's expression – calls *Ineinander*): "What exists are not separated animals, but an

inter-animality" (Merleau-Ponty 1995: 189).[8]

An animal's conduct – its unique way of being a body – is not inevitably addressed to a purpose; it does not submit to *aut-aut* reasoning. The body is not a 'physiological sack' (Merleau-Ponty 1995: 188) and an organism's life is neither reducible to the pursuit of utility nor to the manifestation of finality: "Rather, its appearance manifests something that resembles our oneiric life" (Merleau-Ponty 1995: 188). Animal behavior certainly has utility, but the fact that every animal is always this-or-that animal opens up a different kind of reflection. Similar reflections can be found in relation to the category of species. According to Merleau-Ponty, the notion of species has ontological value: "The species is what the animal has to be, not in the sense of a power of being, but in the sense of a slope on which all the animals of the same species are placed" (Merleau-Ponty 1995: 189). It is necessary to clarify this point: How is it possible to reconcile the fact that, on the one hand, there is a sort of bodily freedom of the living being; and on the other hand, there is a kind of natural and physical legacy (such as the directives imposed by the species)?[9]

Let us briefly turn to the work of Konrad Lorenz. A student of Jakob von Uexküll, Lorenz developed an interesting interpretation of animal behavior, especially in relation to the notion of instinct. According to Merleau-Ponty,

> "[T]he 'instinctive tendencies' are not actions directed toward a goal, not even toward a distant goal of which the animal is aware. Instinct is primordial activity 'without object', objektlos, which is not primitively the position of an end. […] The instinct is an activity established from within but that possesses a blindness and does not know its object. (Merleau-Ponty 1995: 191–192)"

8 See also: "There is a *natural* rooting of the for-other. We saw in Portmann that the animal body is understood as an organ for the for-other, that mimicry is understood as identification, and that the species is already inscribed in generativity and is also inscribed in this intercorporeity" (Merleau-Ponty 1995: 210).

9 Merleau-Ponty valorises the notion of species. Commenting on Lorenz, for example, he asserts: "The animal species have patterns of specific behaviour 'exactly as they have teeth'" (Merleau-Ponty 1995: 191).

The object is put on the back-burner: it becomes evocative of an innate complex, of a *theme*, in the words of Raymond Ruyer. Merleau-Ponty here – as in his thought in general – tries to find an original way to conceive vital acts: behavior is neither finalistic nor mechanical. The external object – external excitant – is the trigger for a sort of reminiscence:

> "This tension meets the object not so much because it is directed toward it as because it is a means capable of resolving the tension, as if the object intervened like a point of contact that is in the animal, as if it brought to the animal the fragment of a melody that the animal carried within itself, or came to awaken an a priori that provoked a reminiscence. (Merleau-Ponty 1995: 191–192)"

There is an *a priori* – the theme of the animal, the species (what von Uexküll and Merleau-Ponty call the 'melody') – and there is a sort of empty activity:

> "There is an oneiric, sacred, and absolute character of instinct. It seems that the animal both wants and does not want the object. The instinct is both in itself and turned toward the object, it is both an inertia and a hallucinatory, oneiric behaviour, capable of making a world and of picking up any object of the world. […] Instinct is oriented toward the image or the typical. There is a narcissism of instinct. If it tends to find its identity in fixing an object, it does not know what it is nor what it wants. (Merleau-Ponty 1995: 193)"

Tracing narcissistic modalities in animal behavior leads us to an interesting view of animality. In animal behavior – understood as significant and irreducible –, in the animal body – understood as situated and expressive –, and finally in animal instinctual activity – understood as orientation and ritualization –, there is an 'empty production', a primordial symbolism and pre-culture that are immanent in the body itself. There is an enigma of the body; there is a *symbolism* in the body. But what does this mean? Here, Merleau-Ponty provides a precise definition of the symbolism of the body. In a work note, he writes:

> "Symbolism: a term taken as representative of another *Auffassung als* -> We refer then to the mind, carrier of the *als*, to intentionality, to meaning – but then: symbolism is surveyed; there is no longer a body. By saying that the body is symbolism, we mean that without a preliminary *Auffassung* of the signifier and the signified supposed as separated, the body would pass in the world and the world in the body. Feeling or pleasure, because the body is mobile, that is, the power to elsewhere, are the [means of the] unveiling of *something.* (Merleau-Ponty 1995: 211)"

> " There is a primordial communication between the body and the world, a communication in the terms of a *tacit language*. Equally, different bodies can communicate and understand each other through this primordial symbolism. It is here – in this *inter-corporeality*, in this *inter-worldliness* – that we find the "strange kinship between the human and the animal" (Merleau-Ponty 1995: 214). It is the investigation into corporeity that leads us to authentically comprehend animal and human beings: no longer separated by an ontological abyss, no longer assimilated by anthropomorphic characteristics.A new kind of *difference* appears here: human being is not an *exception* but rather *emerges* from *ontological continuity*. The investigations into corporeity lead us back to the primordial relationship between animals and humans: to begin with, we are all living bodies, situated in, and open to, the world; but on the other hand, there are also important differences: "the human body (one of them-and different)" (Merleau-Ponty 1995: 221). The animal, in its *being-body*, is an individual existence equipped with a uniqueness that is expressed in its behavior, in its activity. From this perspective, human being is no longer the result of a mere addition, but *another way of being a body*: "We study the human through its body in order to see it emerge as different from the animal, not by the addition of reason, but rather, in short, in the *Ineinander* with the animal (strange anticipations or caricatures of the human in the animal), by escape and not by superposition. (Merleau-Ponty 1995: 214)"

The ontology traced by Merleau-Ponty is genuinely relational: human and animal beings, through their specific bodies, live the same world and share a primordial openness towards it. The relation between animals and humans is

a *lateral* one (Merleau-Ponty 1995: 211, 268, 273). It is in the context of this kind of ontology that we can find an original way to rethink our relationship to animals, without denying our human specificity and/or the uniqueness of "the grand territory of the beasts" (Derrida 1999).

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HUSSERL'S SOMATOLOGY RECONSIDERED: *LEIB* AS A METHODOLOGICAL GUIDE FOR THE EXPLICATION OF (PLANT) LIFE

The purpose of this paper is to explore some of the possibilities for approaching and understanding the phenomenon of "life" from a phenomenological perspective: Can phenomenology, with its methodological and epistemological grounding in the first-person investigation of the lived experience, enable us to gain insight into the fundamental structures of "the living"? To address this issue we will anchor our analysis in two central phenomenological notions. First is the Janus-faced construal of the body: the fact that, *as a living being*, I not only *have* an *object*-body (*Körper*), but also, and primarily, I *am* a *lived* body (*Leib*). The lived body, it may be argued, is the epistemic ground zero of all phenomenological investigation, so any grounded bio-phenomenological account must start from there. Secondly, and interrelatedly, my embodiment is said to play the key role in *empathy*, which is often considered to be a *via regalis* to intersubjectivity in phenomenology, and is therefore integral in how we approach and understand other living beings.

However, to make the ordeal of taking the phenomenological notions of embodiment and empathy as methodological guides to the category of life even more challenging, our main object of research will *not be human* or *animal*, but *plant life*. Plants have been, for the most part, neglected or trivialized by

phenomenological approaches.[1] Their unique place in the realm of the living makes them, as critics of bio-phenomenological approaches would probably agree, especially interesting candidates for such an undertaking.

The fundamental recognition and understanding of plant life is, like all forms of life, *not* derived from biology, but *precedes* it: For us to be able to investigate it scientifically, we must already have a certain preconception of plant life based on our everyday experience. Of course, parts of our understanding may change in light of such investigations, but the very experience of the fundamental "aliveness" of plants must be there a priori for the whole scientific endeavor to take off at all. The question here is: Can an embodiment-based bio-phenomenological approach ground this experience and make sense of vegetal life?

From the anthropocentric perspective of phenomenology, which takes the lived body of a normal, adult human being as the "originary norm" or *Urnorm* (Hua 1: 154), plants appear to be *anomalies par excellence*. Specifically, vegetal life seems to be, at least *prima facie*, characterized by a fundamental *lack*: while the sessile being-in-the-world of plants seems to be *bereft of sensorimotor intentionality*, their modular, de-centered structure seems to bespeak the *absence of vital individuality*. In this regard, plant life – much more than the pet-example of some contemporary bio-phenomenological approaches, the unicellular bacteria whose movements are much clearer indications of vital intentionality and individuality (Thompson 2007: 74) – can truly be said to be *the* "limit-phenomenon"[2] and can therefore serve as a "litmus test" for the

1 One notable exception to this general trend is the illuminating work on plant phenomenology by Michael Marder (e.g. 2012a, 2012b, 2014).

2 "Limit-phenomena", as defined by Anthony Steinbock in his account of generative phenomenology, are "those matters that are on the edge of accessibility in a phenomenological approach to experience", and can include "the unconscious, sleep, birth and death, temporality, the other person, other worlds, animal and plant life, the Earth, God, etc." (Steinbock 2003: 290; for a further treatment of biological generativity in line with Steinbock's thinking, see Affifi 2015). However, unlike Steinbock, who seems to hold that these limit phenomena have to be ultimately exposed as "inessential" (ibid.: 311) so as to become a *phenomenon proper*, i.e., a subject matter of phenomenology, we suggest that liminality be treated as *constitutive* for the phenomenon under discussion (i.e. vegetal life). For a further analysis of liminal experience see Breyer 2010.

feasibility of any comprehensive bio-phenomenological account. Thus, one of the main goals of our paper is to show that a modified version of Husserlian somatology can pass such a test, and that its anthropocentric character can be critically transformed due to the multifaceted, even self-alienating, nature of empathy.

This article consists of two main parts. First, we provide an outline of Husserl's somatology, "the science of the lived body", as a fundamental methodological and conceptual framework for a phenomenological re-construal of life sciences in general and botany in particular. Second, in order to demonstrate why and how the somatological approach might be useful for conceiving vegetal life through the phenomenological lens we identify, in the writings of Husserl, a three-step procedure for operationalizing the native (empathic) perception of another living being (the three steps include: eidetic self-modification; intercorporeal pairing; and appresentation of an alien field of experience). After expounding on each step, we draw some tentative conclusions, particularly on how our analysis might impact the construal and understanding of empathy that lies at the very heart of "somatological life sciences".

1. The Case for Botanical Somatology

The main reason for going back to Husserl is that he still offers one of the most refined methodological tools for a phenomenological approach to life, whose subtleties have yet to be fully explicated. Husserl laid the foundations for such an undertaking under the heading of somatology. The term makes its appearance in Ideas III (written in 1912, but published posthumously), where it is used to designate "the science of the lived body" (Hua 5: 7) or of "animate organicity" (ibid.: 8). However, the original scope of somatology did not extend to life in general, but was limited to animal life. This is why the main goal of the Husserlian somatology, as originally construed, was to re-conceptualize zoology in phenomenological terms. However, as we will argue below, if appropriately modified, the general framework of somatology could perhaps be extended to all life sciences, botany included.

But how does one instigate such a phenomenological re-conceptualization? The way Husserl envisions somatology is as a "science" based, first of all, on subjective analysis of one's own lived body (*Leib*); and secondly, on the study of the intercorporeal (*zwischenleibliche*) dimension presupposed by all positive sciences of the living. This would mean that, at its very basis, somatology faces two essential methodological questions: How is my own lived body given to me in my experience? And how does this epistemological vantage point enable me to approach the lived corporality of the other (here: animal)? In other words, in order to perceive a given entity (say, a stray dog) as a lived body and not as a Cartesian *bête machine*, two elements are required: first, the *somatic perception* of my own body; and second, the *somatic interpretation* (*Eindeutung*) of the alien body (Hua 5: 8).

Let us start with the more basic of the two, somatic perception. Husserl's account of the phenomenological constitution of the body is extremely nuanced, and cannot be adequately addressed in the present paper. For our purposes, the most important thing is that, according to Husserl, the most fundamental way in which my lived body is given to me experientially is as a *bearer of sensations* (or more precisely, *sensings*). To get a better view of what Husserl has in mind here, consider his description of what happens when my hand touches a table:

> "Moving my hand over the table, I get an experience of it and its thingly determinations. At the same time, I can at any moment pay attention to my hand and find on it touch-sensations, sensations of smoothness and coldness, etc. In the interior of the hand, running parallel to the experienced movement, I find motion-sensations, etc. Lifting a thing, I experience its weight, but at the same time I have weight-sensations localized in my Body. And thus, my Body's entering into physical relations […] with other material things provided in general not only the experience of physical occurrences, related to the Body and to things, but *also the experience of specifically Bodily occurrences* of the type we call sensings. (Hua 4: 146)"

In other words, in addition to sensations (*Empfindungen*), which relate to the sensed qualities of the tactual thing (e.g. smoothness, coldness, etc.), I also experience the co-occurring sensings (*Empfindnisse*) (Hua 4: 144), which relate to and are localized in my own body (touch-sensations, motion-sensations, weight-sensations, etc.). Thus, on this fundamental, pre-reflective or lived-through level, the body is constituted as a *domain of immediately felt sensings*.

So, if in the first step (somatic perception) I am immediately given to myself as a lived body, i.e., as a distinct region of extended fields of sensings, then, in the second step (somatic interpretation), this bodily self-givenness enables me to see the alien body as another lived body endowed with its distinct field of sensings. Namely, the somatological re-construal of zoology entails that we conceive of the animal body not only as a material object in the vein of natural sciences, but also as a "bearer of sensings", as a field of subjectively and immediately localized sensations. But how does this "intercorporeal synchrony" take place? How can I move from my own lived corporeality to the lived corporeality of the other?

According to Husserl, the central capacity by means of which we access, and understand, the other is "empathy". The precise meaning of "empathy" has been a matter of some debate (see, e.g., Marder 2012a; Zahavi 2001, 2012b,), not least because of Husserl's not always unequivocal use of the term. However, there seems to be a growing consensus that, at least in Husserl's most important works on intersubjectivity and embodiment (e.g. Hua 1, 4, 14, 15), it denotes *unmediated* intercorporeal access to the subjectivity of the other, and not a *mediated* inferential or (self)projective achievement. In the words of Zahavi, empathy in Husserlian phenomenology "is not a question of feelingly projecting oneself into the other, but rather an ability to experience behavior as expressive of mind, i.e., an ability to access the life of the mind of others in their expressive behavior and meaningful action" (Zahavi 2012a: 186—187). A more detailed account of empathy in Husserl will be the central topic of the next section.

It is *empathy*, then, that is said to enable us to move from somatic perception to somatic interpretation. Consider, for instance, the famous and illuminating case of the jellyfish discussed by Husserl in 1921:

> "If [the animal] possesses parts that are 'sensitive to the light', which can be considered similar to the eyes, insofar as they can be subjectively grasped as sensitive to the stimuli, then we can ask ourselves how it is with the corresponding kinesthetic system, which we can assume to be 'available' to the unknown ensouled subject (*Seelensubjekt*)? And it is in light of this rudimentary type of such [kinaesthetic] system […] that we interpret the seeing of this animal, i.e., we get to understand what kind of 'things' are visually constituted for this [living] being or how the optical layer of the whole 'thing' looks like for [this] being. (Hua 14: 116—117; our translation)"

We know what it is like to see, not because we have studied the physiology of the eye and the visual circuits in the brain, but because, by means of somatic *perception*, we are experientially given to ourselves as visual beings. Further, we know that the eyeless jellyfish sees not solely by studying the physiology of its sense apparatus but because we are able, by means of somatic *interpretation*[3], to understand that the functioning of this apparatus coincides with the appearance of sensations, which makes jellyfish a distinct bearer of visual sensings and therefore a seeing entity. But even if we are willing to concede that all this is true in the case of "lower" animals such as jellyfish, are we also allowed to extend the same empathic procedure to other living beings, say, plants? Is not vegetal life, in its radical otherness, an unsurpassable "point of resistance" to somatic interpretation, an unsurmountable "barrier to empathy" (Marder 2012: 260, 261)?

It is interesting to note that Husserl himself explicitly expresses doubts about the possibility of including *botany* in his somatological framework (Hua

3 It should be noted that the term "interpretation", which is used in the standard English translation of Hua 5 as an English substitute for a rather uncommon German word *Eindeutung,* does not imply an implicit opposition to, or rejection of, a "direct perception" approach to intersubjectivity. In fact, the very opposite seems to be the case. To a first approximation, we can think of "Eindeutung" as simply a synonym and precursor of "appresentation", a term frequently used by the later Husserl (see section 2.3). The positive function of "interpretation" – understood as an active intervention undertaken by an attentive subject, which helps bring to the fore the "anomalous" life of the plant – is further developed in section 2.2.

5: 9; see also Hua 14: 118). The reason, he says, is that, when confronted with plant bodies, we lack a determinate mode of empathy that would justify the appropriate somatic interpretation:

> "The universal and completely indefinitely performed empathy that permits the analogy is not enough for the investigator; he needs concrete experience of concrete sensitivities related to concrete organs, whereby the analogy of the plant organs with brute-animal ones, to which well-known sensitivities belong according to experience, must be broad enough to ground the probability of the interpretation. (Hua 5: 9—10)"

As we can see, Husserl here mentions another element that is required for somatic interpretation, namely *analogy*. Basically, he seems to be arguing that the dissimilarities between what we know about plant bodies and what we experience as our own *Leib* are too pronounced to justify the "standard" empathic procedure of somatic interpretation. However, this seems to leave us in a rather unfortunate predicament: Is the prospect of establishing "somatological botany" doomed from the very beginning?

Things are not as grim as they might appear at first sight. Note that, in the quoted passage, Husserl does not claim to have given the final answer to the problem. This is already clear from the fact that he appeals to matters of *probability* ("whereby the analogy […] must be broad enough to ground the probability of interpretation") rather than to matters of *principle*, which is to say that, in his view, the issue is not set in stone, but is an empirical matter open to subsequent revision. In fact, it turns out there are at least two further developments which might allow us to reassess plant life by increasing the viability of somatic interpretation. The first possible development is related to a refinement and extension of somatic methodology: the idea here is to enable new ways of empathizing and drawing analogies that are hidden at the more basic stages of somatic interpretation (more on this shortly). The second possible development relates to what we may call, with Thomas Kuhn, a "paradigm shift" in life sciences, i.e., a radical shift in how life sciences are conceptualized and practiced, which would have profound effects on all of their (sub)branches, botany included.

Husserl himself indicates that the exclusion of vegetal life from somatology is not due to its principled inaccessibility or incomprehensibility, but rather due to his intention "to be as accommodating as possible to the prevailing field of physiological botany and biology in general" (Hua 5: 10). In other words, Husserl seems to have given up on the idea of somatic botany not for some principled reason, but only because, in light of the hostile climate towards non-mechanistic approaches in the scientific establishment, the conditions for pursuing such a line of investigation seemed rather unfavorable. However, he leaves open the question of whether somatic interpretation in botany "cannot play — or whether in fact it is not playing — its fruitful role after all, as it undoubtedly does in zoology, although here, too, this is often not appreciated" (ibid.). This seems to imply that a phenomenologically-inspired paradigm shift in life sciences, and consequently in botany, might eventually lead to the inclusion of vegetal life in the framework of somatology.

Hence, the possibility of somatic interpretation of the plant body depends not only on developing a specific methodological toolbox for such interpretation, but also on the advances in, and modifications of, life sciences based on new scientific methods for investigating vegetal life. Recent studies of the *behavior* of plants, which usually go by the name of "plant intelligence" studies (Pollan 2013; Marder 2012), as well as raging controversies over the legitimacy of so-called "plant neurobiology" (Baluska/Mancuso 2007), indicate at least one thing: that the issue surrounding the somatic interpretation of the plant is far from settled. If the plant, then, is truly the litmus test for the soundness of any phenomenological account of life, we can conclude that the prospect of "somatological life sciences" is at least feasible. But what would constitute, in the case of vegetal life, specific conditions for the appropriate application of somatic interpretation?

2. A Biological Reading of *Cartesian Meditations*

To answer this question, let us now turn to what might be termed a biological reading of *Cartesian Meditations* (CM), particularly of the famous CM V on intersubjectivity. Originally, the phenomenological analyses and syntheses presented in CM V are meant to address the following question:

"How is *the Other* given to me on the most basic level?" (Staehler 2008: 105; our emphasis). A biological reading reinterprets this question as: "How is the *other living being* given to me on the most basic level?" Ultimately, the aim of the biological reading of CM V is to find a more refined account of somatic interpretation based on Husserl's multifaceted account of empathy[4].

In CM, Husserl outlines a fundamental three-step procedure meant to specify the process of somatic empathy towards another living being. These three steps are as follows:

(i) eidetic self-modification;

(ii) inter-corporeal pairing; and

(iii) appresentation of an alien field of experience.

Let us have a look at each in turn.

2.1 Eidetic Self-modification, or What It Is Like To Be a Potted Plant?

The main idea behind the first step (*eidetic self-modification*) is to take the so-called *eidetic variation*, one of the cornerstones of phenomenological method, and use it on somatic perception, on the self-givenness of my lived body. Eidetic variation is a method based on "free imaginative variation", and

4 Here, it might be worthwhile to mention that the proposed biological reading of Husserl differs from some other contemporary readings (e.g. Steinbock 1995, Zahavi 2001, Lobo 2013) in that it puts *empathy* back in the center. This, of course, is not to deny that empathy, conceived as "a *thematic encounter with a concrete other*", is only *one particular form* of (pre-linguistic) intersubjectivity (in addition to *a priori* intersubjectivity, radical otherness, and alterity in self), and that "some of the most interesting and far-reaching phenomenological analyses of intersubjectivity are all characterized by going *beyond empathy*" (Zahavi 2001: 153). But this does not preclude its usefulness in explicating how other living beings are given to me *on the fundamental level*. For it should be clear by now that Husserl's key insight concerning somatic interpretation still holds: To experience another body as *Leib* is the result of having performed a corresponding empathic act. In fact, there has recently been a considerable renewed research interest in empathy due to its implications for cognitive sciences, clinical psychology, and interpersonal interaction research (e.g. Zahavi 2012b).

is supposed to help us grasp the essence (*eidos*) of a given phenomenon: by imaginatively altering various properties of the phenomenon in question, Husserl believes that we may arrive at its essence, i.e., to a horizon of invariant aspects within which that phenomenon can change without losing its unique identity (Zahavi 2003: 39):

> "Suppose we are seeking the essence of an act of perception itself, an example Husserl gives in the *Cartesian Meditations*. We can take any current perception, for example *seeing* a table, and then seek to alter its constituent parts, while retraining the perceiving element in the act. The essential features are those which cannot be varied in our imagination. Imaginative free variation plays a helpful role in allowing the *eidos* or essence of the phenomenon to manifest itself as the structure of its essential possibilities. (Moran 2000: 155)"

Now, transferred onto somatic perception, eidetic variation might enable me to modify my factual self-givenness as this particular human *Leib*, in order to ultimately arrive at the essence of being a bodily ego, or the essence of being a *Leib* in general. For instance, when I face the potted plant on my windowsill, I can eidetically self-modify by imagining myself as being in its place: what would it *be like* to be a potted plant, to have a plant-shaped body, etc.? The general question here is whether we could, by performing this type of imaginative operation, gain any essential insight into *what it's like* to have a *Leib* for *every* living being (plants included).

Husserl was convinced that the main value of eidetic variation lies in its uncovering of the *universal* structures of experience, which presumably hold for *all* conceivable variations of subjectivity. So, for instance, even if I imagine myself being a potted plant, I must conclude that all transcendent objects that enter into a perceptual relation with my vegetal body will still appear to me *perspectivally*, i.e., they will give themselves to me not in "one fell swoop", but through a series of perspectives, or "adumbrations" (*Abschattungen*), as Husserl called them. This holds true for all embodied living beings, be it plant, animal, or human.

Furthermore, when applied to the alien plant body, eidetic variation proves beneficial in that it supports the viability of empathy by stimulating my

capability of imagining alien modes of bodily life.[5] This becomes clearer if we take into account that the process of eidetic variation includes the so-called genetic "dismantling reduction" (*Abbaureduktion*), which Husserl, drawing on the jellyfish case mentioned above, elucidates as follows:

> "We can, to a certain extent, *systematically dismantle* our full-blown experience ([our] perception, [our] originary experiential apperception), [and] we can consider how perception is constituted from its horizons if we *exclude* certain experiences from *the genesis* [of the overall experience], that is if we assume that certain groups of experiences are impossible in principle. […] (Hua 14: 115, our translation and emphasis)"

And, on another occasion, he writes:

> "We can only say this much: there is, in the human environment (*Umwelt*) and in the human being itself, as its subject, a layer that can be abstractly discriminated – a layer of animality (*das Tierische*), that is to say, that which is shared with the animal (and whose unearthing requires a more in-depth examination). (Hua 15: 180, our translation)"

Hence, my attempts to imagine alien modes of bodily life are not entirely ungrounded, but can orientate themselves towards the imaginative "inversion" of my genetic becoming. This would mean that, by progressively dismantling in my imagination various layers of my experiential edifice, I can find, lurking hidden underneath the upper (genetically more recent) strata, the experiential

5 Some authors explicitly deny that imagination plays a central role in empathy (e.g. Zahavi 2012b: 237). However, since Husserl treats imagination in the context of eidetic self-modification in CM IV, which may be read as paving the way for the topic of intersubjectivity in CM V, it seems important to elucidate the exact nature of the link between empathy and imagination. Even if imagination does not play a central role in empathy *in general*, we might still maintain that there can be various "modifying types of empathy" (*Abwandlungsformen der Einfühlung*) (Hua 29: 329, our translation), and that it therefore plays a role in *a certain type* of empathy, e.g. in empathy towards *anomalous* living beings.

"vegetal-body" resources for imagining what it is like to be a plant.[6] In other words, the process of dismantling reduction enables me to move from the various capacities and properties of my fully developed, egoically and reflectively given, adult human *Leib* – to the more fundamental (pre-egoic, pre-reflective) layers which, it might be argued, all living beings have in common. It would seem that Husserl has something similar in mind, when he writes:

> "Is it not here necessary, in order to attain a scientifically comprehensible construal, to enter into the domain of the ideally possible modifications of the way in which our own interiority is given to us solipsistically, to construct *eidetic types*, to differentiate between, and modify, different layers [of experience], to consider *the founding layers in light of their single-sided commutability and relative autonomy* […]? (Hua 14: 125, our translation and emphasis)"

However, despite all these benefits, the straightforward answer to the question of whether eidetic reduction can help us gain insight into what it is like to have a *Leib* for *every* living being would be a resolute *no*: eidetic variation provides me with no valuable somatological insight, since we should not mistake "free imaginary possibilities" for motivated, real possibilities (see, e.g., Lobo 2013: 264, 266). Put differently, the main virtue of free imaginative variation is also its main vice: it enables me to extend the conceivable possibilities of embodiment without being constrained by any factuality (Hua 1: 110). For nothing prevents me from stepping beyond the selected example of the potted plant and imagining being in place of some *inanimate* object (say,

6 In fact, Husserl holds that each human being, as a being that is always becoming, carries "in itself a genesis that has arisen out of the community" (Hua 15: 155; our translation). In this particular context, Husserl takes this to be a merely inter-human issue, but it can be argued, based on other texts, that he also considers "generative unity" as a biological phylogenetic fact (see e.g. Hua 15: 172—173, 179). Accordingly, the famous supplement no. 23 to *Crisis*, dedicated entirely to the question of biology, states that biology is literally a reflection or mirroring of the *intentionale Ineinander* (Hua 6: 482).

a stone or a piece of wax).[7] This goes on to show that my imagination was not motivated by some specific feature of the plant encountered, but was the result of my arbitrary decision. For this reason, it could be said that the mediation by eidetic self-modification, although *potentially beneficial* in "anomalous" cases of empathy (see below, section 2.2), is *neither necessary nor sufficient* for performing an act of real empathy towards every living being.

2.2 Intercorporeal Pairing, or Resonating with a Potted Plant

This brings us to the second step of the elementary empathic procedure, which we may call *intercorporeal pairing*. We use this term to describe how my own *Leib* relates to the encountered alien body on the basis of "inter-bodily resonance" (Fuchs 2016, in press), e. g., on the basis of perceived similarities in form, modes of behavior, etc. The necessary condition for intercorporeal pairing is that my own *Leib*, which is given to me from the "inner" perspective as a field of sensings, coincides with a particular organismic form of corporeality or *Körper*, which is given to me from the "outer" perspective:[8]

> "Here it must also be noted that in all experience of things, the lived body is co-experienced as a functioning lived body (thus not a mere thing), and that when it itself is experienced as a thing, it is experienced in a double way - i.e., precisely as an experienced thing and as a functioning lived body together in one. (Hua 14: 57)"

In other words, intercorporeal pairing presupposes that I am given to myself as, to use Husserl's neologism, a *Leibkörper*, i.e., as a Janus-faced body

7 This is the reason "alien phenomenology", with its main focus on the question "what is it like to be a thing?" (e.g. Bogost 2012), is methodologically misguided: its "speculative realism" relies only on free-floating imaginary variations without being constrained by real, motivated possibilities.

8 Our use of the inner/outer perspective here is strictly *methodological* and rests upon Husserl's distinction of *Inneneinstellung* and *Außeneinstellung* (see, e.g., Hua 4: 161). As such, it should not be mistaken as an epistemological, or even ontological endorsement of the representationalist conception of the mind-world relation.

construed as a "turning point" (*Umschlagspunkt*) (Hua 4:161), where the causal relations (relations between material objects) of the *Körper* are interrelated with and transformed into conditional relations (relations between psychophysical experiences) of the *Leib*. My own *Leibkörper* enables me, by drawing *behavioral parallels* between my body and the encountered entity, to perceive the latter as another *Leibkörper*: since my lived body (*Leib*), as a unique bearer of sensings, coincides with a specific object in the world (*Körper*), characterized by specific modes of behavior; and since the modes of behavior entertained by the encountered entity resemble those of my *Körper*, I perceive this foreign entity as an instance of a foreign *Leib*, a foreign field of sensings:

> "A body over there reacts to external stimulation, to the cold wind or the freezing rain, for example, in the same way as my own arms and hands: it shivers. And when it bumps into another thing, it does not halt or bounce back, but restores its balance and circumvents the obstacle. Such behavioral similarities motivate a complex of synthesizing experiences which terminates in an act in which I transfer a sense of sensing over to a perceived body. As a result, that body appears as a material thing with its own system of sensations, sensations that I cannot have or live through but are indicated to me by the thing's behavior. (Heinämaa 2012: 227)"

It is important to note, however, that, according to Husserl, intercorporeal pairing is *not a cognitive procedure*, and that, consequently, the manifestation of a *somatic analogy* between the two bodies is not based on projection, interpretation, or inference, e.g., on an argument from analogy or inference to the best explanation (see, e.g., Heinämaa 2012: 228; Zahavi 2012a: 181; Zahavi 2012b: 234—239). On the contrary, the key point of intercorporeal pairing is that it is a (bi-directional) "transfer of sense" (Hua 1: 142), which, although it can be pre-prepared by the eidetic self-modification, can ultimately happen only by what Husserl calls *passive* association.

"Passivity" in this context does not denote a "lack of activity", but rather those aspects of constitutive or sense-bestowing activity of our embodied ego that are relegated to the pre-egoic, unthematic background. In other words, passive association is a pre-reflective constitutive activity taking place "in the

background", i.e. it is that which precedes and underlies the active (reflective) synthesis occurring "in the foreground". I *do not infer* (derive, deduce, etc.) that the entity confronting me is another living being; instead, my embodied perception *is sensitive to and resonates with the other body*. It is a matter of a "pre-reflexive intertwining of lived bodies in which my own is affected by the other's body as much as his by mine" (Fuchs 2016: 9, in press). Or, consider the example provided by Heinämaa:

> "For example, when I turn over soil in order to make a hole for roses, I suddenly detect a quivering movement among the falling clods. This quivering stands out immediately in my perceptual field, and I switch from perception of mere matter to perception of a living thing: a worm or a millipede. […] Rather than being an inference, the change from one type of experiencing ('mere matter') to the other ('living') resembles a *Gestalt switch*. (Heinämaa, 2012: 227—8)"

This example portrays a kind of immediate Gestalt switch from the lifeless to the living which shows that intercorporeal pairing, as conceived in terms of "perceptive association" (Husserl 14: 530; our translation), is not an active (reflective) achievement, but rather an experiential, and to a certain extent a contingent, fact. What it does not show, however, is that the fact of becoming passively (pre-reflectively) paired with another body implies – in cases, such as that of the plant body, where we want to become more familiar with an otherwise unfamiliar life form – its own temporal dimension: it has the *immediacy* of the Gestalt switch (it is direct, unmediated), but one that *unfolds in time*. In other words, it is not so much a matter of "a flash of insight", as it is a matter of "intercorporeal re-sonance" in the sense of dynamic (to-and-fro) interplay in the mutual alignment of two sensing bodies. In this regard, the main value of intercorporeal pairing is precisely in its adding what was lacking in the first step, i.e. in the *narrowing down* of the unbridled, free-floating self-modification of eidetic variation to particular instances of encountered bodies.

However, we are immediately faced with another problem: Namely, how can we claim that these encountered bodies encompass *all* living bodies? To see this consider that, in the process of intercorporeal pairing, it is my own human

Leib that is taken to be the "original prototype" or "originary norm" (*Urnorm*) (Hua 1: 154); but if this is the case, then how are we supposed to be motivated[9] by passive association to extend our empathy to *anomalous* bodies, i.e. to all the other living organisms *apart* from man and (perhaps) higher animals? Indeed, given the striking *dis-similarity* of most, if not all, non-human living beings (potted plants in particular!), how are we supposed to *relate* to their anomalous animated bodies?

One way out of this predicament would be to try and broaden the possible scope of intercorporeal pairing by implementing two *enhancement strategies*, both of which take us beyond Husserl's original work. The first strategy consists in *clarifying the notion of analogy*. As Kant once remarked, analogy is not an issue of imperfect similarity or *likeness*, but rather an issue of perfect similarity or *proportional equality*. In other words, analogy holds between two entities whose relations are, in some significant respect, proportionally equivalent, even though they are otherwise *completely* unlike one another:

> "By means of such an analogy I can therefore *provide a concept of a relation to things that are absolutely unknown to me*. E.g., the promotion of the happiness of the children = a is to the love of the parents = b as the welfare of humankind = c is to the unknown in God = x, which we call love: not as if this unknown had the least similarity with any human inclination, but because we can posit the relation between God's love and the world to be similar to that which things in the world have to one another. (Kant 2004: 109, our emphasis)"

This example, reminiscent as it is of the traditional role attributed to analogy in the Scholastic era, might sound a little awkward when transferred into a biological context, but it does a perfect job in illustrating the general function

9 The term "motivation" plays an important part in Husserl's theory of perception. Its use stands in stark contrast to natural causal theories of perception in that it puts emphasis on "a form of spiritual causation", which is said to be enfolding between the object and the subject of experience: "We do not just causally interact with objects in the world but we deliberately turn our attention towards them, they 'motivate' our interest: 'The room's stale air (which I experience as such) stimulates me to open the window' [Hua 5: 229]" (Moran 2012: 32).

that analogy is supposed to fulfill, i.e. allowing us to expand and deepen our grasp of the *epistemically* transcendent or the "absolutely unknown". For it would seem that, in relation to the anomalous living bodies such as that of the plant, we find ourselves in a similarly embarrassing situation. Kant's clarification helps us to get out of the "epistemic rut" by distinguishing between somatic analogy and the simple registering of organismic similarities. In fact, Husserl himself seems to be adopting a similar view when he suggests that we are capable of recognizing anomalous modifications to the human *Leib* if these stand in certain proportional relations to our own lived body as an *Urnorm* – as, e.g., when we are confronted with sense organs which are *phenomenally completely foreign* to us (say, the antennae of an insect), but serve *the same orientation function* as our organs (Hua 15: 626). Put differently, I can hold that the foreign organism's *relation* to its sense organs is the *same* as mine is to my sense organs *without* thereby laying claim to a phenomenal similarity between our sense organs.

In fact, in a truly Kantian spirit, Husserl emphasizes the ever-abiding foreignness, an unsurpassable distance, which comes to full fruition in our empathy towards anomalous bodies. Namely, in order for me to enter the pertinent relation of co-resonance with the other body it is not necessary for the act of empathy to end in fulfillment; instead it can remain an empty form, without thereby losing its distinct experiential character (Hua 14: 479, 526). This is why Husserl conceives of (intercorporeal) pairing as "congruence at a distance (*Deckung in Distanz*)" (ibid.: 531, our translation). With this in mind, we are entitled to the belief that the human *Urnorm*, which is the basis for intercorporeal pairing, is *not* "a kind of matrix that I rely and draw on when understanding others", but rather "a necessary contrast foil on the basis of which others can be experienced as others" (Zahavi 2012b: 240). In other words, "my self-experience doesn't constitute the [positive] model; rather it is that against which the other's difference can reveal itself" (ibid). Hence, the difference between my *Leib* serving as a matrix and my *Leib* serving as a contrast foil allows us to distinguish between naive and critical forms of anthropomorphism. Naive anthropomorphism draws analogies between myself and the alien entity based on our similarities (likenesses) and thus tries to tame the other by subsuming it to the modes of embodiment that I am most familiar and intimate with. Critical anthropomorphism, on the other hand, draws analogies between myself and the

other entity based on certain congruencies in relations and attitudes, while at the same time insisting on the (unbridgeable) distance of the other. In more general terms, we may discover here the *self-alienating* nature of empathy, which suggests that the "limits of empathy" (Marder 2012a) are perhaps far more remote than one might have expected them to be.

The second enhancement strategy for mending, or re-pairing, Husserl's notion of intercorporeal pairing consists in broadening the scope of somatic interpretation by *technological means*. This refers to the so-called "phenomeno-technology" (*Phänomenotechnik*): the use of technologies, especially sense-bestowing technologies (*Sinntechniken*), as an (often unnoticed) intermediary in how specific phenomena manifest or appear to us.[10] In our context, *Phänomenotechnik* would allow for an auxiliary use of scientific studies on plant biology and of time-lapse videos in order to bring forward the formerly "hidden" or "unapparent" (*unscheinbare*) behavior of plants, which in turn would make their specific mode of embodiment emphatically more accessible, as it brings them in resonance with our own *Leibkörper*. But it is important to note that such technological tools are not supposed to substitute, but only to *in-form,* or even *trans-form*, our habitual intercorporeal experience, which is ultimately still governed by passive association.

2.3 Appresentation of an Alien Field of Experience, or Living Up to the Subjectivity of the Potted Plant

Let us now turn to the third, and final, step of somatic interpretation as laid out in CM, to a new type of apprehension that might be called *appresentation of an alien field of experience* (Hua 1: 139). This last step is a supplement to, and an expansion of, the pairing relation described in the previous subsection: motivated by the ongoing inter-bodily resonance between myself and the other

10 See, e.g., Waldenfels 2006. As pointed out by Waldenfels, the technological mediation of appearances needs to be understood *universally*, as the term "technology" covers not only the use of tools and machinery, but also technologies of speech and action, body techniques, image technologies, navigation techniques, etc., so that ultimately the arrangement of every experience can be investigated from a distinct technological perspective (ibid.: 368).

entity, I attribute *inner life* (a distinct primordial sphere of lived experience) to the latter. The use of the term "appresentation" here refers to the idea that we directly experience another *stream of presence*, another *being-here*, which, although originally inaccessible (Hua 1: 144), presents itself to me as seated in the other *Leibkörper*. In other words, we are led to acknowledge that, what we are in the presence of, and what presents itself to us, is a foreign kind of "elementary subjectivity" (Fuchs 2012: 161), which is recognized to *express itself* in and through the other *Leibkörper*.[11]

Note that, in the proposed biological reading of CM, the term "alter ego" is deliberately omitted and replaced by "elementary subjectivity". In fact, one of the more considerable benefits of (re)construing appresentation in this way would be that it transcends the strictly egological framework commonly associated with the Husserlian phenomenology. The resources for this turning away from the transcendental self-reflection of the full-blown embodied personality towards the bio-phenomenological recognition of the impersonal elementary subjectivity can already, to a certain extent, be found in Husserl, insofar as he acknowledges that "the structural analysis of the primal presence" ultimately leads us to "the radical pre-egoic" (*das radikal Vor-Ichliche*) – to the funding "basic layer of non-egoic streaming" (*Unterschicht des ichlosen Strömens*) (Hua 15: 598). The same theme is even more explicit in Merleau-Ponty, for instance when he writes:

> "My personal existence must be the resumption of a prepersonal tradition. There is, therefore, another subject beneath me, for whom a world exists before I am here, and who marks out my place in it. This captive or natural spirit is my body, not that momentary body which is the instrument of my personal choices and which fastens upon this or

11 This fundamental question – whether we are obliged to recognize the elementary subjectivity of all living beings – is to be distinguished from the follow-up question, investigated by Heinämaa (2013), namely whether some anomalous living beings (animals, children, mentally disabled, etc.) may count as co-constituting subjectivities of our world. Husserl argues that not all living subjectivities are our "transcendental companions" (Hua 15: 160, our translation) or "co-bearers of the world" (ibid.: 162, our translation). Thus, being co-constitutive of the world is not, for Husserl, a necessary condition for being an elementary subjectivity.

> that world, but the system of anonymous 'functions' which draw every particular focus into a general project. (Merleau-Ponty 2002: 296)"

Thus, we can take up what was said earlier regarding the role of genetic dismantling (*Abbau*) in the context of imaginative variation (see section 2.1) and say that, by a personal (egoic) enactment of the dismantling reduction, I may discover, within myself, a *pre-personal* (*non-egoic) basic layer of experience*, "another subject beneath me". This finding provides me with the *semantic resources* that are needed for appresenting an elementary kind of subjectivity; however, this time the imaginative variation is not free-floating, but *motivated and restrained* by the way the encountered body is given to me. Put simply, by facing up to my own genetic (temporal, multi-layered) constitution, I get a basic idea of what it would mean to attribute elementary subjectivity to a plant body.[12]

Of course, the bio-phenomenological idea of appresentation does not resolve all the problems that are in potential conflict with this account. Above all, there remains the pressing question of whether our human capacities for eidetic self-modification, coupled with the well-founded motivations gained through intercorporeal pairing, will ever turn out to be sufficient for experientially appresenting elementary subjectivity in any specific entity – say, in the case of the potted plant resting silently on my windowsill. This, it would seem, remains a matter of contingency, a mere hypothetical speculation. In order, however, to at least partly mitigate this worry, we may recall that the human *Leib* serves only as a *contrast foil* and that the anticipated outcome of said appresentation is therefore *not* to *adequately represent* the supposed elementary subjectivity – the "originary inaccessibility" of foreign subjectivity remains an ineradicable fact – but rather *to experience oneself in the presence of another subjectivity*. We may call this a *Levinasian-inspired* turn, which tentatively goes beyond what was originally intended by Husserl in the direction of *practically inverting* the meaning of appresentation (Marder 2014). Applied to the vegetative body I am currently perceiving this interpretation of appresentation would imply what is

12 Accordingly, to meet the challenges of "pre-animal monads" (*vortierische Monaden*), Husserl, in his later reflections (around 1933), assumes that there exists an "infinity of monadic levels" (*Unendlichkeit von Monadenstufen*) (Hua 15: 595, our translation).

called a "counter-experience" (Marion 2002: 215) in similar examples of limit phenomena: it is not so much the plant that enters *my* field of presence, but rather, in a quite uncanny experience, *me* who is entering *its* field of presence.

3. Conclusion

Such, then, is the general outline of botanical somatology as conceived through the lens of the "biological rendition" of the tripartite empathic procedure in Husserl's CM. The first step, *eidetic self-modification*, is a methodological tool that enables me to imaginatively modify my self-givenness as this particular human *Leib* so as to arrive at the essence of lived corporeality, and thus shed light on the living body which I am currently perceiving. However, due to its unconstrained (imaginative) nature, its main usefulness, particularly when confronted with an anomalous life form, is in supporting the empathic process by initiating the "dismantling reduction", and thus paving the way to later steps, in which it must find its ultimate grounding. The second step, *intercorporeal pairing*, denotes a pre-reflective synchrony or resonance between my lived body and that of the encountered alien being. The most important point here is that such intercorporeal resonance is not a matter of inference or projection, but rather of an on-going, dynamic interplay between the two bodies that occurs on a *pre-reflective* level. Finally, *appresentation of an alien field of experience* is the direct experience of elementary subjectivity (another "stream of presence") in the encountered being: grounded in the on-going process of the intercorporeal pairing, I apperceive the other human being as yet another sphere of lived experience. This apperception, however, is not meant to be an adequate representation, but rather a co-presentation or co-experience: the subjectivity of the other is presented to me through the presentation of my subjectivity to the other.

The common thread that has been weaving through all three steps is the necessity of the *pre-egoic* (pre-reflective) and *bilateral* construal of empathy: the empathic process is no longer a matter of my trying to reflectively subsume the foreign embodiment under my particular mode of embodied being, but rather a matter of a pre-reflective resonance and co-presentation at the most rudimentary level of (co)being: *an on-going, pulsating corporeal congruence at*

a distance. Construed in this sense, empathy becomes much more akin to what Marder terms "ontological empathy", which is "no longer determined by ontic similitude but, instead, by a sense of proximity to the *being* of other creatures […] " (Marder 2012a: 268). This, in turn, has important consequences to how we conceive of anthropocentric approaches: As our reading of Husserl's somatology suggests, taking the human experience of the *Leib* as a vantage point for the exploration of life is not undermined by a seemingly inescapable commitment to an unbridled (naïve) anthropomorphism, since empathy, which lies at the very heart of the somatological approach, is *not* synonymous with the imposition of anthropomorphic conditions onto the experience of the living. Instead, it must be understood as the gradual formation of a contrast foil whose aim is to efficiently bring to the fore the peculiarity of non-human life forms. Thus, the phenomenological notion of empathy, in its protean nature, turns out to be considerably more resilient to the biological challenge than one would have expected initially.

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Michael Marder

THE VERTICAL AND THE VERTIGINOUS: A PHENOMENOLOGY OF THE MOUNTAINS

I.

The notion of horizon plays a decisive role in traditional phenomenology. Both beings and events, phenomenologists tell us, emerge against a background of meaning that makes experience possible but that is, nevertheless, itself situated outside this experience and remains un-thematized (Hua 1, §19; Husserl 1950a: 81–83). The world, for Edmund Husserl, is "the horizon of all horizons," delimiting the perceptual field (Hua III, §27; Husserl 1950b: 56–58). It is the horizon that opens up visual perspectives by foregrounding the spatio-temporal relations among objects and, at the same time, receding from the subject's conscious grasp. This dimension of the world predates whatever or whoever appears on the horizon and, by its very appearance, disrupts the horizon's ideally smooth boundaries with rugged vertical outlines.

The phenomenological idea of the horizon is, in the first place, precisely that—an *idea*. Derived from visual experience in vast open spaces (the sea, desert, fields, etc.), where the curvature of the earth becomes readily palpable, it is applied to meaning as such, delimited by the total context of significance, against which whatever happens to be singularly meaningful temporarily stands out. But even the perceptual horizon tends toward ideality and in-differentiation. It presents itself as an imaginary line—continuous, unbroken,

and homogeneous. The differences registered in the visual foreground are made possible by the indifference of the background and, especially, of the horizon that delimits it. In dialectical terms, the being-horizon of the horizon is an abstract universal: not yet explicitly filled out with concrete content; home to infinite possibilities; indeterminate and underdetermined. In fact, it will never be filled out or determined, seeing that nothing ever changes *in it*, even if, *on it*, everything is in flux, with various beings kaleidoscopically attaining salience, only to give place to others.

Together with the world, the body might be also considered "the horizon of all horizons", whence sensory experience departs and whither it invariably returns. While the horizon of the world is itself horizontal, that of the body (the human body, that is) is vertical, in keeping with the axis of our embodiment that runs from head to feet and that has given rise to a variety of metaphysical speculations. To be sure, the vertical horizon of the body is not abstract; it is, from the outset, a concrete universal achieved through tremendous efforts of mediation and comprising a material register of the modifications it undergoes. Neither human infants nor our primate ancestors are privy to the verticality of the bodily horizon, which, at least for the former, is a task to be accomplished (learning to sit, crawl, and finally walk) through a series of dialectical self-negations of the body and its physical positions. Assuming that the child masters this task, what comes about is a dual horizon: the horizontal horizon of the world and the vertical horizon of the body, the one ensconced in the other. Human embodiment is the interplay between these two horizons.

Recently, American philosopher Anthony Steinbock has noted what we might call "the horizontal prejudice of phenomenology". The prejudice is by no means unique in the history of philosophy. As Steinbock writes, "In philosophical literature the concept of verticality has been largely ignored or suppressed" (Steinbock 2007: 13). The accusation is more grave than it sounds: the suppression of the vertical would be nothing less than the suppression of the body's default position vis-à-vis its lived space, with the exception of the developmental stages I have briefly outlined or time spent sleeping. A purely horizontal phenomenological experience lapses into one-dimensionality and runs the risk of becoming flat. Worse still, it exhausts its capacity to articulate the experience of the body and of the world, of a living body *in* the world.

That said, Steinbock's proposed solution to the massive blind spot is bizarre, to say the least. Associating verticality with the idea of transcendence, he defines it as "the vector of mystery and reverence" (ibid.). Indeed, "vertical experience" may be ultimately ungraspable because it is not given in the same manner as the controllable objects populating the world. However, neither is the horizon ever given as such, which means that it, too, can become a vector of mystery. More than that, "vertical experience" at its most concrete is that of a standing, walking, or running body, unto which "up" and "down", "left" and "right" are first grafted. If we are to be faithful to the phenomenological method, we ought to look for verticality without diluting it in the ideality of transcendence, that is to say, without abandoning Husserl's injunction "Back to the things themselves."

What are the phenomena that epitomize the vertical? On the margins of literature and philosophy responses vary. Paul Claudel ascribes this feature to plants and humans. "In nature," he concludes, "the plant alone […] is vertical, along with man." (Claudel 2000: 148; transl. M.M.) The verticality of the human was already significant in the eyes of ancient Greek philosophers, who not only equated moral and physical uprightness but also, as in the case of Plato, mapped the faculties of the soul—the appetitive, the emotive, and the rational—onto an ascending line culminating in the head, a part of the body that was closest to the *topos ouranios* of Ideas. Gaston Bachelard, in turn, prefers to treat the house as the prototype of verticality: "The house is imagined as a vertical being. It rises upwards. It differentiates itself in terms of its verticality." (Bachelard 1994: 17)

Needless to say, the vertical configurations of a house, a plant, and a human are quite distinct. A house is a statically vertical being, inserted into a given place within the natural landscape or a cityscape, which it, at the same time, molds. A human is a mobile vector of verticality, persistently negating the place occupied at the moment on the way to another transient place. A plant is a dynamic vertical ensemble of growths, embedded in a particular locale and expanding outwards from it in such a way that its lived interpretation of environmental conditions constructs a sense of place from its own phytophenomenological perspective (cf. Marder 2015).

What is above and what lies below different vertical beings vary in keeping with their respective emplacements. A house articulates the foundations and the roof as what secures it on the earth and establishes the limit between the domestic sphere and the open sky. A human treats the earth as a substratum on which life exists and which is breached to procure the "natural resources" it contains, while transforming the sky into space, the realm of satellite communications, global surveillance, and star wars. A plant uses its sense of graviotropism to distinguish "up" from "down", germinating in both directions at once, seeking sunlight in the former and rooting itself in the latter.

Whether it is a plant or a house, the epitomes of verticality are suited to our own scale, to the verticality of the upright human body, and are hence domesticated, like anything that appears against the horizontal horizon of our lifeworld. Horizons of verticality habitually revert back to finite existence, dovetail with our spatio-temporal orientation, and confirm the anthropocentric bias of using ourselves as the yardstick for everything other than human. In turn, the verticality of mystery that shifts the entire problematic into the domain of transcendence overreacts to the ethos of daily immanence and loses track of its existential horizons. Sorely missing are the mediations between the two levels of the vertical. Between the highest heights of divinity and the folds of everyday life, the overwhelming (albeit still immanent) verticality of high mountains is an optimal vantage point for the phenomenological exploration of this vector of existence.

II.

If I turn to the mountains as mediations between the immanent and the transcendent notions of verticality, that is because their scale is no longer domesticated on the horizons of human embodiment and, therefore, surpasses the anthropocentric bias operative with respect to the rest of our surroundings. To state my thesis succinctly, *mountains are the places where the vertical is converted into the vertiginous*—where the horizon of the world disappears even as that of the body is suspended in solitary, virtually worldless, indecision. That is, perhaps, the reason for the sublimity of the mountains: in addition to turning our heads up to face their peaks, we feel

that the distant targets of our regard make our heads turn. Far from something merely intended by our intentionality, they command the intending gaze and shower the subject who contemplates them with unintended effects. After all, the etymologies of the vertical and the vertiginous merge in the Latin verb *vertere*, to turn, which is also the source of the nouns *vertex*—the highest point, the turning point, an angular point where two sides meet—and *vortex*—an abyssal whirlpool or whirlwind that, in a spiral, sucks everything into itself. Verticality is not the site of transcendence but the intersection of the highest and the lowest, the earth and water or wind (air), the summit and the abyss, actively turning toward and passively being turned or spun around, almost losing one's head, the peak of the body's own vertical horizon, etc. In the mountains, these extremes enter into an infinite commerce with one another, which is something impossible against the flat neutrality of the world's horizon.

Unlike ordinary objects of intentionality, the mountains strike back at the subject and impose their verticality as the only horizon for experience and as the limit to our sense-making activities. In other words, they supersede the very horizontality of the horizon, along with a measured or gradual disclosure of phenomena, and so throw us back onto the vertical horizon of the body extracted from the horizontal horizon of the world. The clearest instance of this strange phenomenology *avant la lettre* is Jean-Jacques Rousseau's description of the mountains in *Julie, or the New Heloise*. In the twenty-third missive to his beloved, the protagonist Saint-Preux observes that "the perspective of the mountains being vertical strikes the eye all at once [*frappe les yeux tout* à *la fois*] and much more powerfully than that of the plains, which can be seen only obliquely, receding into the distance, and in which every object conceals another from view." (Rousseau 1997: 63) Traditional phenomenology—which, as we now realize, is that of the plains—contends that objects appear obliquely against the horizon and are given through adumbrations, *Abschattungen*, or distinct spatial profiles, each of which conceals some of the other sides or dimensions. Rousseau's "phenomenology," on the other hand, emphasizes the simultaneity of vertical givenness. His mountains are the landscape (and the theater) of truth, mixed with power, directness, and simultaneity. This is the source of his belief

that the people living there are more honest, more morally upright, more straightforward, and finally more truthful, just like the mountains themselves. We might thus say, by implication, that the mountains also reveal the truth of human embodiment, given all at once outside the horizon of the world. Vertigo ensues as an aftereffect of being struck by this revelation.

The shift in perspective Rousseau describes is much more than a theoretical, specular, or spectacular turn, for it induces a strong psychological effect. The hero of *Julie* undergoes something like a *conversion* (literally, a turning of the soul) under the influence of altitude and mountain air. Few notice that "in the mountains where the air is pure and subtle, one breathes more freely, one feels lighter in the body, more serene of mind; pleasures there are less intense, passions more moderate. Meditations there take on an indescribably grand and sublime character, in proportion with the objects that strike us…" (ibid.: 64) Once again the mountains "strike us," inverting the movement of intentionality. Except that this time, it is not the eye but the soul itself that is struck, turning away from violent passions to sublime meditations. Rarified air, a lighter body, free breathing—all these are the signs of a spiritualized corporeality and a materiality that remains irreducible, even in its most subtle or sublime variation. The verticality of the mountains carries the subjects in its grip from the sensuous to the transcendent, without letting them flee the sphere of immanence. It recalls them to the vertical horizon of the body nearly deprived of the world's horizontal horizon.

It would not be surprising that, having been struck by the mountains, body and soul, we would feel the vertigo inherent in the experience of verticality. This is precisely what happens in *The Confessions*, where Rousseau affirms his ideal of a "beautiful country"—"No flat country, however beautiful, has ever seemed so to my eyes"—and reports on his journey in the mountainous region near a Southern French city of Chambèri: "Along the side of the road is a parapet to prevent accidents, which enabled me to look down and be as giddy as I pleased; for the amusing thing about my taste for steep places is, that I am very fond of the feeling of giddiness which they give rise to, provided I am in a safe position." (Rousseau 1996: 167) Craving a controlled loss of control, Rousseau has recourse to the verticality of the mountain so as to open himself to a sense of vertigo, feeling his body feel all by itself, thrown back onto itself,

almost outside the world, at the world's edge, at the rim of an abyss, no longer in the context of a familiar horizontal horizon. His strategy corresponds to Kant's later formulation of the dynamic sublime, which is terrifying, yet which may elicit feelings of joy if moderated by one's safe distance from the spectacle. The list of opposites united in the mountains would be thus incomplete without the beautiful and the sublime.

Still, the loss of control, culminating in the vertiginous turning of the subject's head exposed to the experience of verticality, cannot be easily mitigated. When the mountain presents before you a scene that "ravishes the spirit and the senses," "you forget everything, even yourself, and do not even know where you are." (Rousseau 1997: 65) Rousseau, of course, sought such self-forgetting in his reveries, in the course of which, on flatter surfaces, he passionately desired to lose himself "like an insect among the grasses of the meadows." (Rousseau 2000: 174) But, in the mountains, oblivion to one's insignificant self grows out of the vertigo of verticality, which, likewise, expands and redefines the horizontality of the horizon as uncontainable: "the horizon presents more objects to the eye than it is able to contain" (Rousseau 1997: 65). It is as though a new embodiment can be sought there, a possible reconstitution of oneself and of the world on the basis of the limit experience of vertiginous verticality. Deprived of the world's horizontal horizon, the subject is reduced to the vertical horizon of the body. Vertigo results from the loss of old ground, when the new one has not yet been discovered. Then, the horizontal horizon of the world is viewed afresh, not only because it appears wider when seen from the summit but also because its mundane horizontality presents itself as inexhaustibly rich, in excess of the capacity wielded by the transformed sight.

I would be remiss if I were to ignore the majestic verticality of certain plants, in particular certain trees, capable of inducing the same effect in human subjects as high mountains. The sequoia is probably a privileged example here, as anyone who has ever been to California's Sequoia National Park can attest. Try as we might, these imposing plants cannot be domesticated or mapped onto a human scale. In the immanence of their existence, they point toward transcendence, suggested in their comparison with places of religious worship, as in "Cathedral Grove" growing on Vancouver Island in British Columbia, Canada. Being among sequoias is a vertiginous experience of verticality,

which, unlike that of a mountain (conceived not as an assembly of organic and inorganic entities but merely as a geological structure), confronts us with its own embodiment, standing over and against the human. Rather than deprived of our horizontal horizon next to them, we sense the incomplete overlap, indeed a veritable encounter, of two worlds, two redoubled—vertical and horizontal—horizons: ours and those of the plants themselves. This encounter suffices to knock the ground from underneath our feet, that is to say, to effectuate a loss of ground which, though not absolute, is nonetheless far-reaching, insofar as it cuts through the illusion that *our* footing is the first and the last, the principle and the culmination of all that is. But without the horizontal grounding referent, verticality itself ceases to make sense; hence, once again, the vertigo we already experienced in the mountains.

III.

To the mountains we flee from the world and from our selves, rid of the vertical dimension of existence and nearly dissolved into the indifferent horizontality of our environment. In effect, Jean-Paul Sartre seems to echo Rousseau in *Being and Nothingness*, exemplifying the subject's evasion from its own being with reference to a climber's gaze directed to the peak of the mountain. Imagine, Sartre suggests, that I am "the one who has still an hour to climb before being at the top of the mountain." At this precise moment, "when I look at the mountain top […], we are dealing with an escape from myself accompanied by a reflux which I effect in terms of the summit of the mountain toward my being-there in order to situate myself." (Sartre 2001: 468) What this means is that, turning my head and my gaze up to the peak, I temporarily forget my spatio-temporal position "one-hour-from-the-top" and project myself to the desired destination of my climb. I momentarily become free by negating the "here" of my place and the "now" of my time (ibid.). Thus far, the relation of my present self to my future self, who is going to complete the climb in an hour, is identical to that Martin Heidegger described in *Being and Time*. But does anything change qualitatively when my projection, along with the flight from myself that it entails, are vertical? Is not the freedom of the Sartrean mountain climber vertiginous because it redoubles what he terms the

"original transcendence" of the subject in time with the vertical transcendence within the immanence of space? If phenomenology procures its method from the matters themselves (*die Sache selbst*), then it cannot simply transpose a generic structure of experience onto the experience of being in the mountains.

Let us pause for a moment and focus on two still frames: Rousseau peering down from a mountainous road and Sartre's climber looking at the summit. In both cases, the physical act of raising or lowering one's head and gazing up or down acquires a transcendent sense, in light of the withdrawal of the world's horizontal horizon. Without actually tumbling down, one falls under the sway of the vertical: to the upright position of one's body is superadded the elevation of the mountain, which, simultaneously, mirrors and dwarfs the standing subject. Futile are the considerations of embodiment outside its environmental frame, which, besides negatively delimiting, determines its outlines. *Embodiment is inextricably tied to emplacement*, and a radical change of place, let alone being in front of a geological structure that might not be a habitable place at all, induces a similarly sharp about-face in our embodiment. The point, however, is that "the environment" is not a homogeneous category and that its physical texture itself is vital as a horizon of embodiment, be it the horizontal horizon of a world conceived essentially as a plain or the majestic verticality of the mountain overwhelming the vertical horizon of the body.

In religious experience, there is yet another kind of verticality, which is non-spatial and purely transcendent—higher than the highest point in physical space. The mountains often function as a conduit between two verticalities, the material and the ideal. Just think of the opening verses in Psalm 121, "A Song of Ascents": "I lift my eyes up to the mountains; / Where will my help come from?" There, in a gradation of ascents, the mountains are a transitory station between a hopeful human gaze, which travels up, and divine salvation, which would have come down upon the world. They are at the intersection of the ordinary and the extraordinary, of the present and the future, and of physical and spiritual elevations. It is the transformation of the first element in each pair into the second that causes vertigo; the conversion of immanence into transcendence, within the realm of immanence itself, makes our heads turn. Even for the phenomenology of religious experience, therefore, the mountain is neither a stage prop nor a piece of scenery; it is the verticality and the vertigo

of a transition from one regime of visibility to another, from the obscure human vision St. Paul characterizes as "enigmatic" to divine sight, *theoria*. Could we, perchance, say that the verticality of religious experience, mediated by the mountains, is, in the first instance, that of time as opposed to space? In other words, is not spatial elevation but a figuration (or a prefiguration) of temporal difference, the unevenness of time beyond any *horizon* of expectation?

The mundane horizons of human embodiment, too, cannot be purely spatial because the body is a constantly metamorphosing process, never embodied once and for all. These temporal horizons, still operative for Sartre's climber, follow the logic of Husserlian time-consciousness, where the past is the already bygone present and the future is a present still underway. Temporal verticality, on the other hand, is a stand-alone instant exempt from the mutations of the present and irrupting on its horizon with an unexpected and inexplicable force. Such instants are analogous to mountain peaks peppering the continuum of time and disrupting its horizontality, be it in the shape of Friedrich Nietzsche's monumental history, or in Emmanuel Levinas's absolutely immemorial past, or Jacques Derrida's messianic future "to come." Faced with a temporal peak (or a chasm), we are subject to the same vertigo as when we glance at a spatial summit (or an abyss). The present present no longer seamlessly extends back to past present and forward to future present; in fact, its timeless horizon melts away when it is converted into a site for the vertical irruption of the event. With no safety nets on the temporal horizon, the subject is thrown back onto itself, just as we saw it happen in the mountains. In the throw, the sense of "before" and "after" is unsettled as thoroughly as the spatial difference between "up" and "down". *Incipit* vertigo!

On the basis of concrete experiences of verticality, with their corresponding vertigos, it is possible to venture a generalization of what both exceeds and precedes the horizontality of the phenomenological horizon. The places where the questioning of the horizontal takes place matter. Although the mountains are hardly the symbols of the lifeworld, they are the *preferred milieus for the intersections of different verticalities*—the mediating surfaces between the human and the divine, the physical and the spiritual, immanence and transcendence. If, finding ourselves there, we feel our heads spin, that is a sure sign that the passage from one dimension to the other is well on its way. Be this

as it may, the spatial and temporal disruptions of horizontality in the mountains are the harbingers of a fleeting truth, which, phenomenologically speaking, reduces the subject to its body outside the bounds of a familiar world. As such, they effect a practical deconstruction of the everyday experience's horizons and of the very idea of the horizon constitutive of our experience.

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POVZETKI/ABSTRACTS

Sebastjan Vörös , Peter Gaitsch (eds.)
The Horizons of Embodiment: Corporeality in Humans, Animals, and Beyond

In the past two decades, the notion of *embodiment* has been quickly gaining currency in cognitive science and philosophy of mind. Although virtually unknown at the beginning of the 1990's, it has now become, in the guise of embodied and enactive cognitive science, a serious contender against the classical (cognitivist) conceptions of mind, cognition, and consciousness. By drawing on the thematizations of the body found in Husserl and Merleau-Ponty, especially on the distinction between body as *lived body* (*Leib*) – a pre-reflective bodily awareness that shapes our experiential landscape –, and body as *physical body* (*Körper*) – a thematic experience of the body as an object –, it is maintained that mind and cognition are embodied in a twofold sense: (i) *structurally*, i.e., in the sense of being constituted by extracranial (neural, bodily, environmental, and social) processes, and (ii) *phenomenologically*, i.e., in the sense of including the experience of oneself as a bodily agent situated in the world. It is contended that this Janus-faced nature of corporeality, divided between "being a body" (*Leibsein*) and "having a body" (*Körperhaben*), may help undermine some of the age-old dualities (mind-body, interiority-exteriority, etc.) and thereby help anchor experience in materiality and materiality in experience.

The main focus of the volume at hand is to analyze, evaluate, and critically reflect upon, what might be termed *"horizons of embodiment"*. First, it purports to examine the scope and applicability of the notion of embodiment in relation to not only human, but also animal, vegetative, and perhaps even artificial life. Specifically, it aims to investigate to what extent, if at all, different construals of embodiment might contribute to a better understanding of different life forms – of their unique, if tentative, modes of being, cognizing, and experiencing. Second, it purports to examine, from

both practical and theoretical perspectives, possibilities for a "fusion of horizons" (*Horizontverschmelzung*) between structural and phenomenological approaches to embodiment: How can objective (third-person) and experiential (first-person) aspects of corporeality be combined so as to provide efficient means for the study of the living? Both perspectives wish to enrich and broaden our grasp of different grades, modes and dimensions of embodiment, bringing forth their tentative limitations and paving ways for their overcoming.

Keywords: phenomenology, cognitive science, philosophy of mind, embodiment, body.

Horizonti utelešenosti: telesnost pri živalih, ljudeh in onstran

V zadnjih dveh desetletjih se na področju kognitivne znanosti in filozofije duha vse bolj uveljavlja pojem »utelešenosti«. Če je bila »utelešenost« še na začetku 90. let 20. stoletja v omenjenih disciplinah domala povsem neznana, je sedaj pod okriljem t. i. utelešene in udejanjene kognitivne znanosti postala resen protikandidat klasičnim (kognitivnim) pojmovanjem duha, spoznavanja (kognicije) in zavesti. Utelešeni in udejanjeni pristopi v kognitivni znanosti izhajajo iz tematizacij telesa, ki jih srečamo pri Husserlu in Merleau-Pontyju, zlasti iz razlikovanja med »živim telesom« (nem. *Leib*) – predrefleksivnim zavedanjem telesa, ki naši izkustveni krajini podeljuje obliko – in »objektivnim telesom« (nem. *Körper*) – telesom, dojetim kot materialnim predmetom v svetu. Njihova osrednja teza je, da sta um in spoznanje utelešena v dvojnem pomenu: (i) *strukturno*, tj. v smislu, da v njuni konstituciji sodelujejo zunajmožganski (zlasti telesni, okoljski in družbeni) procesi, in (ii) *fenomenološko*, tj. v smislu, da vključujejo doživljanje samega sebe kot utelešenega, v svet vpetega agensa. Zagovorniki utelešenih/udejanjenih pristopov so prepričani, da lahko dvojna narava telesnosti, razpeta med tem, da ljudje ne le, da *imamo* telo (nem. *Körperhaben*), temveč telo tudi *smo* (nem. *Leibsein*), spodkoplje starodavne filozofske dvojnosti (duh-telo, notranjost-zunanjost itd.) in v tem smislu pomaga usidrati izkustvo v snovnosti in snovnost v izkustvu.

Posamezni prispevki posebne številke, ki je pred vami, se ukvarjajo z analizo, oceno in kritično refleksijo t. i. »horizontov utelešenosti«. Posebna številka kot taka pa je namenjena, prvič, raziskovanju dometa in uporabnosti pojma utelešenosti v odnosu ne le do človeške, temveč tudi do živalskih, rastlinskih, nemara celo umetnih oblik življenja. Ali drugače, njen cilj je proučiti, v kolikšni meri – če sploh – bi različne opredelitve utelešenosti lahko pripomogle k boljšemu razumevanju različnih življenjskih oblik – njihovega edinstvenega načina bivanja, spoznavanja in doživljanja. Drugič, s tako praktičnega kot teoretskega gledišča skuša raziskati, kakšne so možnosti za »stapljanje horizontov« (nem. *Horizontverschmelzung*) med strukturalnimi in fenomenološkimi pristopi k utelešenosti: kako bi lahko združili objektivne (tretjeosebne) in izkustvene (prvoosebne) vidike telesnosti, da bi lahko prišli do karseda učinkovitih sredstev za proučevanje »živosti«? Obe perspektivi želita obogatiti in razširiti naše dojemanje različnih stopenj, tipov in razsežnosti utelešenosti, zato je pomembno, da osvetlimo njune morebitne omejitve in skušamo najti načine, da jih presežemo.

Ključne besede: fenomenologija, filozofija duha, kognitivna znanost, utelešenost, telo.

Paulo De Jesus

Making Sense of (Autopoietic) Enactive Embodiment: A Gentle Appraisal

Autopoietic enactivism (AE) has over the last two decades undoubtedly been at the forefront of the "embodiment revolution" in philosophy of mind and cognitive science. It has developed a "radical" and influential account of embodiment which maintains that cognition is constitutively dependent on the living body. AE presents a naturalist but non-reductive framework in which the body can be understood both as an autonomous system and subjective sense-making agent. According to AE this account should serve as the core basis from which to develop a truly embodied cognition paradigm worthy of challenging traditional cognitivism. The paper will present AE's account

of the body in order to examine and critically evaluate it. This evaluation will explore certain conceptual ambiguities and theoretical incongruences which are at the root of two difficulties for AE's account: (i) it highlights a potential anthropocentric and anthropomorphic bias; and (ii) it is too abstract, synchronic, and does not pay sufficient attention to the historical, sociocultural dimension of embodiment. The paper concludes by drawing from recent work in the sociology of the body to both support this reading of AE and also as a possible means to improve on it.

Keywords: anthropomorphism, enactivism, embodied cognitive science, embodiment, sense-making, the body multiple.

Osmisliti (avtopoietsko) enaktivno utelešenje: Prizanesljiva ocena

Avtopoietski enaktivizem (AE) je v zadnjih dveh desetletjih brez dvoma v ospredju »revolucije utelešenja« v filozofiji duha in kognitivni znanosti. Sčasoma se je razvil v »radikalno« in vplivno obravnavo utelešenja, ki trdi, da je kognicija konstitutivno odvisna od živega telesa. AE predstavlja naturalističen, a nereduktiven okvir, znotraj katerega lahko telo razumemo obenem kot avtonomen sistem in kot subjektiven osmišljajoč dejavnik. V skladu z AE naj bi to prepričanje služilo kot osrednje jedro, na podlagi katerega je mogoče razviti paradigmo resnično utelešene kognicije, ki bi lahko izzvala tradicionalen kognitivizem. Članek predstavi obravnavo telesa znotraj AE, da bi jo lahko nato ustrezno preučil in kritično ovrednotil. To ovrednotenje razkrije določene pojmovne dvoumnosti in teoretska neskladja, ki pestijo AE. Še posebej pereči sta v tem oziru naslednji težavi: (i) problem morebitne antropocentrične in antropomorfne pristranskosti; in (ii) problem prekomerne abstraktnosti in sinhronosti, zaradi česar AE ne posveča zadostne pozornosti historični in družbeno-kulturni razsežnosti utelešenja. Članek sklenem s sklicevanjem na nedavne raziskave na področju sociologije telesa, in sicer z namenom, da bi podkrepil ponujeno branje AE in obenem ponudil možna sredstva za njegovo izboljšanje.

Ključne besede: antropomorfizem, enaktivizem, utelešena kognitivna znanost, utelešenje, osmišljevanje, telesna mnogovrstnost.

Peter Kaiser

Taking Bodily Self-Awareness in Animals Seriously

The current debates on embodiment, consciousness, and bodily (self-) awareness are partly characterized by insightful convergences of analytically and phenomenologically influenced approaches, allowing for an increased understanding of the phenomena themselves. Since bodily awareness is essential to any sentient being, these analyses should also be of high relevance to studies of animal cognition in general, and animal consciousness in particular. Far too often only higher forms of (self-)awareness have been the focus of philosophical debate.

The aim of this paper is to strengthen the case for the role of bodily self-awareness in animals by bringing David DeGrazia's account of self-awareness in animals into dialogue with contemporary phenomenology, thereby emphasizing significant overlaps.

First, I discuss DeGrazia's account of bodily self-awareness. DeGrazia argues that higher forms of self-awareness such as social and reflective/introspective self-awareness (e.g. demonstrated in mirror self-recognition tasks) presuppose bodily self-awareness. Drawing on various empirical data and conceptual considerations, his arguments are illuminating in their own right. But his conception of self-awareness remains somewhat underdetermined.

Therefore, second, I argue that DeGrazia's case for bodily self-awareness in animals faces a serious challenge: It has been claimed that the most basic types of self-awareness in question are instances of mere consciousness and not self-awareness (Lynne R. Baker).

Third, I shall argue, this challenge can be met by complementing DeGrazia's account with Dan Zahavi's and Shaun Gallagher's phenomenological analysis of pre-reflective self-awareness. Emphasizing the subjective aspect of *for-me-ness* of any first-personal given experience is precisely what it means to take bodily *self*-awareness seriously.

Keywords: bodily self-awareness, pre-reflective self-awareness, self-consciousness, animal minds, animal consciousness.

Vzeti telesno samozavedanje pri živalih zares

Sodobne debate o utelešenju, zavesti in telesnem samo-zavedanju deloma zaznamujejo zanimive konvergence med analitičnimi in fenomenološkimi pristopi, kar prispeva k boljšemu razumevanju fenomenov samih. Ker je za sleherno čuteče bitje telesno zavedanje bistvenega pomena, bi tovrstne analize morale biti neznansko pomembne za študij tako živalske kognicije nasploh kot živalske zavesti posebej. Filozofske diskusije so se vse prepogostoma osredotočale samo na višje oblike samozavedanja.

Pričujoči članek želi okrepiti pomen vloge telesnega samozavedanja pri živalih z dialoškim soočenjem DeGrazieve obravnave samozavedanja pri živalih s sodobno fenomenologijo, pri čemer želim poudariti zlasti pomenljiva prekrivanja med obema pristopoma.

Prvič, najprej razpravljam o DeGrazievi obravnavi telesnega samozavedanja. DeGrazia zatrjuje, da višje oblike samozavedanja, kakršni sta družbeno in refleksivno/introspektivno samozavedanje (kakor se, denimo, izkazuje pri zrcalnem samoprepoznavanju), predpostavljajo telesno samozavedanje. Čeprav so njegovi argumenti, ki se sklicujejo na različne empirične podatke in konceptualne premisleke, sami po sebi jasni, pa njegovo pojmovanje samozavedanja ni dovolj natančno določeno.

Zato, drugič, zatrjujem, da se DeGraziev zagovor telesnega samozavedanja pri živalih znajde pred resnim izzivom: nekateri avtorji pravijo, da so najosnovnejši tipi samozavedanja, za katere tukaj gre, zgolj primeri zavesti in ne samozavedanja (Lynne R. Baker).

Tretjič, skušam pokazati, da se je s tem izzivom mogoče spoprijeti tako, da DeGrazievo obravnavo dopolnimo s fenomenološko analizo predrefleksivnega samozavedanja, kakor sta jo predložila Dan Zahavi in Shaun Gallagher. Poudariti natanko subjektivni vidik – óni *za-me(ne)* – kakršnega koli danega izkustva pomeni vzeti telesno *samo*zavedanje zares.

Ključne besede: telesno samo-zavedanje, predrefleksivno samozavedanje, samo-zavest, živalski um, živalska zavest.

Toma Strle

Embodied, Enacted and Experienced Decision-Making

In this paper I will attempt to show that mainstream contemporary approaches to understanding and researching decision-making – endorsing the goals and core presuppositions of traditional cognitive science – provide a limited account of decision-making at best. Firstly, they falsely presuppose that decision-makers are mostly making some sort of calculation regarding objective states of a pregiven world, independent from decision-makers. Secondly, even though the majority of approaches admit subjectivity into the picture of decision-making, they mostly try to avoid it or objectify it. Thirdly, the interactive history of decision-makers with their environment and the role of the body are in large part left out of research designs and explanations of decision-making.

Even though there has been a surge of proposals of embodying decision-making in recent years, they do not take the theses of embodied cognition far (or seriously) enough (at least from the perspective of the enactivist view of embodied cognition) – they, for instance, do not take the lived (experienced) body, experience of decision-makers, or sense-making as central to decision-making. Borrowing and extending the ideas from (neuro)phenomenology and enactivism, I will argue that decision-making is best understood from the perspective of what sense and meaning situations, decisions, and the process of decision-making have from and in the (experiential) perspective of decision-makers. As a consequence, I will further claim that decision-making science must begin researching the experience of decision-makers rigorously and systematically if it is to understand the phenomenon in a less limited and a more meaningful way.

Keywords: decision-making, embodied cognition, enactivism, experience, (neuro)phenomenology, sense-making.

Utelešeno, udejanjeno in doživeto odločanje

V članku bom poskusil pokazati, da prevladujoči sodobni pristopi k razumevanju in raziskovanju odločanja, sprejemajoč osnovne cilje in predpostavke klasične kognitivne znanosti, v najboljšem primeru podajajo omejen vpogled v preučevani fenomen. Prvič, napačno predpostavljajo, da odločanje poteka predvsem kot nekakšno preračunavanje z objektivnimi stanji zunanjega, od odločevalcev neodvisnega sveta. Drugič, čeprav v "podobo odločanja" pripuščajo subjektivnost, se ji večinoma poskušajo izogniti ali jo objektivirati. Tretjič, interaktivna zgodovina odločevalcev z lastnim okoljem in vloga telesa sta v sodobnih pristopih k raziskovanju odločanja v večji meri izpuščena iz raziskovalnih načrtov in razlag odločanja.

Čeprav je v zadnjih letih opaziti porast predlogov, kako utelesiti odločanje, pa ti tez utelešene kognicije ne pripeljejo dovolj daleč oz. jih ne jemljejo dovolj resno (vsaj z vidika enaktivističnega pojmovanja utelešene kognicije): odločanja na primer ne koncipirajo kot dejavnosti opomenjanja, telesa ne pojmujejo kot tudi živete (izkustvene) strukture, ne preučujejo izkustva odločevalcev itd. Sledeč nekaterim idejam enaktivizma in (nevro)fenomenologije bom trdil, da je odločanje bolj smiselno razumeti z vidika smisla in pomena, ki ga imajo situacije, odločitve in proces odločanja iz in v (izkustveni) perspektivi odločevalcev. Posledično bom nadalje trdil, da mora znanost o odločanju, če želi preučevani fenomen razumeti na bolj smiseln in manj omejen način, začeti sistematično in temeljito raziskovati (tudi) izkustvo odločevalcev.

Ključne besede: odločanje, utelešena kognicija, enaktivizem, izkustvo, (nevro)fenomenologija, opomenjanje.

Ema Demšar

I understand you because I know you: The influence of past embodied encounters on social understanding

This paper revolves around the topic of social understanding in face-to-face social interaction and investigates how our pre-reflective understanding and experience of the other within it are affected by the history of our embodied encounters. The aim of the paper is twofold: first, to highlight some core elements that underpin social understanding, and second, to describe the feeling of familiarity in social interaction and analyze its active contribution to how we understand others. In the first part of the paper, I present some phenomenological and enactive accounts of social cognition. I point out the difficulties of the so-called mindreading approaches, according to which interpersonal understanding is primarily a matter of mental state attribution. I describe how understanding of others is facilitated by the concrete environment of the social encounter as well as the broader social world of shared practices, norms, and roles. However, such environmental support of social understanding is hard to pin down and is always achieved through the concrete process of embodied interaction. Since, in addition, our grasp of the other is itself essentially interactive, I suggest that the enactive perspective, which recognizes interaction as the core of social understanding, is the optimal way to study the phenomenon. The second part of the paper focuses on the pre-reflective, background feeling of familiarity with the other. I introduce the phenomenological concept of body memory and explain how relationships with a history of embodied encounters can, over time, acquire a partially self-sustaining internal structure, which is often accompanied by the experience of familiarity. I argue that this feeling also has an active dimension, since it can shape our experience of and responsiveness to the possibilities for (inter)action in a particular social encounter. Describing pre-reflective social understanding as the ability to adequately respond to these possibilities, I conclude that the feeling of familiarity plays an important role in guiding our unreflective social interaction and actively contributes to how we understand and experience the other.

Keywords: social understanding, participatory sense-making, body memory, unreflective action, affectivity.

Razumem te, ker te poznam: Vpliv preteklih utelešenih interakcij na socialno razumevanje

V prispevku se ukvarjam s temo medosebnega razumevanja in se sprašujem, kako naša pretekla utelešena srečanja oblikujejo predreflektivno razumevanje in doživljanje drugega v neposredni socialni interakciji. Članek je razdeljen na dva dela. V prvem delu skozi oris nekaterih fenomenoloških in enaktivističnih teorij socialne kognicije predstavim ključne dejavnike medosebnega razumevanja v utelešeni interakciji. Izpostavim težave klasičnih, t. i. "mindreading" pristopov, ki trdijo, da razumevanje vedenja in duševnosti drugih temelji na določanju njihovih mentalnih stanj, in poudarim vlogo, ki jo v medosebnem razumevanju igra posameznikovo poznavanje okolja, ki si ga deli z drugo osebo -- tako konkretnega konteksta interakcije kot tudi širšega družbenega sveta socialnih praks, vlog in norm. V neposrednih srečanjih je težko opredeljivi pojem 'okolja' nerazdružljivo prepleten z utelešeno interakcijo, neločljiv od interakcije pa je tudi sam fenomen razumevanja drugega. Pri preučevanju socialne kognicije je zato bistveno prepoznati ključni pomen interakcijskega procesa, kar najbolje uspe enaktivističnemu pristopu. V drugem delu članka se osredotočim na občutek domačnosti oz. predreflektivnega poznavanja drugega v neposredni socialni interakciji. Predstavim fenomenološki koncept telesnega spomina, s pomočjo katerega skozi zgodovino utelešenih srečanj posamezni odnosi razvijejo značilne interakcijske vzorce, ki jih pogosto spremlja prvoosebno izkustvo domačnosti. Temu subtilnemu občutku je mogoče pripisati aktivno dimenzijo, saj v nereflektivni socialni interakciji vpliva na naše doživljanje možnosti za akcijo in tako določa nabor potencialnih dejanj, ki jih izkusimo kot relevantna. Ker lahko predreflektivno socialno razumevanje opišemo kot sposobnost ustreznega odzivanja na relevantne možnosti za (inter)akcijo, sklenem, da ima občutek domačnosti pomembno vlogo pri usmerjanju poteka socialnih interakcij in oblikovanju razumevanja in doživljanja drugega.

Ključne besede: socialno razumevanje, sodelovalno opomenjanje, telesni spomin, nereflektivno delovanje, afektivnost.

Julia Garstenauer

Temporalization of Touch and its Consequences for Embodiment

Edmund Husserl's concept of *touch*, as developed in *Ideas II*, was widely discussed and became the starting point for various explanations of the constitution of the lived body in phenomenological research and beyond. Localization and therefore spatial aspects are the main characteristics for the lived body in Husserl's works, whereas temporal aspects are rarely considered. For this reason, the present paper argues that a pre-reflective bodily constitution occurs not only in the form of localization but also in the form of *temporalization*.

Against the background of an expanded concept of touching, construed as a realization of borders, temporalization is characterized as a continuous and constant being-towards-the-world. It is withdrawn from consciousness, and, in it, the three time ecstasies are intertwined and influence each other. However, the continuity of temporalization is necessarily fractured or deferred. While Husserl, especially in his famous example of the double sensation of the two hands touching each other, claims that there is a *co-presence* of physical body (*Körper*) and lived body (*Leib*), I will try to show, by drawing on cases such as injury and phantom limb sensations, that there occurs a *time deferral*, ranging from a fracture in phantom limb sensations to a minimal deferral in self-touch.

This has two main consequences for embodiment. Firstly, temporalization is a necessary process in the constitution of the lived body: having a (lived) body means having time. Secondly, the relations between consciousness and (lived) body, as well as physical body and lived body, are not simultaneous, but are constantly shifting, and thus never completely coincide.

Keywords: touch, embodiment, temporality, Husserl, Derrida.

Temporalizacija dotika in njene posledice za utelešenje

Pojem *dotika*, kakor ga je Edmund Husserl razvil v *Idejah II*, je bil obravnavan mnogokrat in je postal izhodišče za različne razlage konstitucije živega telesa znotraj fenomenoloških raziskav in onkraj njih. Lokalizacija in z njo povezani prostorski vidiki igrajo v Husserlovih delih poglavitno značilnost živega telesa, medtem ko se časovnim vidikom posveča zgolj poredkoma. Iz tega razloga pričujoči prispevek poudarja, da se predrefleksivna telesna konstitucija ne dogaja samo v obliki lokalizacije, temveč tudi v obliki *temporalizacije*.

Na ozadju razširjenega pojma dotikanja, dojetega kot udejanjanja meja, lahko temporalizacijo označimo kot kontinuirano in konstantno bit-naproti-svetu, ki se izmika zavedanju in v kateri se tri časovne ekstaze medsebojno prepletajo in vplivajo ena na drugo. Toda kontinuiteta temporalizacije se po nujnosti prelamlja in odgodeva. Medtem ko Husserl, zlasti ob znamenitem primeru dvojnega občutka rok, ki se dotikata, zatrjuje, da obstoji *so-prisotnost* fizičnega telesa (nem. *Körper*) in živega telesa (nem. *Leib*), poskušam s sklicevanjem na primere, kot so poškodba in zaznava fantomskega uda, pokazati, da pride do *časovnega odloga*, ki sega od zloma pri občutku fantomskega uda do minimalnega zamika pri samodotiku.

To naznanja dvoje posledic za utelešenje. Prvič, temporalizacija je nujen proces pri konstituciji živega telesa: imeti (živo) telo pomeni imeti čas. Drugič, v razmerju med zavedanjem in (živim) telesom, tako kot v razmerju med fizičnim in živim telesom, ni simultanosti, temveč se odnosi nenehno spreminjajo in zatorej nikdar ne pride do popolnega sovpadanja.

Ključne besede: dotik, utelešenje, časovnost, Husserl, Derrida.

Martin Huth

Interanimality and Animal Encounters: The Phenomenology of the Human-Animal Relations

The paper deals with three interrelated dimensions of human-animal relations (HARs) so as to provide a general phenomenological framework for the analysis of

our being-with-animals. It focuses on *interspecies intercorporeality* (1) that is predetermined by *societal significations and practices* (2). However, these habituated practices and social constructions can be potentially thwarted by *the event of a singular encounter* that interrupts and disturbs our practice of "human-animal normality" (3).

First, based on Husserl´s and Merleau-Ponty's reflections on empathy and intersubjectivity, the text focuses on co-existence construed as *intercorporeality* and *interanimality*. The paper interprets the status of interanimality as primordial *habitual bodily being-with* comprising of communication and mutual influence between humans and animals. It builds a co-existence we are always already immersed in.

Second, differentiated significations of animals exist by virtue of habituated and incorporated practices of differentiation between humanity and animality, of different tacit processes through which we separate "us" from "them". This is manifest in the diversity of HARs – some of the animals are closer to us (particularly pets which are sometimes even humanized) than others (livestock, pests) – culminating in a *selective* recognition of animals as partners in mutual communication and addressees of moral concerns. Our perceptions of, and actions towards, animals are co-determined by embodied structures of *tacit recognizability* (Butler). On the level of habituation, we are used to treat animals differently, be it as "edibles", "family members" or "data providers" (in animal experiments), with different practical and moral implications.

Third, this recognizability is potentially interrupted by singular animal encounters. Levinas and Derrida describe a way of "being-addressed" in the (bodily) encounter that exceeds the normality and normativity of patterns of recognition and of practical routines in dealing with animals. Thus, drawing on Merleau-Ponty´s distinction between the "habituated lived body" and the "body at this moment", encounters as *actual* intercorporeal resonance have the potential of disturbing, exceeding and changing the recognizability and *habituated* interanimality.

Keywords: intercorporeality, anthropological machine, recognizability, thresholds, lateral/frontal sociality.

Interanimalnost in srečevanja z živalmi: Fenomenologija odnosov med ljudmi in živalmi

Članek se ukvarja s tremi medsebojno povezanimi razsežnostmi odnosov med ljudmi in živalmi (OLŽ) in skuša na ta način postaviti splošen fenomenološki okvir za analizo naše biti-z-živalmi. Osredotoča se na *medvrstno medtelesnost* (1), ki jo vnaprej opredeljujejo *družbena opomenjanja in prakse* (2). Vendar pa lahko te privzgojene prakse in družbene konstrukcije spodnese *dogodek edinstvenega (singularnega) srečanja*, ki prekine in zmoti našo prakso »človeško-živalske normalnosti« (3).

Prvič, na podlagi Husserlovih in Merleau-Pontyjevih refleksij o empatiji in intersubjektivnosti se osredotočam na so-bivanje, ki ga dojemam kot *medtelesnost* in *interanimalnost*. V članku status interanimalnosti interpretiram kot prvobitno *habitualno telesno biti-z*, ki sestoji iz komunikacije in medsebojnega vpliva. Interanimalnost tvori so-obstoj, v katerega smo vselej že vpeti.

Drugič, obstoj diferenciranih opomenjanj živali je posledica privajenih in utelešenih praks razlikovanja med človeškostjo in živalskostjo, različnih implicitno privzetih procesov, s katerimi se »mi« razlikujemo od »njih«. To se kaže v raznolikosti OLŽ – nekatere živali so nam bližje (posebej ljubljenčki, ki so včasih celo počlovečeni) kakor druge (živina, mrčes) –, ki se stopnjujejo vse do *selektivnega* prepoznavanja živali kot partnerjev v medsebojni komunikaciji in naslovnikov moralnih vprašanj. Načine, kako zaznavamo živali in se vedemo do njih, sodoločajo utelešene strukture *implicitno privzete prepoznavnosti* (Butler). Na ravni habituacije smo živali navajeni obravnavati kot »užitne«, kot »člane družine«, »vire podatkov« (pri eksperimentih na živalih), kar ima različne praktične in moralne implikacije.

Tretjič, implicitno privzeto prepoznavnost lahko zmotijo edinstvena (singularna) srečanja z živalmi. Levinas in Derrida opisujeta način naslovljenosti, do katerega pride v (telesnem) srečanju, ki presega normalnost in normativnost vzorcev prepoznavanja in delovanja v odnosu do živali. S sklicevanjem na Merleau-Pontyjevo razlikovanje med »privajenim živim telesom« in »telesom v tem trenutku« lahko torej rečemo, da imajo srečanja kot *dejanska* medtelesna resonanca potencial, da zmotijo, presežejo in spremenijo prepoznavnost in *privajeno* interanimalnost.

Ključne besede: medtelesnost, antropološki stroj, prepoznavnost, pragovi, lateralna/frontalna družbenost.

Lucia Zaietta
Humanity is another corporeity:
Animal and Human Bodies in the Philosophy of Merleau-Ponty

This article focuses on the question of anthropological difference and animal-human relations from the perspective of the phenomenology of Maurice Merleau-Ponty. Through an in-depth analysis of corporeity Merleau-Ponty discovers and valorizes a common ontological ground between human beings and animals: far from being reducible to a mere machine, the body tells us something about animals, about us, and, finally, about our mutual interrelationships. What does it mean *to be a body*, a body that acts, inhabits a meaningful space, and expresses something? Animals and human beings share a corporeity that constitutes their openness to the world and it is in the light of this continuity that Merleau-Ponty was able to find a new kind of relation, "an overcoming that does not abolish the kinship". An original notion of *difference* appears here, a notion that valorizes the specificity of each *être-au-monde* without becoming an ontological gap. A human being thus is not an animal *plus* something more, but rather *another corporeity*.

Keywords: Maurice Merleau-Ponty, phenomenology, animality, human-animal relationship, corporeity.

Človeškost je drugačna telesnost:
Živalska in človeška telesa v Merleau-Pontyjevi filozofiji

Članek se osredotoča na antropološko diferenco in odnose med živalskim in človeškim z vidika fenomenologije Mauricea Merleau-Pontyja. Merleau-Ponty s poglobljeno analizo telesnosti razkrije in ovrednoti ontološki temelj, ki je skupen tako ljudem kot živalim: telesa nikakor ni mogoče zreducirati zgolj na stroj, temveč nam sporoča nekaj o živalih, o nas samih in naposled tudi o naših medsebojnih odnosih. Kaj pomeni *biti telo*, telo, ki deluje, naseljuje s

pomenom prežet prostor in nekaj izraža? Živali in ljudje si delijo telesnost, ki konstituira njihovo odprtost za svet. V luči te kontinuitete je Merleau-Ponty odkril novo vrsto odnosa: »preseganje, ki ne ukinja sorodnosti«. Tukaj se pojavi izvirno pojmovanje *diference*, ki opredeljuje specifičnost slehernega *être-au-monde*, ne da bi se obenem prelevila v ontološki prepad. Človeško bitje potemtakem ni žival *plus* še nekaj, temveč *drugačna telesnost*.

Ključne besede: Maurice Merleau-Ponty, fenomenologija, živalskost, odnos med človeškim in živalskim, telesnost.

Peter Gaitsch, Sebastjan Vörös
Husserl's Somatology Reconsidered: *Leib* as a Methodological Guide for the Explication of (Plant) Life

The purpose of this paper is to explore whether phenomenology, with its methodological and epistemological grounding in the first-person investigation of the lived experience, can enable us to gain insight into the fundamental structures of "the living"? To address this issue we will anchor our analysis in two central phenomenological notions. First is the Janus-faced construal of the body: the fact that, as a living being, I not only have an object-body (*Körper*), but also, and primarily, am a lived body (*Leib*). *Lived body*, it may be argued, is the epistemic ground zero of all phenomenological investigation, so any grounded bio-phenomenological account must start from there. Secondly, and interrelatedly, my embodiment is said to play the key role in *empathy*, which is often considered to be *via regalis* to intersubjectivity in phenomenology, and is therefore integral in how we approach and understand the other living being. However, to make the ordeal of taking the phenomenological notions of embodiment and empathy as methodological guides to the category of life even more challenging, our main object of research will not be human or animal, but *plant life*.

The article consists of two main parts. First, we provide an outline of Husserl's somatology, "the science of the lived body", as a fundamental methodological and conceptual framework for a phenomenological re-construal of life sciences in general and botany in particular. Second, and with the aim of demonstrating why and how the somatological approach might be useful for re-conceptualizing vegetal life, we identify, in the writings of Husserl, a three-step procedure for operationalizing the native (empathic) perception of another living being (the three steps include: eidetic self-modification; intercorporeal pairing; and appresentation of an alien field of experience). After expounding on each step, we draw some tentative conclusions, particularly on how our analysis might impact the understanding of empathy: it is not synonymous with the imposition of anthropomorphic conditions onto the experience of the living. Instead, it must be understood as a gradual formation of a contrast foil whose aim is to efficiently bring to the fore the peculiarity of non-human life forms.

Keywords: embodiment, empathy, Husserl, intercorporeality, plant life, phenomenology of life sciences, resonance.

Nov pogled na Husserlovo somatologijo: Leib kot metodološko pomagálo pri eksplikaciji življenja (rastlin)

Namen pričujočega prispevka je raziskati, ali nam lahko fenomenologija, katere metodološki in epistemološki temelj je prvoosebno raziskovanje doživljanja, omogoča vpogled v temeljne strukture »življenja«. Da bi odgovorila na to vprašanje, si bova v svoji analizi pomagala z dvema osrednjima fenomenološkima pojmoma. Prvi je »janusovsko« pojmovanje telesa, po katerem jaz kot živo bitje ne posedujem le popredmetenega telesa (*Körper*), temveč sem v prvi instanci sem živeto telo – živôt (*Leib*). Ker je živôt (živeto telo) epistemska izhodiščna točka vseh fenomenoloških raziskav, mora vsaka prizemljena biofenomenološka razlaga začeti prav tam. Drugič in v povezavi s tem, moja utelešenost igra ključno vlogo pri *empatiji*, ki v fenomenološki tradiciji velja za »kraljevsko pot« k intersubjektivnosti in je potemtakem nepogrešljiva pri tem, kako pristopamo k drugim živim bitjem in jih razumemo.

Da pa bi bila naloga uporabe fenomenoloških pojmov utelešenosti in empatije kot metodoloških pomagál pri razlagi kategorije življenja še zahtevnejša, se v prispevku ne bova osredotočila na življenje človeka ali živali, temveč *rastlin*.

Članek sestoji iz dveh glavnih delov. V prvem delu predstaviva obris Husserlove somatologije, »znanosti o živôtu«, kot temeljnem metodološko-konceptualnem okvirju za fenomenološko reinterpretacijo tako botanike kot znanosti o življenju (»life sciences«) nasploh. V drugem delu pa, sledivši poglavitnemu namenu članka, ki je pokazati, zakaj in kako bi lahko somatološki pristop uporabili pri pojmovanju življenja rastlin, iz Husserlovih besedil izluščiva tridelni postopek za operacionalizacijo empatične zaznave drugega živega bitja (omenjeni trije koraki so: eidetska samomodifikacija, medtelesno oparjevanje in aprezentacija tujega izkustvenega polja). Po nadrobni eksplikaciji vseh treh korakov povlečeva nekaj previdnih zaključkov, zlasti o tem, kako bi nasledki najine analize lahko vplivali na naše razumevanje empatije. Izkaže se namreč, da pri empatiji ne gre za projekcijo antropomorfnih pogojev na našo izkušanje živih bitij, temveč jo moramo razumeti kot postopno izgrajevanje »kontrastivne folije«, na podlagi katere lahko v ospredje stopijo svojskosti nečloveških življenjskih oblik.

Ključne besede: utelešenost, empatija, Husserl, medtelesnost, življenje rastlin, fenomenologija življenjskih znanosti, resonanca.

Michael Marder

The Vertical and the Vertiginous: Toward a Phenomenology of the Mountains

This paper continues my previous investigations into the phenomenology of mountains (cf. Marder 2012). After discussing the phenomenological idea of horizon and distinguishing the horizontal horizon of the world from the vertical horizon of the body, I consider human embodiment in a mountainous natural environment. I argue that, thrown back onto the verticality of the body, which is dwarfed by that of the mountains, the subject is exposed to a new, vertiginous dimension of existence. Through descriptions of everyday

and religious experiences the mountains are revealed as the places of vertigo-inducing conversion from immanence to transcendence and from physical to spiritual elevation.

Keywords: verticality, horizon, vertigo, embodiment, mountains, environmental phenomenology.

Vertikalno in vrtoglavo: Na poti k fenomenologiji gora

Prispevek nadaljuje moje predhodne raziskave s področja fenomenologije gora (prim. Marder 2012). Po obravnavi fenomenološke ideje horizonta in razmejitvi horizontalnega horizonta sveta od vertikalnega horizonta telesa se lotim razprave o človeškem utelešenju v gorskem naravnem okolju. Dokazujem, da se subjekt, odvrnjen k vertikalnosti telesa, ki spričo gora deluje pritlikavo, sooči z novo, vrtoglavo dimenzijo eksistence. Gore se v opisih vsakdanjih in religioznih izkustev razkrivajo kot kraji vrtoglavico vzbujajoče konverzije iz imanence v transcendenco in iz fizičnega v duhovno povzdignjenje.

Ključne besede: vertikalnost, horizont, vrtoglavica, utelešenje, gore, okoljska fenomenologija.

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(ur.), *Phänomenologie im Widerstreit*, Suhrkamp Verlag, Frankfurt/M., str. 13–39.

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Methode«, *Archiv für Begriffsgeschichte* 45 (2003), str. 10–20.

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Rainer Wiehl, »Gadamers philosophische Hermeneutik und die begriffsgeschichtliche Methode«, *Archiv für Begriffsgeschichte* 45 (2003), S. 10--20.

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